Phono Cartridges: Julian Hirsch's short course for buyers
“Small-label” Folk and Jazz: the best is often hard to find
Music for Classical Guitar: a roundup of recent recordings

Equipment Test Reports
- JVC JR-S600 AM/FM Stereo Receiver
- Marantz Model 1250 Integrated Stereo Amplifier
- KLH Model 354 Speaker System
- Micro Seiki DDX-1000 Turntable and MA-505 Tone Arm

MOST
$600 RECEIVERS
SOUND AS GOOD
AS THIS ONE.
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 ±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.
Empire's Blueprint for Better Listening...

No matter which system you own, a new Empire phonograph cartridge is certain to improve its performance. The advantages of Empire are threefold.

One, your records will last longer. Unlike other magnetic cartridges, Empire's moving iron design allows our diamond stylus to float free of its magnets and coils. This insureds 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 movements are 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. After you compare our performance specifications, 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>3 mv/channel</td>
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FISHER HALL: A VERY PALPABLE HIT

For at least as long as we've been able to count, mankind has been fond of the mystical number three: three Graces, three Fates, and three strikes in the game of baseball. That last, though it may sit a little oddly in the context, is an example of a particularly powerful notion: a cat may have nine lives, but it seems to be a firm rule that three strikes is all the rest of us get (maybe all we deserve) whatever the game may be.

The building of multimillion-dollar concert halls is certainly far from being a "game," but when the Lincoln Center for the Performing Arts announced last spring that Avery Fisher Hall was to undergo another revamping over the summer months to correct its notoriously unprepossessing acoustics, no one doubted that this was the hall's third and last chance.

Music Editor James Goodfriend covered the matter of that announcement in his "Going on Record" column in July. The hall reopened in a position to brag about its sound quality previously available only to Non-New Yorkers will not be getting a chance to hear what the hall sounds like as soon as some might like: a recording program will require considerable preparations, an enlarged stage area and a period of careful experimentation among them. But maybe that's only ironic justice: the Philharmonic's "live" patrons are just now beginning to enjoy a sound quality previously available only to buyers of its recordings.

Regular readers will note the absence this month of Martin Bookspan's "Basic Repertoire" and Irving Kolodin's "Choosing Sides" columns. Reader interest in the Basic Rep has declined of late, and we think we know why: how "basic" can a list 180-odd items long be? We will therefore be trying a new tack in this area, covering some of the old ground—and some new as well—with "Basic Library" articles. We have put Mr. Kolodin to work on some of these; his piece on the Mahler symphonies in October was the first, and he has already worked up another, a Basic Library of Chamber Music which will appear in an early issue. Also in the works is Richard Freed's annual updating of The Whole Basic Rep; watch for the announcement in a month or so.

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FOR THE BUDGET-MINDED PERFECTIONIST. THE 6100.

High on performance, the belt-drive 6100 features a super-dependable AC synchronous motor. The convenience of auto return and shut off. Plus full protection of your valuable records with a precision S-shaped tone arm, gentle-action viscous-damped cueing and anti-skate.

FOR THE BUTTON-PUSHER. THE TOTALLY AUTOMATIC 6200.


*Model 6200/$199.95*

*Model 6100/$129.95*

*Suggested list prices. Actual selling prices at dealer's discretion. All models come complete with anti-static turntable mat, plastic hinged dust cover, base enclosure, and low capacitance phono cables that assure 4-channel capability whenever you need it. The base enclosure for the 6300 is constructed of plywood, finished in genuine walnut veneer. The enclosures for the 6200 and 6100 are finished in walnut grain vinyl veneer.*

Features and technological excellence galore. Starting with absolute speed accuracy assured by a combination of direct drive design and DC servo motor that automatically compensates for voltage/speed fluctuations. Of course, there's auto lift and shut off, but on the 6300 it's opto-coupled—a significant Marantz exclusive. It means no tracking distortion caused by mechanical linkage between auto mechanism and tone arm. The secret: a tiny beam from a light-emitting diode maintains constant contact with a photo transistor during play. At record's end, a sliding blade cuts contact, activating a circuit that lifts the tone arm and shuts off the motor. There's more. Stroboscopic pitch control "fine-tunes" speed to your personal preference. And viscous damped cueing gently, smoothly lowers the precision S-shaped tone arm onto the sensitive disk surface. Vertical/lateral counter-balancing and anti-skate result in lowest distortion and tracking error.

marantz. We sound better.
I STATE  I ZIP  I ADDRESS  I NAME  I CITY

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FREE

details ... A DIFFERENT KIND OF RECORD CLUB

You can now own every record or tape that you may ever want ... at tremendous savings ... and with no continuing purchase obligations. You can get valuable free dividend certificates, you can get quick service and all the 100% iron-clad guarantees you want.

Now you can stop price increases that leave you with less music for your record and tape budget. You can guarantee yourself more music for less money through membership in Discount Music Club.

Look at these benefits:

**TREMENDOUS SAVINGS**
on every record and tape in print—no “agree-to-purchase” obligations of any kind.

**DISCOUNTS OF 43% TO 73%**
on mfg. suggested list ... special catalog features hundreds of titles and artists.

**ALL LABELS AVAILABLE**
including most imports through special custom ordering service. If we don't stock it we'll get it for you.

**SCHWANN CATALOG**
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**DISCOUNT DIVIDEND CERTIFICATES**
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same day shipping on many orders ... rarely later than the next several days. Partial shipments always made in the event of unforeseen delays ... all at no extra cost to you.

**100% IRON-CLAD GUARANTEES**
on all products and services. Everything is guaranteed factory fresh and free of defects or damages of any sort. Your total satisfaction is unconditionally guaranteed.

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These are just a few of the money-saving reasons to write for free details. You can't lose so why not fill out and mail the coupon below for immediate information.

**LETTERS TO THE EDITOR**

**Ronstadt**

- I would like to thank Noel Coppage for the revealing and extremely interesting cover story on Linda Ronstadt (November). She is one of the few artists today who can transfer the experiences of life into song and transmit every nuance of the pain or pleasure of them to her audiences; this is what makes her so special. I am pleased to see that someone has at last managed to capture the mind that makes her music instead of the body that complements it. She is more than worth traveling hundreds of miles to see, and after hearing her latest album I would not go to see her. Linda Ronstadt and her music are something very, very special.

**KARL J. ZUK**
Queens Village, N.Y.

**No Redeeming Value**

- I have had it. Your critics are simply too... unthinking and unintelligent to deserve one more second of my attention. Without going into specifics (I know I'll only catch some wise rhetorical reply proclaiming the inherent element of subjectivity in music criticism and the latent superiority of STEREO REVIEW's critics), I request that you do one of two things: fire Noel Coppage and Joel Vance immediately or cancel my subscription with haste. Vance's Nixonian narrow-mindedness as shamelessly exhibited in his comments on Jeff Beck's "Wired" album and Coppage's ad absurdum remarks concerning Gordon Lightfoot were positively the last straws. Let you cease letting these two hacks assault your audience's sensibilities with utter nonsense, I fear your otherwise excellent magazine will be labeled obscene—i.e., having no socially redeeming value.

**TONE-DEAFNESS**

- I am writing because of the statement in the November editorial to the effect that some people "tune-out contented, tone-deaf adulthood in households filled with music." My question is this: Can a tone-deaf person derive any enjoyment from music? The reason I ask is that a teacher in college told me that I was tone deaf, but I do love music and do spend the major portion of my leisure-time budget on records and the improvement of my

**Vocal Impressions**

- Picky, picky, picky! Tell Noel Coppage to leave reviews of the Steve Miller Band and Orleans to Joel Vance. From the reviews in your November issue, you'd never know these albums offer straight-ahead, basic rock 'n' roll with a good beat. On the other hand, I can appreciate Joel Vance's not liking a whole Aerosmith album. Still, these kids do know where a tune's "hook" is, so lighten up. Joel stepped in it in the same issue by incorrectly crediting George Benson's vocal phrasing to Stevie Wonder. In fact, Benson's whole voice came off Donnie Hathaway. Wonder owes Donny too, of course; Donny sang like that ten years ago when he was with the Ric Powell Trio.

**RICH LEE**
St. Petersburg, Fla.

- I enjoyed the fantastic November issue thoroughly from beginning to end, but I was especially pleased with the Linda Ronstadt interview. I agree wholeheartedly with Noel Coppage on his review of her latest album, "Hasten Down the Wind." Buddy Holly's That'll Be the Day is a good song, but it isn't one of her best displays of meaningful emotion. Her real image is best brought out in the emphatic way she sings Lose Again, Give One Heart, and Try Me Again. I'm glad Linda Ronstadt is finally being taken seriously.

**CRAIG STREMKE**
Milwaukee, Wis.
audio system. Whatever the answer, I will continue to do the same, but I am interested in this subject and would appreciate your comments. I can pick out, very slowly, a few simple tunes on the guitar and harmonica but my musical ability is almost nil.

 RANDALL PETERS
 Ringgold, Ga.

The Editor replies: I must apologize to Mr. Peters and other tone-deaf readers for a careless phrase; my reference, of course, was not to those who are literally tone-deaf but those who are (or appear to be) untouched by music's charms. Can the tone-deaf enjoy music? Absolutely. There is, first of all, more to music than tone alone; a friend of mine, for example, totally deaf since childhood, is an enthusiastic and accomplished dancer who picks up the rhythm from the dance floor through his feet. Beyond that, there is the nature of tone-deafness itself, which has to do principally with the ability to duplicate with the voice the frequency of sounds that impinge on the ear. This is a motor skill, and in my experience it appears, like other motor talents, to different degrees in different individuals and over a range running from the fantastic to the minuscule. But this ability to duplicate tones physically is not connected (again, in my experience) to aesthetic appreciation either positively or negatively. I have known those who were able to carry a tune perfectly but were quite indifferent to music; I have known others who could not, as the old tag has it, "carry a tune in a basket" but who delighted in music nonetheless, who were further perfectly capable of detecting a fault of intonation in a singer, an out-of-tune violin, or a wrong note on the piano. (Those who are not tone-deaf themselves might try listening to the many gradations of tone-deafness they can hear around them at community sings, in church congregations, or at symphony-hall and ball-game attacks on The Star-Spangled Banner, in most cases, the loudest, most enthusiastic voices are farthest off the tune.) The exact nature of music and of the musical response are profound mysteries that have thus far eluded—thank God!—either explanation or justification, leaving us a universal, uncircumscribed latitude in which to take our pleasure without let, hindrance, or inhibition of tone-deafness or anything else. I, for one, hope it stays that way.

Billy Joel

• Thank you for the article interview (October) with Billy Joel, a man with excellent keyboard and writing talents. He doesn't seem to be one of those artists who play games; he just puts himself in front of an audience and gets better as the night progresses. I saw him in concert, and in a short time he had everyone (all age levels) on their feet cheering.

 DON BARESE
 Hamden, Conn.

Caruso Dubbings

• Concerning Larry Klein's November Audio News column on Caruso dubbings: the current problem seems to be not in equalization so much as wow and flutter added by the dubbing turntable. RCA, Seraphim, and others should choose a turntable for improved speed stability and design an adequate variable speed control if it doesn't have one (the
Saving the best for last.

The chances are good that when you first bought a stereo system, it was a "package" that included a receiver, 2 speakers, and a record player with cartridge. But how much time was spent selecting the cartridge? Most probably it was just a minor element of the package. Even if it had a famous name, it probably was not a truly first-rank model.

Yet the cartridge is more important than that. It can limit the ability of the entire hi-fi chain to properly reproduce your records. It can affect how many times you will enjoy your favorite records without noise and distortion. And it can determine whether you can play and enjoy the new four-channel CD-4 records.

Consider the advantages of adding an Audio-Technica AT15Sa to your present system. You start with response from 5 to 45,000 Hz. Ruler flat in the audio range for stereo, with extended response that assures excellent CD-4 playback if desired. Tracking is superb at all frequencies and distortion is extremely low. The sound is balanced, transparent, effortless. Stereo separation is outstanding, even at 10kHz and higher where others fall short. Our Dual Magnet design* assures it.

And the AT15Sa has a genuine nude-mounted Shibata stylus. Which adds a host of advantages. Like longer record life. Better performance from many older, worn records. Exact tracing of high frequencies, especially at crowded inner grooves. And tracking capability—at a reasonable 1-2 grams—that outperforms and outlasts elliptical styli trying to track at less than a gram.

We're so certain that an AT15Sa will improve your present system that we'd like to challenge you. Take several of your favorite records to an Audio-Technica dealer. Have him compare the sound of your present cartridge (or any other) with the AT15Sa. Listen. We think you'll be impressed. And convinced.

---

*T.M. Audio-Technica Dual Magnet cartridges protected by U.S. Patents Nos. 3,720,796 and 3,761,647.

The AT15Sa. Very possibly the last phono cartridge you'll ever need.

---

Mahan

• Thank you for the article on the Mahler symphonies by Irving Kolodin in the October issue. I wish STEREO REVIEW would do all the great composers this way. It was so good to read his comments on why he chose the ones he did, for one can no longer go in and pre-view the records one wants to buy, and this is the next best thing. In the regular reviews, the reviewers should give their choices and why at the end of their reviews.

Bob Yaryan
Oakland, Calif.

Decoders

• In his October Audio Basics column, Ralph Hodges states that the CBS SQL-200 decoder is "not commercially available." I was recently advised by Benjamin Bauer of CBS Technology Center that the SQL-200 and the advanced SQL-400 with more powerful logic are available in kit form from the Photolume Company, 118 East 28th Street, New York, N.Y. 10016.

Jack Frost
Sumas, Wash.

Ralph Hodges replies: Exactly right, although we might point out that Photolume came into the picture some time after the column was written. Reportedly the SQL-400 is not yet available, although it may well be by the time you read this. The SQL-200 is, however, and it is priced at about $75 for the kit.

Carpenters

• I have resigned myself to being one of your few female readers—a thirteen-year-old one at that! In the year or so that I've been reading STEREO REVIEW, the few times you've mentioned the Carpenters you've never had a good thing to say. "Mush." "Preparation H." What next?! So what if ballads are considered "mush," or if they come out with an "oldie"? If you enjoy songs like Goofus...
they are ageless, and some people (like me) do like oatmeal.

Laurie Harp
Berea, Ohio

Jane Olivor

J. James Goodfriend described Jane Olivor's performance very well in his November review of "First Night." She's got a good voice and a good personality, though she's got to do something about her outfits. But the problems of new entertainers are sometimes what makes them famous; I think she will make it and become an M.O.R. star. "She's just too good" to be wasted.

George Roig
Miami, Fla.

Roots

The editor's "Musical Roots" column in November nicely complemented E. D. Hoaglan's letter on Nelson Eddy. Belonging as I do to an older generation, I received great satisfaction from the letter and the column since I too was nurtured on the "pop" music of earlier times. The thoughtful comments of those who reviewed the albums mentioned in the editorial were gratifying to me for the dignity they gave to that part of our musical heritage.

Vincent Elworthy
St. Louis, Mo.

Elcaset

I presently have one tape deck and three portable cassette recorders, but after reading Larry Klein's excellent presentation of the elcaset in the October issue, I will certainly buy an elcaset recorder or deck when it becomes available next year. This new format offers film makers as well as audiophiles a more readily edited and potentially higher-fidelity sound capability.

A. Gale Borden
Port Washington, N.Y.

AM Tuners

I see now, after having read September's account of the Chicago hi-fi show, that the majority of new receivers for 1977 will still contain AM tuner sections. How many audiophiles actually listen to poor-quality AM on their $500 or $5,000 music systems? Why don't the manufacturers leave out the AM tuner sections and bring down the prices?

Mark Schmidt
Little Silver, N.J.

Larry Klein replies: The answer is that leaving out the AM tuner section would not bring down the price, since the AM tuner represents so little in cost and effort—and that is the source of the problem in the first place.

Erratum

In the November report on the Nakamichi 600 cassette deck, the wrong model number was shown on the frequency-response curves. The curves shown on page 40 were for the Nakamichi 600; the 500 designation was in error.
Robins’ Eight-track Tape Cleaner

The Robins “Soundtrack Scrubber” contains a mildly abrasive polyester belt designed to clean the tape within an eight-track cartridge. In operation, the device’s specially shaped end is inserted into the loading slot of an eight-track record/player, and the tape cartridge to be cleaned is in turn inserted into the Scrubber’s other end. A linkage within the Scrubber drives the cartridge from the machine’s capstan, and the tape is pressed against the polyester belt and cleaned as it cycles through the cartridge.

The Soundtrack Scrubber’s cleaning belt is sufficiently long to clean about two hundred cartridges. After each cartridge, the belt is advanced a little to bring an unsoiled spot into contact with the tape. A refill spool of cleaning belt is supplied with the device. The Soundtrack Scrubber, Robins catalog No. 30-001, costs $11.99.

Circle 115 on reader service card

Jensen Speaker For Budget Systems

At about $60, Jensen’s Model 20 is intended for audio installations of modest cost or as remote speakers. The 8-ohm system has an 8-inch air-suspension woofer and a 2-inch cone tweeter to provide a stated frequency range of 35 to 20,000 Hz. The manufacturer advises that at least 10 watts of amplifier power per channel is required to drive the system. The maximum power rating is 40 watts. The Model 20 has dimensions of 18⅛ x 11 x 8½ inches and weighs 18 pounds. Finish is walnut-grain vinyl with a sculpted grille.

Circle 117 on reader service card

McKay Dymek Broadband Antenna

The DA 100 is a preamplified antenna covering the radio spectrum from 50 kHz to 30 MHz, including the AM band. It consists of a collapsible 4-foot whip antenna mounted on a small weatherproof box and a separate a.c.-powered electronics module. The antenna itself is to be installed in some (preferably) high place outside. The electronics unit is located indoors.

Circle 116 on reader service card

Technics Turntable Has Professional Features

The new turntable, intended for the broadcast industry as well as the audiophile market, has a start-up time of one-quarter second at 33⅓ rpm, permitting reliable cueing from standstill. A combination of mechanical and electronic braking systems stops the platter in 0.3 second and prevents it from rotating while stopped.

The three-speed (33⅓, 45, and 78 rpm) SP-10MKII has a direct-drive motor with speed referenced to a quartz-crystal oscillator and servo-controlled by a phase-locked loop. Speed drift is a maximum of ±0.002 per cent under any likely load or drag conditions. Weighted rms wow and flutter are 0.025 per cent, and rumble is −50 dB by the DIN A standard, −70 dB by DIN B. The full-size platter weighs about 6½ pounds. The electronics for the turntable are contained in a separate power unit, and the main controls (solenoid assisted) are duplicated in a remote-control box supplied. The turntable’s dimensions are about 14¼ x 14¼ x 4 inches. Approximate price: $700.

Circle 118 on reader service card

Mid-price Receiver From Pioneer

The Model SX-750 occupies approximately the middle ground in Pioneer’s new line of AM/FM stereo receivers. Maximum rated output into 8 ohms is 50 watts per channel, 20 to 20,000 Hz, with no more than 0.1 per cent harmonic or intermodulation distortion. Noise is −70 dB for the phono inputs and −90 dB for high-level inputs. The FM section’s usable sensitivity is 10.7 dBf (1.9 microvolts); 50-dB quieting sensitivity is 17.2 dBf (4 microvolts). Other FM specifications include: capture ratio, 1 dB; AM suppression, 55 dB; alternate-channel selectivity, 80 dB; spurious-response rejection, 90 dB. FM frequency response is −3 to 15,000 Hz; −0.2, −2 dB, and stereo separation is 30 dB throughout that range.

The SX-750 is distinguished by the silver and white styling of the latest Pioneer receivers. The basic controls—volume, balance, bass, and treble—are augmented by lever switches for tone-control defeat, high-cut filter, loudness compensation, mode, and tape monitoring and dubbing. There is a stereo-headphone jack and a front-panel microphone.

(Continued on page 16)
Experience the genius of the "great musician of all time"—as you may never have experienced it before

The Definitive Beethoven Collection

As your introduction to THE BEETHOVEN BICENTENNIAL SERIES
listen to the first 6 symphonies for 10 days free!

Over the years there have been many record albums devoted to various works of the immortal Ludwig van Beethoven. But there has never been a complete collection of all his works. That is why TIME-LIFE RECORDS assembled this magnificent collection in 17 volumes that contain every important work the master ever wrote—even some rare vocal pieces never before available! It's the BEETHOVEN BICENTENNIAL COLLECTION, recorded by the famous Deutsche Grammophon Company of Germany.

This feast of Beethoven is performed by such world-renowned artists as Conductor Herbert von Karajan, supreme interpreter of Beethoven's symphonic works; the great violinist Yehudi Menuhin; opera's greatest dramatic soprano, Birgit Nilsson; Wilhelm Kempff, dean of Continental pianists; silken-toned cellist Pierre Fournier; Britain's brilliant Amadeus Quartet; and the Berlin Philharmonic Orchestra.

10-day free audition: To introduce you to this incomparable collection we invite you to audition Volume 1, the first six symphonies plus the popular Leonore Overture No. 3, for 10 days FREE. These selections were performed by the renowned Berlin Philharmonic Orchestra under the direction of Herbert von Karajan. Highlighted in Volume 1 are:

- SYMPHONY NO. 3 in E Flat Major—the "Eroica."
- SYMPHONY NO. 5 in C Minor—The opening is probably Beethoven's most well-known theme.
- SYMPHONY NO. 6 in F Major—the "Pastoral."

Only the beginning: If you decide to keep the five records of Volume 1 for the low price of $19.95 plus shipping and handling, you become entitled, as a subscriber, to audition approximately every other month, future albums in this fantastic 17-volume Beethoven collection for the same low price. Some of the magnificent works contained in future volumes are:

- The 9th Symphony—a revolutionary work in that it was the first choral symphony ever composed.
- MISSA SOLEMNIS—An exhilarating synthesis of symphony, opera and church music.
- EGмонт—the complete incidental music to the heroic drama by Goethe.
- The 16 Quartets—showing Beethoven's evolution from the classical style of Haydn and Mozart to the highly original and exciting style of the last five quartets.

No risk or obligation: To receive Volume 1 for 10-day free audition, return the post-paid card. If you decide to keep it, we will include, free, the giant book on Beethoven described at right. You are under no obligation to purchase any minimum number of volumes and you may cancel your subscription at any time. Mail the attached card or use the coupon at right.

PLUS a FREE Beethoven Volume (published at $29.50)

This huge, handsome commemorative volume—now out of print—covers the master and his work in rich detail. Includes much material never available to the public before. 367 pages, 269 illustrations in color, and black and white music scores, paintings, drawings, manuscripts, etc.

TIME-LIFE RECORDS
TIME & LIFE BUILDING, Chicago, Ill. 60611

Yes, I would like to examine the first album of the Beethoven Bicentennial Collection. Please send it to me—together with my free $29.50 Beethoven book—for 10 days' free examination and enter my subscription to the Beethoven Bicentennial Collection. If I decide to keep the first album, I will pay $19.95 plus shipping and handling. If I then receive future albums in the Beethoven Bicentennial Collection, shipped an album at a time approximately every other month. Each is $19.95 plus shipping and handling and comes on a 10-day free-examination basis. There is no minimum number of albums that I must buy, and I may cancel my subscription at any time simply by notifying you.

If I do not choose to keep the first album, I will return the album and the book within 10 days, my subscription will be canceled and I will not be under any further obligation.

RBAAM8

Name______________________________
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State________ Zip______________
(or Prov.)________(or Code)______________
input. Most of the input and output connectors are mounted on a horizontal shelf in the rear of the receiver. A walnut-grain vinyl top and walnut-veneer side panels decorate the SX-750, which has approximate dimensions of 19 x 6 x 14 2/3 inches. Approximate price: $400.

Circle 119 on reader service card

Dry Lubricant For Records

□ Ball Corporation’s “Sound Guard” is a dry lubricant, in liquid spray form, intended to be applied to records and then spread around with a buffing pad to leave a film about five millionths of an inch thick. The film is said to reduce stylus friction—and hence record wear—and to lessen the anti-skating requirements of record players. It is also said to subdue certain types of surface noise.

The trade name for the lubricant is “Vac-Kote,” a substance developed by the Ball Corporation for use on space vehicles. Reportedly, it adheres to the vinylite material of records but not to itself, so that build-up of the substance in record grooves is avoided. One application will last for a number of playings, according to the manufacturer. Sound Guard fluid sufficient for treating about twenty records comes packaged with a pump-spray applicator and a buffing pad. Price: $7.

Circle 120 on reader service card

Moving-coil Cartridge with Replaceable Stylus

□ Superex will be U.S. distributor for the Satin moving-coil cartridges, a line consisting of three models, all of which have user-replaceable styli. The stylus assembly itself consists of the diamond tip, the cantilever, and the pivot/suspension. It is attached to the main body of the cartridge by a magnetic clasp, and the cantilever engages a small metal yoke to which the coils are joined.

The Satin M-117 has a 0.5-mil conical (spherical) stylus; the M-177E is fitted with a 0.2 x 0.8-mil elliptical stylus, and the M-177X has a 0.1 x 2.5-mil Shibata stylus. Frequency response extends from 10 to 25,000 Hz for the M-177, to 40,000 Hz for the M-177E, and to 45,000 Hz for the M-177X. Said to be able to drive most magnetic-phono inputs directly (without the transformer or pre-amplifier usually required for moving-coil cartridges), the three pickups have outputs between 3 and 3.5 millivolts for a recorded velocity of 5 centimeters per second. For the E and X models, tracking-force range is 0.5 to 1.3 grams; the spherical model’s range is 0.75 to 2 grams. All three cartridges weigh 9 grams. Prices: M-177, $140; M-177E, $170; M-177X, $190.

Replacement styli are, respectively, $60, $90, and $120. Superex also offers a resistive network ($30) made by Satin that goes between cartridge and preamplifier, and which is said to provide optimum cartridge damping.

Circle 122 on reader service card

Marjen’s New Speaker Systems

□ A relatively new company, Marjen, has brought out a line of three speaker systems, all employing 8-inch woofers and 2-inch cone tweeters in various configurations. A representative system, the Model I, has a single woofer and two such tweeters for a rated frequency response of 44 to 20,000 Hz ±3 dB. The crossover frequency is 2,000 Hz. Recommended amplifier power into the system’s nominal 8-ohm impedance is 10 watts minimum and 75 watts maximum.

High-frequency output is adjustable on the Model I by means of pushbuttons that provide a ±3 dB alteration around a designated “flat” setting. The enclosure, measuring 22 x 10 1/2 x 10 1/2 inches, is constructed of solid and veneered pine; grille cloths are available in black or natural. Price: $139. The Marjen Models II and III ($169 and $249, respectively), have generally similar specifications and features.

(Continued on page 18)
The only way you can equal the realistic sound capability of JVC's modestly priced S300 stereo receiver, is by adding an expensive, but highly versatile graphic equalizer, to another receiver.

For the price of a conventional receiver in its price range, the S300 has built-in JVC's exclusive graphic equalizer system. With five zone controls to cover the entire musical range. While most high priced receivers offer bass and treble controls, and some include a third for midrange, none approach the precision and flexibility of the SEA graphic equalizer system developed and patented by JVC.

371,293 ways to hear better sound.

By adjusting the five detent tone controls covering the frequency range at 40Hz, 250Hz, 1,000Hz, 5,000Hz and 15,000Hz, you can create 371,293 different sounds. A feat never before achieved (with a stereo receiver) outside a professional recording studio. But, then, the S300 is a JVC professional.

Get better performance from your components and listening room.

Why do you need such tremendous variations in tone? Quite simply, they help you to overcome the shortcomings of the acoustics in your listening room: they also can help you to compensate for the deficiencies in old or poor recordings.

Finally, they can do wonders for the frequency response of your speakers, and where you place them.

SEA is really quite easy to use. For example, the 40Hz switch reduces record rumbles, and it can add greater clarity to the ultra low bass of an organ.

The problem of booming speakers is simply handled with the 250Hz switch. And in the important midranges, the 1,000Hz control adds new dimension to the vocals of your favorite rock performers, while the 5,000Hz switch brings out the best in Jascha Heifetz. You can even reduce tape hiss and diminish the harshness of a phono cartridge at high frequencies, with the 15,000Hz control. Then, to double check any adjustment, SEA works with a tone cancellation switch which permits you to instantly compare your settings with a perfectly flat response.

SEA adjusts the sound of your system to the size of your room.

You see, small rooms tend to emphasize high frequencies, while large ones accentuate the lows. But the ingenious SEA allows you to compensate for room size and furnishings—so your system can perform the way it was meant to, wherever you are.

While most manufacturers reserve unique features for their top of the line model, JVC has included SEA in three of its receivers. The S300, the S400, and of course, the top professional—the S600.

When you hear these receivers at your JVC dealer (call toll-free 800-221-7502 for his name), think of them as two components in one. In fact, it's like having all the benefits of a graphic equalizer... without buying one.
New Products latest audio equipment and accessories

with additional tweeters and (Model III) woofers.

Circle 123 on reader service card

The latest catalog of Heathkit products runs to 96 pages and describes several hundred electronic and electronics-related kits, many of which are designed to be assembled by totally inexperienced constructors. The Heath product line includes audio equipment (receivers, amplifiers, tuners, tape machines, equalizers, mixers, and speaker systems) spanning a broad range of prices, as well as already-assembled turntables, phono cartridges, and headphones. There are also television sets, console radios, musical-instrument amplifiers, and electric organs, all in kit form, together with test equipment, marine and amateur-radio electronics, and automotive and hobby accessories. Catalogs are free from: Heath Company, Dept. 350-04 SR, Benton Harbor, Mich. 49022.

Circle 124 on reader service card

A moderately priced four-channel tape deck with track-synchronization facilities (Akai’s term is “Quadra-Sync”) is being introduced by Akai America as the GX-270DSS. The Quadra-Sync feature permits synchronized recording on all four channels in sequence, enabling the user to “build up” a final recording from separate parts recorded at different times and to replace some parts with others without affecting the rest of the material.

The three-motor, two-speed (7⅜ and 3⅝ ips) transport takes 7-inch reels and is solenoid switched. Automatic reverse is provided for playing back stereo tapes, and a pitch control (which operates in both record and playback modes) varies tape speed over a range of ±5 per cent. Microphone/line mixing works by two-section knobs for each input channel, with the front sections controlling microphone levels and the rear the line levels.

The machine’s record-playback frequency response is 30 to 21,000 Hz ±3 dB at 7½ ips and 30 to 15,000 Hz ±3 dB at 3⅝ ips, both with low-noise tape. For a 0-dB recording level, harmonic distortion is under 1 per cent; signal-to-noise ratio exceeds 54 dB for a 0-dB recording level. Wow and flutter are less than 0.07 per cent at 7½ ips. The GX-270DSS, which comes in a wood case, has dimensions of 17½ x 18½ x 7½ inches. Price: approximately $900.

Circle 125 on reader service card

The line of “Stabilized Radiation Loading” speaker systems from Allison Acoustics continues with the Model Four, which is designed for shelf installation. The Allison practice of positioning the woofer as close as possible to the nearest room boundary is achieved in the Model Four with a top-firing woofer of 8-inch diameter. Two of the manufacturer’s “Convex Diaphragm” tweeters are used, one on each of two angled side panels. The system is meant to be installed with its back abutting a wall.

Crossover frequency of the Allison: Four is 2,000 Hz, and the system has a minimum impedance of 6.5 ohms (8 ohms nominal). Minimum recommended amplifier power is 30 watts per channel; a 70-watt peak input is said to produce an acoustic output of at least 0.5 acoustic watt over most of the frequency range. A three-position switch adjusts the frequency balance of the system from nominally flat to gradual high-frequency rolloff, simulating the overall balance of a typical concert hall. Overall dimensions are approximately 19½ x 11 x 10 inches; finish is oiled walnut. Price: about $175.

Circle 126 on reader service card

NOTICE: All product descriptions and specifications quoted in these columns are based on materials supplied by the manufacturers. Recent fluctuations in the value of the dollar will have an effect on the price of merchandise imported into this country. Please be aware that the prices quoted in this issue may be subject to change.

18
Now! Preview the outstanding
Deutsche Grammophon
recording of the complete
FOUR SYMPHONIES OF BRAHMS
superbly conducted by CLAUDIO ABBADO

ALL 4 RECORDS
FOR THE PRICE OF ONE

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BRAHMS' Four Symphonies are the most magnificent since Beethoven's! The extraordinary recording of them from Deutsche Grammophon offers Claudio Abbado conducting four of the world's greatest orchestras. You are invited to preview this album for ten days, without charge or obligation, and you need do nothing to receive it. You may keep all four records for the price of only one—yes, more than 78% off the list price! The Carnegie Hall Selection Committee's selection is limited! So please mail the card or coupon on this page today. You will receive the International Preview Society's Bulletin on a free 10-day trial basis. There is no minimum number of record-pressings themselves are superior, silent-surfaced European pressings, manufactured to highest quality control standards, and come in a handsome hinged case with illustrated brochure and exclusive Committee report.

Our preview offer of Brahms' Four Symphonies is limited! So please mail the card or coupon on this page today. Listen for ten days. Then either return the album and pay nothing, or keep it for only $7.98 plus small postage/handling charge and sales tax in New York. This is a saving of $25.94 off the retail price of comparable recordings.

Preview the greatest classical recordings... free!

The International Preview Society is a unique record program dedicated to bringing you outstanding classical compositions in their most splendid performances. Every superb recording comes to you on a free 10-day trial basis. There is no minimum number of recordings you must buy. And you may cancel your membership at any time.

About 7 times a year, the Society's Carnegie Hall Selection Committee—headed by Julius Bloom, Executive Director of Carnegie Hall—will choose an album of extraordinary merit and importance. You will then receive the International Preview Society's Bulletin highlighting the current selection and other brilliant releases. If you want to receive the Committee's selection, you need do nothing. It will be sent to you automatically. If you want another selection, or no record at all, just check the appropriate boxes on your notification card and return it to us by the date specified. In addition to great music, you also enjoy great savings with our half-price bonus plan. For every set you buy at the low member's price of just $15.99 (3 LPs) or $19.99 (4 or 5 LPs)—always well below suggested retail—you may choose another recording from a list of critically acclaimed LPs and pay just half price!

To enhance your enjoyment of the recommended selection, you will also receive the exclusive Carnegie Hall Selection Committee Report prepared by the distinguished panel of experts who comprise the Committee. By replying now, you assure yourself the privilege of receiving—for future previews—only the finest classical releases.

So if you truly love great music, take advantage of this free opportunity to listen to Brahms' Four Symphonies. Mail the coupon today!

All Four Recordings

$7.98
(regular list price: $31.92)

Yours For The Price Of One

(Plus small postage handling charge if you decide to keep them after your free audition!)

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Please send me my free preview, the superb recording of Brahms' Four Symphonies by Claudio Abbado. I may return it after ten days and owe nothing, or keep it for only $7.98 plus small postage/handling charge and sales tax in New York. This is $25.94 off the list price of comparable recordings. Every other month I will be notified of specially selected releases chosen for their excellence by The Carnegie Hall Selection Committee. I may keep any album for far less than suggested retail price, or return it without obligation. For every one of these sets I buy at your member's price (always below suggested retail) I may also choose one record at half price from your special list. I am not obligated to buy any minimum number of albums, and I may cancel this arrangement at any time.

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59102
Introducing the Accutrac™ 4000.

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

The Accutrac 4000 is the most radical new idea in record-playing technology since the introduction of the LP.

It's a marriage of solid-state integrated circuitry, infra-red electro-optics and the latest in direct-drive engineering. We've replaced hundreds of mechanical parts with efficient, silent electronics: in fact, the functions of nearly 10,000 transistors are being performed by just two logic chips.

The result: The Accutrac 4000 is the most accurate, reliable, noiseless turntable ever invented. And it even lets you re-arrange selections on a record to hear them in the order you want.

The Accutrac 4000 reaches new lows.

Wow and flutter are down to a completely inaudible 0.03% W.R.M.S. Rumble,-70dB (DIN B). Tracking force, a mere 3/4 gram. And tonearm resonance, the ideal 8-10 Hz.

Our direct-drive motor brings the massive die-cast platter to full speed instantly. And keeps it there with the help of electronic sensors which adjust for power fluctuat on.

There's no way a turntable can be any more precise.

Now, listen to the selections on a record in the order you want.

Once we developed the electronic control system, it was a logical step to extend its capabilities.

So now, instead of just listening to a record, you can re-arrange the playing order of the selections, repeat them, even skip the ones you don't like. Just by pushing a button.

Suppose you want to hear selections 5, 3 and 7. Simply press the buttons marked 5, 3 and 7. In fact, you can pre-set the sequence with any combination of up to 24 commands.

And if you don't want to leave your chair to give the orders, beam it in by cordless remote control with the transmitter (lower left) and receiver (above).

The Accutrac 4000 system: it not only plays records as sensitively as possible, it also takes better care of records than is humanly possible.

The arm your fingers never have to touch.

Because the tonearm is electronically driven, not manual, you never risk dropping it accidentally and scratching a record, or damaging the stylus.

The reason for this miracle is the minute infra-red scanning beam in the head that reads the surface of the record and directs the tonearm to follow your instructions.

And it does it with absolute freedom, because the servo-motor that drives the tonearm is decoupled the instant the stylus goes into play.

You don't have to cue manually, either: electronics takes care of that, too. In fact, the infra-red eye will return the stylus to the same groove it left, within a fraction of a revolution. Even the best damped cue lever can't provide such accuracy. Or safety.

The Accutrac 4000: the great protector.

Everything about the Accutrac 4000, from the perfect freedom of the tonearm to the logical placement of the controls outside the dustcover has been done for one reason: to extend the life of a record.

Which is why, once you've played the Accutrac 4000, you'll never be able to trust your records to another turntable again.
are now obsolete.

The Accutrac 4000
Four-channel Cassette

Q. I seem to remember that you wrote in a Q & A not too long ago that four-channel matrix (SQ or QS) cassettes wouldn’t decode reliably if they are made on one cassette machine and played back on another. Yet Ralph Hodges in his Angel cassette story in the October issue wrote about four-channel SQ prerecorded cassettes and said that they decoded very well. Who’s right?

Charles Brogan
Patterson, N.J.

A. We both are. Decoding problems can arise because the phase relationships between the two channels—which embody the rear-channel encoding—have to be maintained accurately in recording and playback in order for the decoder to reconstitute the original four channels properly. The normal and random phase differences between the duplicator’s recording-head gaps and the playback-head gaps in the home machines would be enough to confuse the decoder—at least to some degree. If you were to copy an SQ disc onto a cassette, the same head gaps in your machine would usually serve both the record and playback functions and no discrepancy would occur other than that caused by tape skewing within the cassette itself.

The fact that the Angel discs and prerecorded cassettes were indistinguishable from each other in respect to the rear-channel effect does not mean that a four-channel SQ decoder would necessarily work. Several factors could account for the difference. The best way to make sure that your four-channel decoder will work is to use a cassette that the manufacturer specifically recommends for use with the decoder.

Old Kit Overhaul

Q. I was recently given an old stereo tube power amplifier that I would like to use with a reverb unit for my rear channels. The former owner of the amplifier said that he built it from a kit and it was working fine when he retired it in favor of a transistor job about five years ago. However, when I hooked it up I noticed that the sound was very different from what I expected. Could this be due to the amplifier’s age or is there something else that may be causing the problem?

Allan Thomson
Los Angeles, Calif.

A. It’s hard to know. A Dynakit or a Heathkit is usually worth fixing; some other brands/units may not be. Your logical first step is to test the tubes. When each tube is in the tester, tap it gently several times. If the tester reading changes or the “short” light flashes, reject the tube. Also be prepared to help remove any oxidation from the tube pins and the socket contacts. You should also inspect all the soldered connections carefully. Any that look suspicious—particularly those that have several wires going to one lug or solder point—should be resoldered.

If you are tuned to a weak or distant station, the FM signal reaching the tuner’s antenna terminals for the same reasons that a TV picture will sometimes be affected when a viewer moves about the room.

If you are tuned to a weak or distant station—or if your antenna is somehow inadequate—also show the same approximate readings on the tube-tester meter to ensure proper output-stage balance.

The second step, which will probably eliminate most of the hum and static, is to tighten all screws and nuts holding down the printed-circuit boards, the terminal strips, input jacks, transformers, and so forth, to the chassis. In most kit amplifiers, these nuts and bolts loosen with time—or perhaps they were not adequately tightened originally. Proper electrical grounding of many sections of the circuit depends on having these components in firm mechanical—meaning electrical—contact with the chassis.

You will probably find two or more tubular filter capacitors (cylindrical objects, perhaps 2 to 3 inches tall) with one end fitted into cutouts in the chassis or in a metal or plastic supporting plate. If screws are holding the mounting plates, it’s important that they be tight. If the capacitors are held in place by having their prongs twisted through slots in the metal chassis, be sure they are securely locked and soldered into place.

As for the noisy controls, a shot of spray from a TV-tuner cleaner spray (available from any radio or electronics parts store) will cure that problem. The spray hose should be positioned so that the fluid gets into the control. After spraying, rapidly rotate the control several times. It might not be a bad idea to spray a little cleaner into the tube sockets also to help remove any oxidation from the tube pins and the socket contacts. You should also inspect all the soldered connections carefully. Any that look suspicious—particularly those that have several wires going to one lug or solder point—should be resoldered.

If the above suggestions do not solve the problem and you are not competent to go further on your own, a professional audio repairman is your best bet. However, I would suggest you get an estimate on the job first, since his legitimate service charges may exceed the value of the amplifier to you.
Here's an easy way for you to get manufacturer's information about products advertised or mentioned editorially in this issue. Just follow the directions below...and the literature will be sent to you free of charge.

**a.** Tear out one of the perforated postage-free cards. Please print or type your name and address where indicated. Use only one card per person.

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

**c.** Simply mail the card. One card per person is all that is necessary. No postage is required.

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

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**FREE INFORMATION SERVICE**

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Sansui unveils its

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MODEL 9090 DB and MODEL 8080 DB.
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Turnover switches with tone defeat and two stereo headphone jacks are exclusive to the 9090 DB.
The new SANSUI 9090 DB is not only SANSUI’s new top receiver. We believe it is the finest on the market. Read its description and we believe you will believe as we do.

Imagine yourself at the controls of the Dolby*ized 9090 DB just as you see them, life size, on these pages. As you touch them in real life you will be thrilled at the beautiful way the 9090 DB responds to your every wish. You will love how the controls give you a sense of power, and how this magnificent receiver permits that instant surge, that instantaneous response you want to hear through your speakers.

The built-in Dolby Noise Reduction System does more than correctly equalize and decode Dolby FM. With it you can make and play your own Dolby-processed tapes from any source, even if your recorder lacks its own Dolby circuitry. The 9090 DB’s triple tone controls give you a choice of 2 different frequencies where the treble and bass action begins, as well as a studio-type equalizer for the vital “presence” midrange. And our easy-to-read twin power meters show you at a glance how much power your speakers are getting.

Look at what the Model 9090 DB stereo receiver offers. Even better, listen to it for yourself at your nearest franchised SANSUI dealer.

**AUDIO SECTION**

**Power Output:**
125 watts/channel, min. 5WMS with both channels driven into 8 ohms from 20Hz to 20kHz, with no more than 3.1% total harmonic distortion.

**IM Distortion**
less than 0.3% at rated input, RMS power output (7kHz: 7kHz = 6:1, SMPTE method)

**Frequency Response (1 watt):**
10Hz to 30kHz ± 1 dB from A to speaker terminations

**RIAA Phono Equalization:**
±0.3 dB, 30Hz to 15kHz

**Phono 1, 2 Sensitivity/Impedance:**
2.5mV/50k ohms

**Phono 1, 2 Maximum Input Capability:**
180mV at 1kHz, less than 3.2% total harmonic distortion.

**Hum and Noise:**
better than 80 dB (Aux, Tape Monitor)
better than 70 dB (Phono)

**FM SECTION**

**IHF Sensitivity:**
9.8 dBf (17µV)

**50 dB IHF Quieting Sensitivity:**
Mono: 10 dBf (39µV)
Stereo: 14 dBf (36µV)

**Signal-to-noise ratio:**
better than 70 dB

**Total Harmonic Distortion:**
Mono: less than 0.2%
Stereo: less than 0.3%

**Alternate Channel Selectivity:**
Better than 85 dB

**Spurious Response Ratio (IHF):**
better than 85 dB

**Stereo Separation:**
better than 40 dB

**Frequency Response:**
30Hz to 15kHz, ±0.6, -2.0 dB

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*SANSUI ELECTRONICS CORP.*
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SANSUI ELECTRIC CO., LTD. Tokyo, Japan • SANSUI AUDIO EUROPE S.A., Antwerp, Belgium

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The most powerful receiver in the current JVC line is the JR-S600, rated to deliver 110 watts per channel to 8-ohm loads between 20 and 20,000 Hz with no more than 0.1 per cent total harmonic distortion (THD). Backing up this power is a preamplifier fitted with the JVC SEA (Sound Effect Amplifier) graphic-equalizer system instead of conventional tone controls.

The FM/AM tuner section of the JR-S600 makes liberal use of integrated circuits, including a phase-locked-loop (PLL) multiplex demodulator, a quadrature detector for FM, and an AM tuner employing a single IC. The FM section has a built-in "noise-reduction" circuit, apparently a form of JVC's ANRS and an AM tuner employing a single IC. The JR-S600 features the radically different styling of the new JVC line. The front panel is molded of ribbed plastic, styled to resemble metal heat-sink fins. However, their principal noncosmetic function is to serve as handles for lifting the receiver, and they are very well suited to that purpose. Price: $750.

**Laboratory Measurements.** Following the standard preconditioning period (during which the top of the cabinet became quite hot), the amplifier delivered 128 watts per channel to 8-ohm loads at the clipping point. The 4-ohm output was 173 watts, and at 16 ohms it was 85 watts. At 1,000 Hz, the THD was below our measurement limit of 0.003 per cent until the output exceeded 10 watts. It measured 0.0056 per cent at 20 watts, 0.025 per cent at 120 watts, and 0.1 per cent at 130 watts (approximately the clamping point). The intermodulation distortion (IM) was under 0.02 per cent up to about 15 watts, reaching a nominal -±10-dB range at center frequencies of 40, 250, 1,000, 5,000, and 15,000 Hz. Above them is a slider balance control with a center detent and a slider volume control, both oriented horizontally.

The JR-S600 was switched off. The sole occupant of an aluminum panel section to the right of the dial area is a horizontal tuning control—actually the rim of a flywheel drive protruding slightly from the panel (there is a second flywheel within the receiver). The right section of the panel is devoted to the five vertical slider controls for the SEA circuit, which vary the response over a nominal ±10-dB range at center frequencies of 40, 250, 1,000, 5,000, and 15,000 Hz. Above them is a slider balance control with a center detent and a slider volume control, both oriented horizontally.

The other operating controls form a row of aluminum-finish pushbuttons across the full width of the panel just below the dial and SEA area. They include power and speaker switches (the latter for separate control of two pairs of speakers) and program selectors for AM, FM, PHONO 1, PHONO 2, and AUX sources. There are separate monitor buttons for two tape decks and a DUBBING button that cross-contacts the machines for copying a tape from either one to the other.

The JR-S600 AM/FM Stereo Receiver

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(Continued on page 44)
You might not know it, but cigarette smoke is mostly gas—many different kinds. Not just 'tar' and nicotine.

And despite what we tobacco people think, some critics of smoking say it's just as important to cut down on some of the gases as it is to lower 'tar' and nicotine.

No ordinary cigarette does both. But Fact does.

Fact is the first cigarette with the revolutionary Purite filter. And Fact reduces gas concentrations while it reduces 'tar' and nicotine.

Read the pack. It tells how you get the first low gas, low 'tar' smoke with good, rich taste.

Taste as good as the leading king-size brand.

And that's not fiction. That's a Fact.

Fact: The low gas, low 'tar.'

Available in regular and menthol.

only company to date that has advertised a high-fidelity product working in this manner. Class-D amplification is a pulsed system that takes advantage of the fact that the heat dissipation in a transistor is lowest when it is either fully on or fully off (in a normal amplifier, it is usually between those states). The signal handled by the class-D amplifier is a continuous stream of narrow pulses occurring at a frequency far above the audible range (typically several hundred kilohertz). Switching transistors are used instead of the conventional linear types generally found in audio amplifiers.

The pulses serve as a carrier for the audio modulation, which can be applied in any of several ways. Pulse-width modulation is probably the easiest to understand. The audio waveform is used to vary the width of the pulses passing through the amplifier. For example, as the waveform goes increasingly positive, it can be used to widen the pulses; the negative portion of the audio signal can be used to narrow them. The actual power dissipated within the amplifier is constant during this process.

To restore the audio signal at a high power level before it goes to the speakers, only a low-pass filter in the amplifier's operating area where the signals from the two stages combine is a potential source of distortion (it is similar to crossover distortion, though it does not tend to occur at the zero-voltage axis), but Hitachi was able, by means of an inexpensive circuit modification, to eliminate this almost entirely. The result is an amplifier whose distortion is at least as low as that of any comparable conventional amplifier.

This approach is not entirely new, since something similar was attempted in the ill-fated Mattes amplifier back around 1965. It used the low-power driver stages to feed the speakers at low levels and transferred the output to the more powerful class-B outputs as the signal increased. In a sense, it was an idea that was ahead of its technological time, for the low reliability of the semiconductors available at that time proved to be its undoing.

Superficially, the new Quad 405 "current dumping" amplifier would seem to be based on a similar concept, though with a bit of a difference. In essence, it employs a highly linear class-A amplifier to supply the voltage (and presumably the current associated with low-power outputs) to the speakers. A more powerful class-B amplifier is used to supply the heavy currents needed at high power levels. The aim was to effectively eliminate crossover distortion in a fairly powerful amplifier without going to class-A operation. We have not seen the Quad amplifier, but judging from what we have read about it, it does its job effectively and it is a very lightweight unit as well (it weighs about 20 pounds).

A relatively new approach to the "class" question in amplifier operation is being employed by a few manufacturers. Special monitoring circuits automatically adjust the bias applied to the output stage in accordance with the power output demands of the audio signal. The amplifier is therefore operating, from moment to moment, closest to the class that, in the view of the designer, produces the desired results. In general, the amplifier's operating characteristics are shifted to approach class A or class B, depending upon the signal.

If you feel that the question of "which class is best" is left unanswered, you are quite correct. Some amplifiers may in truth have audible advantages, but we have never encountered an amplifier whose superior characteristics—when there are any—were clearly linked to a specific mode of operation. There are many ways to design an amplifier, and I'm sure that the advocates of each technique can provide specific reasons for their particular approach. Perhaps it need not be repeated, but in all areas of high fidelity audiophiles should keep their eyes and ears fixed on results achieved rather than on the techniques used to achieve them.
**Technical Talk**

By Julian D. Hirsch

**CLASS A, B, C, D... AND G AMPLIFIERS:** Most people interested in audio components have by now heard the terms "class A" and "class B" applied to amplifiers. In the last couple of years, the "class-D" amplifier has received some publicity, and more recently we have heard about Hitachi’s "class-G" amplifier. These alphabetical classifications describe the electrical operating conditions of an amplifier, whether tube or transistor, and particularly how the signal waveform is handled from beginning to end of a full cycle.

Purely from the standpoint of linearity (inherent absence of waveform distortion), class-A operation is superior to the others. The tube (or transistor) is biased so that current flows in it throughout the entire signal cycle. Figure 1 illustrates this condition, in which the current drawn (at full signal output) varies between somewhere near zero and approximately twice the quiescent or no-signal level \(I_0\) for the duration of the cycle. Since the current curve is symmetrical with respect to \(I_0\), the average current passing through the tube or transistor is constant whether or not there is a signal present.

Under no-signal or very-low-signal conditions (which is the way high-fidelity amplifiers operate much of the time), the efficiency of a class-A amplifier is essentially zero, meaning that there is a constant power-supply input with little or no signal output (this is analogous to the miles per gallon achieved by a car standing with its motor idling). But even at full power, the class-A amplifier is less than 33 per cent efficient. This is no problem in preamplifier or other low-level stages which consume little power, but it requires huge power supplies and heat sinks for the output stages of a powerful solid-state amplifier.

In class-B operation, the output device conducts for at least half of each full cycle. This is shown in Figure 2, in which the quiescent current \(I_0\) is quite small compared with the maximum drawn at the positive signal peak. When the signal waveform goes slightly negative, the output transistor is cut off so that it draws little or no current, and the output waveform is clipped accordingly. This is obviously a severely distorted condition, but if a *second* transistor is operated during the negative half-cycle of the signal waveform and the two outputs are combined, the resulting waveform is a reasonable replica of the input signal. (This mode of operation, called "push pull," is used in virtually every audio power amplifier designed for home music systems, whatever its class.)

Since the power-supply current \(I_0\) through the output transistors under no-signal conditions is much less than in class-A operation, a class-B amplifier runs relatively cool when not driven very hard. And, at full power, it is about twice as efficient as a class-A amplifier. The result is high power capability without the cost, size, weight, and current-consumption penalties exacted by class-A operation. Many amplifiers are operated with their biasing set between the class-A and class-B conditions, and these class-AB (or simply class-B) circuits are by far the most used in high-fidelity amplifiers.

Insofar as its output devices are linear and perfectly matched in their characteristics, the distortion of a class-B amplifier stage need not be any greater than that of a class-A amplifier. Such perfection does not exist in real life, of course, and there is always therefore some mismatch between the two halves of the waveform at low values of the signal waveform, where the transition from one side to the other of the push-pull pair takes place. This can be minimized by biasing the stage toward class-A operation, but such biasing reduces both output and efficiency. The inevitable mismatch gives rise to the effect known as "crossover distortion," which appears as a notch or jog in the waveform near where it crosses the zero-voltage axis. These small discontinuities are widely believed to be most responsible for the kind of distortion heard in transistor equipment. That point remains debatable, but we can all agree that any distortion is undesirable.

A third operating condition, known as class C, is widely (and mostly) used in radio-frequency transmitters and therefore need not concern us unduly here. Briefly, a class-C stage conducts for less than half the signal cycle. In audio terms, this represents almost total distortion, but in a transmitter the class-C stage serves its purpose very well.

The current Federal Trade Commission regulations on the rating of amplifier power have made the industry painfully aware that the one-third full-power pre-conditioning level is uncomfortably close to the 40 per cent area where class-B amplifiers are least efficient. In order for many amplifiers to meet the 1-hour, one-third-power requirement, it has been necessary to grossly overdesign their cooling systems; this has meant very large heat sinks and (in some high-power units) fans. Clearly, a more efficient amplifier would be a boon to both manufacturer and consumer, for it would make possible a smaller, lighter, cooler, and (one hopes) cheaper product.

One such approach is generally referred to as "class D," and it has been proposed for some years. Although various manufacturers are reported to be working on such systems, Infinity is the

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**Tested This Month**

- JVC JR-S600 AM/FM Receiver
- Marantz 1250 Integrated Amp
- KLH Model 354 Speaker System
- Micro Seiki DDX-1000 Turntable and MA-505 Tone Arm
Responsive. Sensitive. Bold when they should be. Subtle when they should be. For a living room rock concert... or a tranquil laid-back evening spent with your moods. Eyes closed, ears open. Feet tapping or feet up.

The new Jensen Spectrum Series has achieved a new plane of sound reproduction. Remarkable clarity. Admirable quality. And fullness of sound from the deepest lows to the top-of-the-scale highs.

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The Jensen Spectrum Series speakers, Models 520, 530, 540 and 550. Perhaps the clearest sound reproduction you have ever encountered.
Tape Horizons

By Craig Stark

SYNC AND SWIM

One of the questions readers often ask me is to explain the difference between the "sound-on-sound" and "multi-sync" (also known as "Sel-Sync," "Simul-Sync," and other trade names) provisions found on many of today's open-reel tape decks. While both features are designed to permit you to create a composite out of individually recorded parts (that is, separate tape tracks), the two approaches are fundamentally different.

First for sound-on-sound. Suppose Smith is set to play three different parts of a pop number: an acoustic guitar, a Hammond organ, and an electric guitar. His friend Jones will be on the drums but can't come over until later. If you use a regular three-head stereo tape machine, you must go the sound-on-sound route, and you end up with mono, not stereo.

You start by recording Smith's acoustic guitar on the left channel (track one). Then, when he's ready to add the organ part, Smith must listen (via headphones, probably) to the track he has just laid down in order to stay in time with the already recorded guitar. Ah, but right away you have problems—several, in fact. First of all, if Smith merely listens to track one and records on track two, he won't be in time with himself on the tape. The playback head he listens to is physically at least an inch or so away from the record head laying down the organ track, and that's the distance by which the recorded organ will be out of synchronization with the guitar—amounting to a significant fraction of a second at 7 1/2 or even 15 ips. And second, of course, if you use track one for the guitar and track two for the organ, where do the electric guitar and drums go?

The sound-on-sound technique is a solution to both difficulties, although perhaps not the best solution, as we shall see. It involves re-recording the contents of track one as you record the organ. This is accomplished by putting the track-one channel into the playback mode, connecting its output to the line input of track two (the track-two microphone input is used for the organ), and recording the two inputs simultaneously, using the microphone mixing facilities to adjust their relative balance.

If the balance and playing are good, you now no longer need the original track one, so to get Smith's third part, the electronic guitar, you have him listen to a playback of the right channel, which you simultaneously re-record along with his new part, back onto track one. This leaves track two available for the drums, and the job is done.

All this re-recording exacts a price, however. Any frequency-response variations in the record-playback of your deck are magnified with each recording generation, as are tape hiss, wow, flutter, modulation noise, and the like. Further, while the "mix" may seem good initially between parts one and two, when three is added you might decide that number one should have been more prominent—but there's no going back to it at that point.

"Multi-sync," an important feature of four-channel decks in particular, eliminates these problems by switching just those sections of the record head where tracks have already been laid down into temporary playback use. There's likely to be a slight loss of playback fidelity in the "sync" mode (most record heads are not really optimum for playback), but you need only enough fidelity for Smith and Jones to hear the beat and stick with it. With a four-channel machine each instrument gets its own track, and all wind up in sync. The final mixdown—customarily onto a second, stereo recorder and usually using "pan pots" to "place" each track within the left-to-right stereo panorama—is the only re-recording step, and if balances or placements aren't right the first time, the original tracks are still there for a second or third try.
dealing somehow with the difficulties, and solving the problem of reliable interconnecting cables. (4) Above all, duplicating the test conditions specified by the FCC so that designs can be tested (the problems of creating a uniform reference r.f. field of carefully controlled strength are giving pause even to the FCC at the moment).

Add to these some concerns reflecting the special nature of the high-fidelity industry: For example, can the cost of all the above be paid for by a product such as a preamplifier, which is not designed to sell at a remarkably high profit margin and which will probably not be sold in great quantities anyway? Some audio manufacturers oppose bandwidth limiting in their products on aesthetic/philosophical grounds; what will be their reaction when they are called upon to insert r.f. traps and filters? There is, in fact, some evidence that conventional r.f. filtering techniques have in the past been responsible for a degradation in the performance of devices such as phono preamplifiers.

The problems of the audio industry will, of course, become the problems of the audio consumer in time. Prices will go up whether you require heavy r.f. suppression in your location or not since the manufacturer will not be permitted to manufacture any but r.f.-suppressed units. It is likely that some compromises in performance, measurable if not audible, will characterize at least the first equipment built to meet the proposed regulations. Separate components and add-on accessories will present difficulties when interfaced, with who-knows-what result. Other advances in the state of the art will inevitably be held back as efforts are diverted to r.f. interference.

And, on top of all this, CB'ers broadcasting at illegal power levels with readily available linear amplifiers may still continue to come crashing through your curtain of protection and into your living room. Indeed, many wonder whether the coming onslaught of radio energy can effectively be shielded against or filtered out by any practical, general "fix" (as opposed to specific cures for specific cases).

The situation, in a nutshell, is this: The audio industry would of course like to eliminate RFI completely, but many of its members would like to work toward this goal in their own way, perhaps with specific rather than blanket cures. (The question of whether they can be trusted to do this, and with all deliberate speed, remains a question, of course.) They would also like—without much hope of getting their wish fulfilled—to see the existing laws on illegal CB transmissions and equipment more vigorously enforced. Also, they wonder whether the indiscriminate licensing of CB operators, with its potential for throwing the television and home-entertainment equipment of millions into chaos, can really be in the interest of the greater good. We wonder also.

The issue is a complex one. Probably it cannot be argued on moral grounds, although it's unnervingly tempting to try to do so. What will probably help most right now, while things are pending in the Congress, is the weight of public opinion. So if you have opinions on this issue or any of its aspects, you're urged to make contact with your legislators in Washington. Your calls and letters will be doubly appreciated because, unless I miss my guess, the good senators and congressmen are just as disturbed (and even more mystified) about all this as you and I.

For the discriminating audio enthusiast: AM, FM and FM Stereo with Phase Locked Loop Multiplex with outstanding reception and positive separation. Dual inputs with monitor and crossdubbing. Superb amplifier for dramatic, full depth performance with power to spare.

Did we say power? 43 watts per channel, minimum. RMS into 8 ohms from 20Hz to 20kHz with less than 0.4% Total Harmonic Distortion, no more than 0.4% IM Distortion and a 70 dB S/N Ratio.

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Maida SP3150
4-Way Speaker System. Overall frequency response: 25Hz to 22kHz; ±1dB, Impedance: 8 ohms; Power handling capability: 50 watts maximum music power.

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Direct Drive Turntable. Stroboscope allows you to adjust speed with pinpoint accuracy. 2-speed adjustments: 33 1/3 rpm turntable; 4-pole electronic motor; S-shaped tone arm with anti-skate.

Muida ... the stereo specialist.
Severe months from now, Stereo Review will be featuring a story on radio-frequency interference (RFI) in audio systems, which shows promise of becoming even more of a problem for audiophiles than it is right now. In the meantime, this is a good time and place to bring up an aspect of the RFI situation that the article will only touch on—the legal aspect.

In a remarkably short time, the emergence of strange voices saying odd things from the speakers of an audio system switched to the phono or tape input has progressed from being an astonishing novelty to a commonplace, full-blown nuisance. Not that such interference was unheard of up till a few years ago; rather, listeners afflicted with it often didn't know what they were hearing, since it consisted in many cases of unidentifiable noises. But now the citizens-band blitz of speech transmissions (tending to be heard, often quite distinctly, as speech when they get into an audio system) has clearly identified the culprit, and tempers are beginning to flare.

To the audiophile newly conscious of RFI, it is a specter of considerable menace: an intolerable invasion of his privacy, a persistent violation of his guaranteed right to pursue his own private, law-abiding activities within the sanctity of his own home. The fact that the CB’ers, doing their “rubber-ducky 10-4” number piggyback on your Mozart, are oblivious to their interference with other people’s pleasure only adds insult to the injury and helps explain why many generally mild-mannered audiophiles are often on a very short fuse where this subject is concerned.

When the lot next door is suddenly converted into a boiler factory, a homeowner hardly expects the government to tell him to get earplugs or move. Nor does the pollution-conscious citizen anticipate advice on how to choose a gas mask when he complains to city hall about harmful industrial emissions. Is it possible that the government will remain indifferent when the sanctity of an individual’s audio system is invaded as sudden, as imperious a fashion? In a word, yes. The rules say, in effect, that broadcasters and other R.F. sources operating within constraints imposed by the FCC have the right to continue unimpeded by concern for interference with your audio system. If you have a piece of equipment that is acting as an involuntary receiver of such broadcasts (no matter whether it is a multi-kilobuck stereo system, a cheap table record player, or a gold filling), it is a matter strictly between you and—if you can get him involved—the manufacturer of your equipment.

Presumably this rule was enacted in the interest of the greater good, and indeed the case for commercial and certain types of amateur radio broadcasts being invaluable public services is as strong—or as weak—as ever. But many question whether a radio medium such as CB, used heavily for personal chitchat (and as a means of thwarting traffic laws) is really worthy of such protection. However, as radio amateurs point out, CB is only one of many interference sources, even if it is now the most obvious and widespread. The goal, they say, should be to eliminate all interference effects, no matter from where. What about that?

By the time you read this, the Goldwater-Vanick bill, languishing from inattention in the 1976 Congress, will almost certainly have expired. However, the consensus is that it will just as certainly be reintroduced in a similar form during 1977, and with a good deal more Congressional support. The G-V bill proposes several changes in the Federal Communications Act, the charter under which all forms of radio and radio-related communications operate in this country. One change would tighten up the restrictions on spurious radiation from any device capable of emitting r.f. energy (affecting only devices yet to be produced, of course). Another would mandate “the use of protective components in audio and visual electronic equipment which are capable of reducing interference to such equipment from radio-frequency energy.”

The intent of the bill is to empower the FCC to create standards under which equipment not complying with said standards cannot legally be sold or otherwise trafficked in. As a matter of fact, according to the strictest interpretation of the bill, noncomplying equipment cannot even be used.

So far there's been little jubilation over the government's plan to, in effect, outlaw RFI. Television manufacturers (TV sets tend to suffer from CB interference on several VHF channels) feel the proposed restrictions on the various sources of spurious radiation are not stringent enough. Other victims (and perpetrators) of interference have their own tales of woe. Bobbing around in this sea of controversy are the manufacturers of audio equipment—particularly of amplifiers, preamplifiers, and the like. For them, the only likely prospect is the bleak one of having to erect ever-stronger technical fortifications against a mounting deluge of radio energy, and perhaps having to do so in ways that are not sympathetic either technically (quality cost) or economically (dollar cost) to their general design philosophies.

A few conversations at random with audio-industry spokesmen have turned up the following difficulties they believe they face: (1) Finding and hiring experts in interference and coordinating their work with that of the existing engineering staff to create feasible, affordable designs. (2) Redesigning circuits and hence rearranging assembly lines for the insertion of r.f. suppression devices, possibly even redesigning chassis to improve their shielding. (3) Determining in advance what is likely to happen when their equipment is connected to other manufacturers' equipment.
However, if you want to alter pitch, a strobe ring and two potentiometers put electronic control at your fingertips.

**Electronic speed-switching to eliminate vibrations.**

Before Philips, starting, stopping and switching turntable speed from 33 to 45 rpm, were all done mechanically. The GA 212 controls all three functions electronically.

You don't push the GA 212's buttons (and maybe give the stylus the shakes), you merely touch them, feather-lightly. No mechanical pressure, no vibrations.

To further immunize this remarkable turntable against mechanical and acoustic feedback, Philips engineers float the platter and tonearm on a cushioned subchassis, while rigidly mounting the motor to the main chassis. Only a shock-absorbing belt connects platter and motor. The precision-ground belt also reduces rumble to inaudibility.

**Photoelectronic shut-off stops stutters before they start.**

Even to shut off the motor at the end of a record, Philips has replaced mechanics with electronics. Or, rather, with electronics and optics. For the GA 212 shuts itself off—simply and silently—by interrupting a light beam with a hidden lever that parallels the tonearm.

The tonearm, not so incidentally, is a fitting and flawless companion for the turntable. In engineering the arm, Philips eschewed seductive curves and played it straight. Because straight is the shortest (least mass) distance between two points. And less mass means less resonance.

Of course, the arm's geometry, adjustments and controls are as advanced as the motor's controls. And you know how advanced those are.

**PHILIPS**

**HIGH-FIDELITY LABORATORIES**

For the name and address of your nearest franchised Philips dealer, call 800-243-6100, day or night, toll-free.

(In Conn.: 1-800-882-6500.)
THE ELECTRONIC TURNTABLE.

An electronic computer controls the speed; electronic circuits control everything else.

Electronic devices are more accurate and more reliable than even the most sophisticated mechanical device. But you know that. What you may not know is that now the precision of electronics has been put to work in a turntable in ways electronics have never been used before.

The Philips GA 212 Electronic Turntable. More than mechanical. Less than $170.*

The turntable is the Philips GA 212 Electronic. It gets its go from a low-rpm, servo-controlled d.c. motor, much the way the best (read: expensive) turntables do. But then the GA 212 goes the best one better.

A computer to control the servo-control.

To ensure constant, accurate speed, the GA 212 regulates its motor with a mini-computer. The computer corrects even the slightest variations in speed at the speed of light. Electronically. Wow, flutter and drift are so low as to be virtually undetectable; cartridge tracking forces, stylus/groove friction, cleaning-brush drag and line-voltage fluctuations leave the GA 212's precise speed unaffected.

*Optional with dealer.
Power Plus.

The Scott R336 Receiver.

Power is important. But power alone is not enough. That's why the popular Scott R336 gives you all the power you need. Plus the performance features you expect.

The Scott R336 provides 42 watts minimum continuous RMS power output per channel. More than enough for most listeners. And both channels are driven into 8 ohms from 20 Hz to 20 kHz with no more than 0.3% total harmonic distortion.

Power? Sure. But check these important performance features many other receivers in this medium price range have sacrificed.

- IM distortion (lower than 0.15%). Far below the average. Provides cleaner sound and eliminates listening fatigue.
- Signal strength and center channel tuning meters. Provide simultaneous visual indication of correct tuning and optimum signal strength.
- Phase locked loop multiplex section. Maintains superior stereo separation. Remains in alignment for the life of the receiver.
- FET RF stage. Assures higher sensitivity and overload immunity.
- Log-linear taper volume control with detents. Spreads out volume levels. Provides finer control at low-to-moderate levels.
- Clutched bass and treble controls with detents. Allow altering the frequency response of one channel without affecting the other. Systems can be "custom balanced" to compensate for room acoustics, decor or speaker placement.
- Separate high-frequency noise filter. Permits cleaning up of noisy tapes, discs or broadcasts.
- Three position FM de-emphasis switch. Permits proper reception of domestic, Dolbyized or European broadcasts.
- Two completely independent tape monitors. Allow two tape recorders to be used simultaneously for direct tape-to-tape copying without passing through the receiver's electronics.
- FM Muting. Silences interstation hiss while the tuner scans the frequency spectrum.
- Pretuned LC notch filters in the multiplex. Reduce interference to a minimum.
- Signal strength meter circuit. Employs two point sampling for wider dynamic range.
- Over 120 db IF gain. Assures better limiting and better AM rejection.
- Instantaneous electronic protection circuit in the output stage. Employs voltage/current sensing to prevent output transistor failure and speaker damage.
- AM section designed around a tuned RF amplifier using J-FET. Improves signal-to-noise ratio.

And the Scott R336 is backed by a three-year, parts and labor limited warranty. Another very important plus.

WITH BSR,
YOU DON'T HAVE TO PAY EXTRA FOR THE EXTRAS.

Only BSR gives you much more without making you pay more.
With the 200 BAX you get the base, dust cover, three different spindles and a stylus wear indicator at no extra charge.
We also include an ADC induced magnet cartridge; so unique it's patented.
That's more than you get from Dual, Garrard or BIC.
And that's just the beginning.
The BSR belt drives have built-in features that make records sound better and last longer:
like a viscous damped cueing lever, calibrated force adjustment and anti-skate control.
The prices are much lower than you'd expect. Under $140 for the 200 BAX, under $120 for the 100 BAX and under $100 for the 20 BPX.
Sure, you could spend more for a turntable. But even then, you might not get as much as you get from BSR.
For full details, see your dealer or write: Consumer Products Group, BSR (USA) Ltd., Blauvelt, N.Y. 10913.

Dust Cover

ADC Induced Magnet Cartridge

Locking Umbrella Spindle
Rotating Single Play Spindle
Continuous Repeal Spindle

styles
Wear Indicator

Base

*Suggested manufacturer's retail price.

Matrix Phase Shift

Q. Proper phase relationships are an important factor in the acoustical reproduction of a signal, as evidenced by their consideration in speaker design and installation. Yet it is precisely these phase differences that are used to carry four-channel information in the SQ matrix process. Can we not therefore expect some sort of deterioration when playing an SQ recording through a two-channel sound system, compared with the results obtained from a conventional stereo record?

KENNETH SAX
Chicago, Ill.

A. As is my practice when dealing with matters outside my area of know-how (which seems to contract as the audio field expands), I forwarded Mr. Sax's question to Benjamin Bauer who, as the inventor of the SQ system, should, I felt, have a ready answer. He did. Mr. Bauer writes as follows:

"The debate as to the effect of phase on the quality of sound has been going on since a century ago, when Helmholtz pronounced that phase has no effect on sound. The very existence of this debate over so long a period suggests that the effect, if any, is tenuous. We have established that carefully tailored phase-shift networks have no audible effect whatsoever on the quality of signal. I refer specifically to the so-called all-pass "psi-networks" in which the function of phase angle vs. log frequency is a straight line. Such networks have been used for years in recording and broadcasting without any listener's even knowing it. Nevertheless, prior to using them in quadraphony, we tested them with sine waves, square waves, impulsive sounds, speech, classical music, and popular music using a panel of expert listeners. Our panel was unable to hear any difference with or without these networks in the circuit.
The relative phase shifts between channels of a stereo or a matrixed quadraphonic program are in a different category. They do cause changes—sometimes beneficial, sometimes deleterious—in the sound of the program. In the SQ system the front channels, which carry the sounds of the front stage, are recorded strictly in-phase as in a conventional stereo disc, and this accounts, in part, for the ideal compatibility of the SQ system. The back channels are recorded at a relative 90-degree phase angle which gives them a feeling of depth, and this accounts for the improved quality of SQ records even when reproduced on a stereo system.
It should be noted that the phase shifts in loudspeakers resulting from improperly designed crossover networks or drivers are a different matter, and the nature of their phase-shift functions is taken into consideration by experienced speaker designers."
Every Fuji cassette means beauty and purity in sound. No hiss, no dropouts. Widest frequency response and dynamic range. Total reliability. Fuji high-fidelity cassettes such as the FX will give you the best performance possible on your tape recorder. Already widely recognized by experts as the finest cassette in the world. Fuji. The cassette of the pro.
The fine tone-burst response of the KLH 354 is illustrated by these photos at (left to right) 100, 2,000, and 10,000 Hz, with the input signal shown immediately above.

10 watts into an 8-ohm load, and with the input adjusted to maintain a constant acoustic sound-pressure level (SPL) output equivalent to a 90-dB SPL at 100 Hz measured at a 1-meter distance from the speaker mounting plane. The distortion at 1 watt was very low—under 1 per cent from 100 to 60 Hz, rising to 6 per cent at 30 Hz and about 15 per cent at 20 Hz. At a 10-watt drive level, the distortion was 2 per cent at 60 Hz, and it was just under 1 per cent from 100 to 60 Hz, rising to 6 per cent at 30 Hz. The constant SPL measurement gave distortion readings very similar to those measured at 10 watts, except for slightly higher distortion below 40 Hz.

The impedance of the KLH Model 354 was about 10 ohms over most of its frequency range, with a minimum of 5 ohms between 80 and 200 Hz and a rise to 30 ohms at 40 Hz. Its efficiency was slightly higher than we have measured on some other acoustic-suspension systems, and it produced unconventional appearance derives from the fact that, instead of being mounted on a motorboard and a wooden base, it is supported by three symmetrical placement alumina struts emerging radially from the motor housing. The full-size (12-inch) aluminum platter, which weighs about 6 pounds, rests on the motor and hides it from view, so that the only visible parts are the three mounting supports and the platter. A neon lamp located just outside the platter’s edge illuminates the two rows of raised stroboscope bars along its periphery.

Below each mounting strut is a rubber "foot" coupled to the strut through a shock absorber or compliant damped suspension. A large knurled wheel adjusts the height of each foot individually over a range of about 3/4 inch for table-top leveling. The DDX-1000 turntable connects to an external control box through a 3 1/2-foot cable. The box, which is about 8 1/2 x 4 x 3 inches, has a panel with four buttons and two knobs. A push-on/push-off button controls the power to the unit. A light touch on either of the two speed-selector buttons sets the platter in motion at 33 1/3 or 45 rpm and also lights a red LED near the button. Above each speed selector is its own vernier adjustment knob with a nominal range of ±6 per cent. Between them is a stop button which turns off the motor but leaves a red LED glowing to show that the power is still on.

A black plastic cap, extending about an inch above each mounting strut, serves as a cover for the shock absorber and as a mounting post for a tone arm. A special arm-mounting plate is supplied with a universal cutout adaptable to most separate tone arms. (An optional arm-mounting plate is available with an elongated cutout for the SME 3009 arm.) A hole at the other end slips over the mounting post, and the plate locks firmly into position with a set screw. The mounting plate can be rotated to place the arm base from 7 1/4 to 9 1/4 inches from the turntable center, enabling stylus overhang to be set readily. Since there are three mounting posts, it is possible to install up to three tone arms simultaneously on the DDX-1000.

Micro Seiki also makes a high-quality, dynamically balanced tone arm, the Model...
A speaker unlike any other.

The Acoustic Matrix enclosure yields performance unattainable with a conventional wood enclosure.

Nine drivers are mounted in the Acoustic Matrix enclosure, four on each rear panel and one facing forward.

Introducing the Bose 901® Series III.

In 1968, Bose introduced an unconventional loudspeaker system: the legendary Bose 901. Now, we are introducing a new speaker of revolutionary concept, design, materials, and performance: the Bose 901 Series III.

What you will hear.

You will be struck by a sense of immediacy and presence, spaciousness of sound, and accurate stereo image almost anywhere in the room. Equally startling are the realism and accuracy of the timbre of each instrument, the clarity and dynamic range of the deepest bass notes, and the precise definition of individual instruments.

Efficiency

Most dramatic, however, is the remarkable efficiency with which this level of performance is achieved: the new 901 Series III can produce the same volume of sound with a 15 watt amplifier as the original 901 with a 50 watt amplifier. This dramatic breakthrough in the basic economics of high-fidelity makes it possible to put together a high performance component system at a lower price than was previously possible, even though the 901 Series III is a more expensive speaker than its predecessor.

Technology

Spectacular performance and efficiency are the results of proven Bose design concepts and technological innovations that include the unique, injection-molded Acoustic Matrix enclosure and a new, ultra-high-efficiency driver.

At the same time, the 901 Series III is (as is the original 901), a Direct/Reflecting speaker with a separate electronic equalizer.

To appreciate the spectacular performance of the Bose 901 Series III, simply ask a Bose dealer to play the 901 III in comparison to any other speaker, regardless of size or price.

For a full color 901 III brochure, write Bose, Box SR1, The Mountain, Framingham, Mass. 01701. For the nearest Bose dealer, call (800) 447-4700. In Illinois call (800) 322-4400.

The Mountain, Framingham, Mass. 01701.
The amplifier's high gain. The microphone measured and especially noteworthy in view of 10 volts, one of the best figures we have measured input instead of the shorted input of ten used. The microphone input had about the unweighted and is made with a normally terminated input (or 0.5 millivolt at a phono input) for a gain, requiring only 49 millivolts at a high-level inputs and -75.5 dB through the re-ferred to 10 watts, was -80 dB through the high-level inputs and -75.5 dB through the phono inputs. This represents excellent low-noise performance since our measurement is unweighted and is made with a normally terminated input instead of the shorted input often used. The microphone input had about the same sensitivity as the phono input (0.55 millivolt) with a -67-dB noise level, reflecting the flat microphone-amplifier response instead of the high-frequency roll-off of the phono circuit's RIAA equalization.

The phono inputs overloaded at 300 millivolts, one of the best figures we have measured and especially noteworthy in view of the amplifier's high gain. The microphone overload was at 360 millivolts, making inadvertent overload and distortion an unlikely possibility. The conservative design approach of the Marantz Model 1250 is perhaps best illustrated by the fact that its main amplifiers require only a 1.7-volt input to drive them to the clipping point (1.43 volts for rated output), yet the preamplifier section can deliver 13 volts (rated 10 volts) before it clips! Apart from the huge reserve margin this gives to the amplifier, it means that the power amplifier can be driven by just about any preamplifier or accessory device and that the preamplifier in the Model 1250 can in turn drive just about anything without exceeding its capabilities.

Comment. On the rare occasions when we come across a product as outstanding as the Marantz Model 1250, we make an extra effort (since nothing is perfect) to find a weak spot. Try as we might, we could not fault the amplifier. No test, either by measurement or by use, revealed any respect in which it fell short of its potential. This may not mean that it is perfect, but it does mean that we couldn't find any limitations.

The operating controls have a smoothness and positive "feel" that are consistent with the image of quality associated with a top-end amplifier from one of the most highly respected names in the industry. There are no unwanted noises, switching transients, or the like when anything is pushed or turned. The amplifier's protective relay does not connect the speakers until all turn-on transients have subsided, and it disconnects them first when it is shut off. For all practical purposes it is a noise-free amplifier.

For those who are impressed by transient response and slew-rate performance (we have some reservations about their significance to the listener), we can say that the rise time of the amplifier, including the preamplifier section, is about 1 microsecond and that the slew rate is about 30 volts per microsecond. Clearly there have been no sacrifices in these respects in the design of the Model 1250.

We suspect that the true appeal of the Marantz Model 1250 will be to the advanced tape recordist, who will appreciate its remarkable taping flexibility. The possibility of controlling and using three separate programs simultaneously through the same control amplifier is a little mind-boggling, but it works, and very well. The RECORD SELECTOR controls are so logically marked and designed that their use becomes almost automatic after a brief period of familiarization.

When it is considered that most integrated amplifiers whose electrical performance compares with that of the Marantz Model 1250 not only lack its complete operating flexibility but are more expensive, it begins to appear that the Marantz Model 1250 is something of a "best buy" for those who are in the market for a powerful, state-of-the-art amplifier that is distinctly different from its competition.

Circle 106 on reader service card

The Marantz Model 1250 has relatively high gain, requiring only 49 millivolts at a high-level input (or 0.5 millivolt at a phono input) for a reference output of 10 watts. The noise level, referred to 10 watts, was -80 dB through the high-level inputs and -75.5 dB through the phono inputs. This represents excellent low-noise performance since our measurement is unweighted and is made with a normally terminated input instead of the shorted input often used. The microphone input had about the same sensitivity as the phono input (0.55 millivolt) with a -67-dB noise level, reflecting the flat microphone-amplifier response instead of the high-frequency roll-off of the phono circuit's RIAA equalization.

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Circle 106 on reader service card

KLH Model 354 Speaker System

According to KLH, the Model 354 is somewhat more efficient than has been the rule for other acoustic-suspension speakers of this type. A Model 120 amplifier rating of 25 watts per channel is recommended, but the speaker can be used safely with amplifiers capable of delivering up to 175 watts per channel.

The cabinet of the KLH Model 354 is constructed of high-density particle board finished with a walnut wood veneer. The speaker mounting board is normally concealed by a black fabric grille. Removing the grille reveals that the front of the speaker is finished in walnut like its other surfaces, with four black "Hedlock" grille fasteners in the corners to secure the grille.

The KLH Model 354 is 26 inches high, 14 inches wide, and 12% inches deep; it weighs slightly under 50 pounds. An optional walnut-finish pedestal ($25 per pair) raises the cabinet three inches from the floor. The Model 354, like the other KLH speakers, is covered by a five-year warranty including parts and labor. Price: $250.

Laboratory Measurements. Our frequency-response measurements were made with the tweeter and mid-range level switches in their center, or flat, positions. Combining the curves obtained from a quasi-reverberant field measurement at frequencies above 300 Hz with a closely miked measurement at lower frequencies, we obtained a frequency-response curve that was notably uniform over the full measurement range of 20 to 15,000 Hz. Except for a bass rise of about 5 dB measured at about 50 Hz, the smoothed re-

(Continued on page 50)
Both of these decks will improve the sound of your cassettes. One even improves your tuner.

Introducing the RS-671AUS and the RS-677US with Dolby FM. Both decks will dramatically improve the sound of your cassettes. But with the RS-677US you’ll also get a dramatic improvement in the sound of your tuner. Like a quieter FM S/N ratio. Increased dynamic range. Even better FM reception.

And to improve the sound of your cassettes both units employ a two-motor drive system. Including an electronically controlled DC motor used exclusively for capstan drive. The results: 0.075% (WRMS) wow and flutter for the RS-671AUS. And 0.07% (WRMS) for the RS-677US.

You also get a quiet S/N ratio of –65dB (CrO₂ tape, above 5kHz). As well as lower distortion and excellent transient response. The reasons: A Technics low-noise preamplifier. Selected low-noise transistors. And Dolby.

And both decks also give you an extremely wide frequency response of 30 Hz – 17kHz (CrO₂ tape). Thanks to the exceptionally narrow gap of our patented HPF heads.

You’ll also get quiet, highly accurate recordings, with plenty of dynamic range, because both decks have peak check VU meters. So you can precisely set recording levels for the barest minimum of overload distortion, especially when recording from live sources.

Both decks have memory rewind. Fast-acting silent electronic switching. A lockable pause control. Mike/line mixing. A CrO₂ tape selector. And with the RS-671AUS, you’ll get selectors for high and low bias. And with the RS-677US, memory play and solenoid activated remote control.

So when you’re ready to improve your system, the RS-671AUS and the RS-677US are ready for you.

*Dolby is a trademark of Dolby Laboratories, Inc.
Cabinetry is simulated wood.

Technics by Panasonic
some can dub in either direction. A few can even do this while playing a different program through the loudspeakers. However, with the Marantz Model 1250 it is possible to record a program from one source on one recorder, another program from a different source on the second machine, and still listen to a third program through the speakers.

The electrical-performance specifications of the Marantz Model 1250 are equally impressive, if not quite as novel. It is rated to deliver 125 watts per channel to 8-ohm loads between 20 and 20,000 Hz with less than 0.1 per cent total harmonic distortion. We will not attempt to repeat the full list of specifications included in the instruction manual for the amplifier, suffice it to say that they are representative of the finest contemporary amplifier performance.

The Marantz Model 1250 is a rather compact unit, especially considering its power and versatility. It is only 15½ inches wide x 12½ inches deep x 5¾ inches high, although it weighs a solid 40.7 pounds. In appearance it resembles the lower-power Marantz amplifiers. The panel is finished in satin gold with a silver bezel, made of a durable laminate (from about 100 to 5,000 Hz), its limited range prevented it from creating a grossly unnatural effect.

The filters had the rated 12-dB-per-octave slopes, and in their effects were as close to conventional in that they are joined without any addition to the preamp and main in jacks. These, too, are unconventional in that they are joined without external jumpers or use of a special switch. Instead, plugging a standard phone plug into one of the filters has the same effect as connecting a power-amp channel from the preamplifier output and connects it to the new source. Presumably, if one wished to use the Model 1250 as a preamplifier alone, one could insert shorting plugs into the two main in jacks and take the outputs from the preout jacks. A DIN socket duplicates the functions of each of the groups of tape-recording jacks. Left- and right-channel scope outputs are supplied for connection to a Marantz tuner having a built-in oscilloscope display (any external oscilloscope could be used, of course).

The spring-loaded speaker-output terminals are designed to receive the stripped ends of the wires, clamping them firmly when the spring is released. As would be expected from an amplifier with such elaborate input facilities, the Marantz Model 1250 has a good number of a.c. convenience outlets—six in all, with two of them switched. Suggested price: $699.95. An optional walnut-veneer cabinet costs $42.50.

## Laboratory Measurements

Following the usual one-hour preconditioning period at one-third rated power, the outputs of the Marantz Model 1250 clipped at 162 watts per channel from 8 ohms at 1,000 Hz. The outputs for 4 and 8 ohms were, respectively, 242 and 90 watts per channel.

At 1,000 Hz, total harmonic distortion (THD) was 0.005 per cent or less at outputs up to 10 watts, rising slowly to 0.012 per cent at 130 watts and 0.06 per cent at 160 watts just before clipping occurred. The intermodulation distortion (IM) was less than 0.025 per cent from 1 watt to the rated 125-watt output, reaching 0.058 per cent at 150 watts. It also rose slightly at very low power levels—to 0.19 per cent at 10 milliwatts. At rated output, the THD was essentially less than 0.04 per cent from 20 Hz to 20,000 Hz (approaching 0.01 per cent over much of that range). The distortion did not change significantly at lower power levels.

The tone-control characteristics had the expected shapes, closely matching Marantz's specifications. Using the 250- and 4,000-Hz frequencies resulted in a flat response between 150 and 5,000 Hz even at the extreme control settings, which changed the output by about ±8 to ±10 dB at the frequencies extremes of 20 and 20,000 Hz. The midrange control action was centered at about 900 Hz with a maximum range of ±7.5 dB. Although it affected a wide range of frequencies (from about 100 to 5,000 Hz), its limited range prevented it from creating a grossly unnatural effect.

The filters had the rated 12-dB-per-octave slopes, and in their effects were close to ideal as conventional fixed filters can be. The high-frequency cut-off (the 3-dB point) was at about 8,000 Hz, while the low-frequency cut-off was below 30 Hz. The low filter reduced the output by 12 dB at 15 Hz and by 30 dB at 30 Hz (Continued on page 48)
RESEARCH DELIVERS
A Quantum Jump in Record Care

New D3 Fluid

1. Unmatched activity plus safety to vinyl additives (the critical compounds of longevity).
2. A secret non-adhering anti-static system that is measured in parts-per-billion!
3. A special chemical "release system" (pat. pend.) that allows suspended contaminants to pull away from critical micro-grooves.

The Systems Approach
Of the Discwasher Brush

D3 plus the patented directional micro-fibers and absorbent backing remove—rather than line up—all dust and suspended debris.

Research Delivers from
Discwasher Group
1407 N. PROVIDENCE
COLUMBIA, MO 65201
0.05 per cent at 75 watts and 0.1 per cent at 125 watts. The IM rose somewhat at very low power levels to a maximum of 0.45 per cent at 10 milliwatts.

At the rated 110 watts output, the THD was about 0.06 per cent below 100 and at 20,000 Hz, but it decreased to about 0.025 per cent between 500 and 3,000 Hz. At lower power outputs the distortion was substantially lower, typically between 0.005 and 0.015 per cent.

The SEA tone controls provided the versatility one would expect from a five-band graphic equalizer. Obviously they can create a greater variety of useful frequency-response curves than is practicable with more conventional tone controls, and they have the further advantage that the knob positions outline the approximate frequency-response curve.

The switched filters had marginally adequate 6-db-per-octave slopes, with their 3-decibel frequencies being approximately 100 and 4,000 Hz. The loudness compensation boosted both low and high frequencies at low settings of the volume control. The extended RIAA phono equalization was accurate within ±1 dB from 20 to 20,000 Hz, and it was within ±0.5 dB over the defined range of 50 to 15,000 Hz. There was a slight interaction with the phono-cartridge inductance, causing an increase in output at frequencies above 10,000 Hz. The effect was slight, however, amounting to about 1.5 dB at 15,000 Hz and 4 dB at 20,000 Hz.

The audio sensitivity for a 10-watt reference output was 62 millivolts (mV) through the AUX inputs, with a very low -77-dB noise level. The phono sensitivity was quite high, 0.62 mV, yet the noise was a low -74 dB and the phono preamplifier overloaded at a very high 280-mV input.

The FM tuner section had a usable sensitivity (in mono) of 11 dBf or 2 microvolts (µV). The stereo sensitivity was set by the switchable threshold at 27 dBf (12 µV). Quieting sensitivity (50 dB) in mono was 13 dBf (2.5 µV) with 1 per cent THD. In stereo, it was 36 dBf (35 µV) with 0.37 per cent THD. The ultimate S/N at 65 dBf (1,000 µV) input was 68 dB in mono and 67 dB in stereo. The respective distortions at that level were 0.06 and 0.085 per cent. The stereo distortion with 100 per cent out-of-phase (L—R) modulation was 0.11 per cent at 100 Hz, 0.036 per cent at 1,000 Hz, and 0.079 per cent at 6,000 Hz.

The FM frequency response was flat within ±0.5 dB from 30 to 12,000 Hz and was down 2 dB at 15,000 Hz. The phase-locked-loop multiplex circuit showed its effectiveness in the outstanding stereo-channel separation, which exceeded 40 dB from 40 to 3,000 Hz and was at least 30 dB from 30 to 15,000 Hz. The AM frequency response was down 6 dB at 75 and 3,800 Hz.

The other FM-tuner characteristics were also very good. The capture ratio was 1.36 dB at 65 dBf (1.33 dB at 45 dBf), with 65 dB of AM suppression (although the latter decreased to 52 dB at a 45-dBf input). The image rejection at 98 MHz was 83 dB. Alternate-channel selectivity was a very good 88 dB, and adjacent-channel selectivity was 6.5 dB. The muting threshold was the same as the stereo-switching threshold—27 dBf (12 µV). Pilot carrier leakage at 19 kHz was a low -75 dB, and hum was -69 dB. The FM muting worked well, but we often heard a "thump" when tuning on or off a station, which might be hazardous to small light-duty speakers if the volume were set too high.

In our tests, JVC's FM noise reduction worked about as well as the conventional Dolby FM decoding circuit, muting that it reduced but did not eliminate FM noise.

Comment. In its basic operating qualities, the JVC JR-S600 leaves little to be desired. It has an excellent FM tuner, an audio amplifier whose power output and distortion characteristics rival or exceed those of many fine separate amplifiers, and a "tone control" system whose versatility could be exceeded only by a much more complex octave-band equalizer. Add to these qualities an outstandingly quiet audio section and one of the highest phono-overload capabilities in the business, and the result is clearly one of the handful of top-ranking receivers on the market.

Circle 105 on reader service card

Marantz Model 1250
Integrated Stereo Amplifier

As well as being the most powerful integrated amplifier to bear the Marantz name, the Model 1250 has the distinction of including a unique tape-recording capability unlike any other we have seen. Many amplifiers and de luxe receivers have internal switching for copying from one tape deck to another, and when used with the Model 1250 the results are quite remarkable.

(Continued on page 46)
Big as life.

*FM STEREO*

88 90 92 94 96 98 100 102 104 106 108

*FM*

10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

*LOUDNESS*

*MONO*

*FM MUTING OFF*

*TAPE MONITOR*

*LEFT*

*RIGHT*

*VOLUME - BALANCE*

*DOLBY NR - DOLBY FM - DOLBY CAL - DOLBY REC LEVEL*

*CONTROL*

*TREBLE*

+2 +4 +6 +8 +10 +12 +14 +16 +18 +20

15kHz

3kHz

DEF

LEFT

RIGHT

*WATT POWER*

*WATT POWER*
## Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Power Output Min. Rms per channel, both channels driven into 8 ohms @ rated output Harmonic Distortion.</th>
<th>FM Sensitivity</th>
<th>Dolby Circuitry</th>
<th>Thin Power Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>6050</td>
<td>125 watts @ 0.1% THD</td>
<td>9.8 dBf</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>5050</td>
<td>85 watts @ 0.1% THD</td>
<td>9.8 dBf</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>7070</td>
<td>110 watts @ 0.2% THD</td>
<td>9.5 dBf</td>
<td>No</td>
<td>No</td>
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<tr>
<td>6060</td>
<td>60 watts @ 0.3% THD</td>
<td>10.3 dBf</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>5060</td>
<td>40 watts @ 0.5% THD</td>
<td>11.2 dBf</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>9090</td>
<td>30 watts @ 1% THD</td>
<td>11.8 dBf</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Model 6050**
- Two power output meters, two tuning meters.
- Triple tone controls. Turnover switches with tone defeat.
- -20 dB muting switch.
- Mic-mixing with mic level control.
- Two stereo headphone jacks.

**Model 5050**
- Two tuning meters.
- Mic-mixing with mic level control.
- High filter. Speaker selector.

**Model 7070**
- Two power output meters.
- Two tuning meters.
- Triple tone controls.
- Mic-mixing with mic level control.
- -20 dB muting switch.
- 7 position tape/play switch.
- Speaker selector.

*Note: Dolby Dolby®ized are trademarks of Dolby Laboratories, Inc.*

[Circle NO. 38 ON READER SERVICE CARD]
MA-505, that we tested in conjunction with the DDX-1000. The MA-505 has an S-shaped tubular aluminum arm with a low-mass cartridge shell attached by a bayonet connector. The arm and cartridge mass are balanced by a threaded counterweight, and vertical tracking force is applied by a spring within the arm.

The anti-skating knob, near the tracking-force adjustment, shifts the position of a wire relative to the arm axis so that the tracking-force spring exerts a component of force tending to rotate the arm toward the outside of the record. There are separate reference settings for elliptical and conical stylus; once set, the anti-skating torque varies in direct proportion to the tracking-force setting. A separate lateral balance weight compensates for any tendency of the S-shaped arm to move out of alignment.

Extending from the arm base is a lever that adjusts the height of the arm assembly to match that of the turntable. Another lever operates the damped cueing mechanism, and there is an integral arm rest with a lock. A platter reached operating speed about 2 seconds after one of the buttons was touched. The tone-arm tracking error was low—less than 0.4 degree per inch of radius (and usually much less). Its tracking-force calibrations were extremely accurate, with an error of less than 0.02 gram at any setting. The anti-skating compensation, like that of most arms we have tested, was slightly low when playing high-velocity test recordings. However, it was close enough to the optimum value to be considered satisfactory. The cueing system was very smooth, and the arm drifted outward only one or two groove widths during its descent. The low-frequency resonance with the Shure cartridge was at 8 Hz, an indication that the arm mass was relatively low. The capacitance of the signal cables and arm wiring was 80 picofarads per channel, which is compatible with the requirements of CD-4 cartridges.

The stylus-force dial (the larger black knob in photo) is located on the pivot structure above the tone arm and has a scale precisely calibrated from 0.3 to 3 grams at intervals of 0.1 gram. The anti-skating knob, near the tracking-force adjustment, shifts the position of a wire relative to the arm axis so that the tracking-force spring exerts a component of force tending to rotate the arm toward the outside of the record. There are separate reference settings for elliptical and conical stylus; once set, the anti-skating torque varies in direct proportion to the tracking-force setting. A separate lateral balance weight compensates for any tendency of the S-shaped arm to move out of alignment.

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- **Laboratory Measurements.** The Micro Seiki MA-505 arm was installed on the DDX-1000 turntable and a Shure V-15 Type III cartridge was mounted in the arm shell. The apparently complex series of setup adjustments on the arm actually made its installation simple and straightforward.

The turntable speeds were not affected measurably by line-voltage changes between 95 and 135 volts; they could be varied over a ±6 per cent range by the vernier controls. The platter reached operating speed about 2 seconds after one of the buttons was touched. The flutter (wobble) was 0.025 per cent, the lowest figure we have measured on a turntable and probably the residual level of the DIN test record used for this measurement.

Unweighted rumble was —33 dB, and spectrum analysis showed that it was predominately at 10 Hz with a broad distribution at lower frequencies. However, the higher-frequency rumble components dropped off rapidly, being 20 to 30 dB below the 10-Hz level at frequencies of 15 Hz or higher. Because of this, applying ARLL audibility weighting, which reduces the contribution of the lower frequencies, resulted in a reading of —63 dB, which is typical of the better direct-drive turntables on the market.

The mounting shock absorbers isolated the turntable against vibration more effectively than most conventional turntable suspensions. However, the unit was most sensitive at about 75 Hz, a frequency easily excited by any speaker system. Though better than average, the acoustic-feedback isolation of the DDX-1000 was therefore, according to our test techniques, not quite as good as its unusual mounting system might suggest. On the other hand, Micro Seiki states that the very low center of gravity of the DDX-1000, combined with the design of the mounting feet, provides high resistance to lateral vibration. Since our test technique applies only a vertical vibration component, it could not properly evaluate this characteristic.

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**Circle 108 on reader service card**
You may have noticed that few turntable manufacturers call your attention to the critical role of the tonearm in record playback. Dual is an exception. For years, we have been pointing out that the fidelity of reproduction and record life are significantly influenced by every aspect of tonearm design. Whatever the shape, materials, or mechanics of a tonearm, the goal is always the same: to maintain the cartridge in the correct geometric relationship to the groove and to permit the stylus to follow the contours of the groove freely and accurately. Whenever the stylus cannot follow groove undulations, it will gouge its own way. And as we have frequently reminded you, there is no way to repair a damaged record.

Why we want you to know more about tonearms. And why others may not.

Every tonearm designer should consider geometry, mass, balance, resonance and bearing friction. However, despite the simple fact that the shortest distance between two points is a straight line, some designers are more concerned with appearance. Hence, the curved tonearm, whose deviations from optimum design simply add mass, reduce rigidity and increase the likelihood of resonance. Which is why all Dual tonearms are straight.

Dual engineers have always designed for optimum performance, which depends on more than external shape. Stylus force is applied through a long coiled spring centered around the vertical pivot, and its accuracy is maintained independently of record warp or turntable level. So is the dynamic balance of the tonearm. And the anti-skating system is not only calibrated separately for all stylus types, but is self-compensating for groove diameter.

You might keep all this in mind when you are considering your next turntable. Chances are you'll want it to be a Dual.

United Audio Products, 120 So. Columbus Ave., Mt. Vernon, N.Y. 10553

Exclusive U.S. Distribution Agency for Dual

The Dual CS721. Fully automatic single-play with continuous repeat. DC, brushless electronic, direct-drive motor. Vertical Tonearm Control, anti-resonance filters, adjustable cue-control height and descent speed. 10% electronic pitch control, illuminated strobe. Less than $400, including base and cover. Dual CS704, similar, but with semi-automatic tonearm, lead-in groove sensor. Less than $310, including base and cover.

Specifications (DIN B):
Dual CS721: Rumble, >72dB; Wow and flutter: ≤±0.03%
Dual CS704: Rumble, >70dB; Wow and flutter: ≤±0.05%

Dual CS721
Gimbal-mounted Dual tonearms pivot horizontally and vertically on identical sets of pivot points and high-precision low-friction bearings. The metal of the pivot point is first hardened and then honed, a process which produces microscopically smooth surfaces. The ball-bearing races are only 0.157 inch in diameter. Bearing friction: vertical, \(<0.007\) gram; horizontal, \(<0.015\) gram.

Stylist force, applied by long coiled spring around vertical pivot, remains perpendicular to record even if turntable is not level.

The curved tonearm may appear longer than the Dual tonearm, but both actually have the identical effective length and horizontal tracking angle.

The Dual 1249. Fully automatic, single-play/multi-play plus continuous repeat. Belt drive, 12" dynamically-balanced platter, 6\% pitch-control, illuminated strobe. Less than $230.

Other full-size belt-drive models include: Dual 502, semi-automatic. Less than $160. Dual 510, semi-automatic, with lead-in groove sensor. Less than $200.

Specifications (DIN B):
- Rumble: \(-65\) dB
- Wow and flutter: \(<0.05\) %
RIP-OFFS: ONE MORE TIME

Following several columns on the subject and numerous other mentions of it in these pages, letters and cards about musical rip-offs have been buzzing about our offices like flies in the marketplace on a summer afternoon. I have been asked to reinforce my condemnation of rock plagiarizing from the classics, and I have been asked to condemn plagiarism in the case of classical composers as well ("pinching folk melodies"). I have been asked with what justification I condemn such as Emerson, Lake and Palmer when the results of what they do are so invaluable (?!), and when, it is assumed, I would defend the equivalent practice in the context of classical music. I have been told to accept the whole thing as a natural condition of music—and of the world—and I have been asked to please shut up about it all.

I have a certain sympathy with that last request, but the buzzing around the office doesn't merit it. Besides, I think, on the basis of the letters received, there is an awful lot of confusion on the issue. I am no pundit, but I think I see the situation clearly enough to function possibly as an arbiter.

Point one: plagiarism, as a matter of morality, is the use of someone else's invention without giving him the proper credit. A rip-off is the same thing. But it is also a rip-off, even if credit is given, if what is done with the other man's work is to make it less than it was before you got your hands on it. Handel, who was probably the greatest appropriator of other people's ideas in the history of music, invariably improved whatever he took. A few popular composers have managed to produce something on about the same level as the original work they took it from, but most have merely managed to whittle an inferior pop song or rock composition from what was originally a masterpiece. That is a rip-off, category two.

Which leads us to point two: using somebody else's melody is not necessarily a rip-off; it depends upon how it is used and why. Deliberate quotation, for example, is not plagiarism, for the listener is expected to recognize the source and to react to its placement in a new context. Thus Tchaikovsky did not plagiarize the Maestrale in his Overture 1812, and Berlioz did not plagiarize the Dies irae in his Symphonie Fantastique, and the Beatles did not plagiarize the Marseillaise, In the Mood, and Greensleeves in All You Need Is Love (thank you, Steve Simeis).

Nor are variations on a theme whose source is acknowledged necessarily plagiarism. No one in his right mind would contend that Vaughan Williams' Fantasia on a Theme of Thomas Tallis is a steal from Tallis, or that Delius' Brigg Fair is a rip-off of that rather well-known folk song. Ditto Beethoven's Diabelli Variations, Kodaly's Dances from Galanta, all the Bach chorales, and innumerable other pieces. And certainly the very titles of Copland's Billy the Kid and El Salon Mexico and Tchaikovsky's Capriccio Italien openly acknowledge their composers' debts to folklore elements.

And so we come to the unconscious rip-off, and classical music, I admit, is big on that: Beethoven's Eroica theme appeared first in Mozart's Bastien et Bastienne, and the "Ode to Joy" theme in a minor sacred work by Mozart. Debussy's La Danseuse Eblue features a theme from Grieg's Piano Concerto. And most, sublime (and pitiful), the half-mad Robert Schumann wrote down a theme he said was dictated by angels; sadly, it turned out to be an imperfectly remembered melody from his own Violin Concerto. Still, not all such anticipations are causal, and the line between memory and coincidence is also difficult to draw. If one really wanted to force the issue, he could take up what my friend Leonard Altman occasionally proposes—with a wicked look in his eye—as a fit subject for a Ph.D. thesis: Bach Precedents in the Dead Sea Scrolls.

But what Emerson, Lake and Palmer, Waldo de los Rios, and other hacks have lifted is not melodies but entire compositions, to which they have added little except a rhythm section, changing virtually nothing but the instrumentation and the length. This is clear-cut plagiarism when composer credit is claimed for the final product, and generally a rip-off, in the second sense, even when it is not.

When the original work happens still to be in copyright, it is legal plagiarism as well (as in The Barbarian). And so, point four: using somebody else's melody if it's copyrighted and you don't have permission and he catches you at it, is legally plagiarism. Here it doesn't matter at all how you treat the melody, what you make of it, or why you did it. You can feel morally pure and still get clipped for damages, for the law is not interested in aesthetics but in ownership. It happened to Richard Strauss. He quoted what he naively thought was a folk song in his Aas Italien. The song was Funerali Fantastici, and it was written by Luigi Denza only six years before Denza sued and won, Strauss paid.

In popular music, a fair number of songwriters have ended up paying royalties to other songwriters, and many more would have but that the copyright on the earlier work (if there was one) had run out. That doesn't mean that pop musicians are more dishonest than classical musicians. Rather, it goes back to two things. The first is, as mentioned before, that in classical music the melody is only a part of the work, whereas in a pop song the melody is the music. And second, that it's sometimes impossible to tell, in the misty state called inspiration, whether you are creating something or merely remembering something.
When your taste grows up, so should your cigarette.

What you want from a cigarette changes. Once I smoked just to be like everybody else. Now I know what smoking's all about. I smoke for taste. And Winston's real taste is what I want. Winston is for real.

The Pop Beat

By Steve Simels

NEXT BIG THING: HAWAIIAN?

In my capacity as Popular Music Editor here at what Joel Vance (in a thinly disguised ploy to get himself a raise) refers to as the “Best of All Possible Music Magazines,” I have, over the course of the last few years, received a lot of interesting letters from readers. Some are remarkably thoughtful reflections on things we’ve published (believe me, there are a lot of armchair rock critics out there who could put us professionals to shame), some are angry fan outbursts, some are threats, and a few are propositions (my favorite is the one from a girl in Arizona who informed me, pithily, “Face it, Steve, I’m a doll”). But recently I received one with a question in it that, to put it mildly, threw me for a loop.

“Where,” the correspondent inquired, “do you think pop music is going today, and how will we recognize it when we see it?”

After spending a few sleepless nights wrestling with that question and coming up with nothing more cogent than “to hell in a handcart,” I admitted that I was licked, and so, tailed between my legs, I availed myself of the sage advice of James Goodfriend, Stereo Review’s Music Editor. Jim may have noticed that I was unkempt, disheveled, and mumbling incoherently, but, as this is how I appear on most good days, he waited for me to make the first move.

“Jim,” I finally cried in desperation, “they’re on to me. The readers want to know where pop music is going, and I haven’t a clue. What do I tell them?”

Jim smiled at me with the air of a Borgia prince reaching for his poison ring.

“Hawaiian music.”

“Hawaiian music?” I repeated, feeling like Dustin Hoffman in The Graduate.

“Sure,” he said. “For the last thirty years, every time things have gotten slow in the record business, some executive predicts that Hawaiian music will be the Next Big Thing. It never fails.”

Now, I don’t know if Jim was aware that Don Ho (of Tiny Bubbles fame) has just gotten his very own daytime show on ABC, but the bizarre thing is that he just may be right. In fact, Hawaiian music is just as reasonable a prediction for the N.B.T. as reggae, jazz-rock, c- & w, or anything else you could care to name for the simple reason that it is highly unlikely that anything will be the Next Big across-the-boards influence on both music and pop culture. Two of the most visible stars of the decade, for example—David Bowie and Bette Midler—have been commercially successful, and they have been influential in the sense that they have inspired a host of imitators, but neither one of them, after the initial novelty wore off, could be said to have changed the way we live. The most that could be said about them—except for all Seventies stars, from Springsteen to Elton to the Eagles to Patti Smith, which is certainly a mixed bag—is that they’ve given us new wrinkles, small refinements of things that have gone before. They’ve pursued their own visions, to be sure, but they are hardly revolutionary.

Second, all of the profound social and musical changes of the recent past—the emergence of the big bands and then the crooners in the Thirties and Forties, the rise of rock-and-roll in the Fifties, the whatever-the-hell-it-was of the Sixties—have been largely youth-oriented phenomena. There are, however, a lot fewer teenagers today, percentage-wise, than there were ten years ago; their buying power, quite aside from the state of our national economy, has consequently decreased; and by all accounts they are, as a group, despite the dizzying developments of the last few years, a singularly jaded and complacent lot. Depending on the degree of your scorn for youthful folly, that may or may not give you hope, but it is unlikely that we will be seeing soon again a bunch of kids ripping out theater seats after hearing a new song.

WHAT WE CAN EXPECT, I think, is more of what we’ve been getting lately—disco. It may or may not be significant, but it is at least interesting that the only “new” music peculiar to the Seventies with any broad commercial appeal is dance music, music addressed not to the head (or even the heart) but to the feet, to the automatic motor response that is the real engine behind any dance craze. But its acceptance has been so easy, so natural, and so unhurried (even though many of its promoters are hurrying for the Big Bucks) that it is unlikely to be building up any kind of aesthetic backlash.

Last, and most crucial, the record industry in 1977 has grown to the point where, to put it simply, an Elton John is worth more to MCA than a Jaws. With stakes like that, the music moguls are understandably unwilling to risk money on anything not demonstrably marketable. An expensive flop like the notorious Martha Reeves album Richard Perry produced is to be avoided like another Great Gatsby, and that is a situation not exactly conducive to the greening of whatever boat-rocking young geniuses are still lurching out there in the musical wilds. At the same time, the number of people buying records has increased so that only a small segment of the total audience is necessary to support—profitably—almost any kind of artist. The c- & w folk don’t listen to jazz, discomaniacs couldn’t care less about John Denver, Framp-ton fans won’t scream for Earth, Wind and Fire, and Eagles rooters aren’t in the Kiss audience is necessary to support—profitably—almost any kind of artist. The c- & w folk don’t listen to jazz, discomaniacs couldn’t care less about John Denver, Framp-ton fans won’t scream for Earth, Wind and Fire, and Eagles rooters aren’t in the Kiss army, yet they all sell. The result is an incredibly compartmentalized listening audience, with everyone blissfully unaware of what his neighbors are into, and that kind of parochialism, while profitable for record companies and artists, is unhealthy even in the short run, most unlikely to produce any cross-fertilization or significant new musical discoveries.

So where do we go from here? The answer seems obvious: headfirst into The Bland. Audience are unwilling to sacrifice their ears, young people regard music as a kind of background activity slightly less important than television, and the record companies can’t afford to take chances (they never really wanted to anyway). Certainly there are and will continue to be exceptions; we will have a few more commercially successful breakthroughs or two. But these will only prove the rule, and barring something catastrophic like a war or a depression or the Second Coming, it’s hard to imagine the overall picture changing in any significant way. Hawaiian music? Why not? Do you really think it’s such a leap from the New Decadence to Grass Skirt Chic?
Find out why three bright young men left banking, teaching and insurance to sell Lanier dictating equipment.

Richard Marks
Former Banking Supervisor

"I never thought I was the type to be in sales. I have a master's in marketing and I saw myself in administration. But I also saw that things moved very slowly at the bank. Especially salaries and promotions.

"A friend suggested Lanier."

"So I looked into their record. They introduced seven new products in just four years. They had taken on IBM, Dictaphone and Norelco—and won. Lanier was a fast-moving, aggressive company. This year they even expanded into the automatic typewriter business.

"I liked what I saw."

"So I went to work for Lanier. I’ve been here 15 months, and so far I’ve doubled what I was making at the bank. I feel like I’m really getting ahead. And there’s room to grow. They’re looking for management from within.

"I feel like I’ve got a career at Lanier, not just a job."

Paul Lieberman
Former Teacher

"After several years of teaching, I was ready for a change. I wanted to work with a wider variety of people. More-aggressive people. Real professionals.

"I found them at Lanier."

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JANUARY 1977
As an audio component, the phono cartridge has a somewhat ambiguous status. For some it is a mere afterthought, "the thing with the needle" at the end of the tone arm that they paid a penny extra for when they bought their turntable. But the informed consumer knows that the performance of the cartridge is crucial to the long- and short-term quality of record reproduction. The truth is that regardless of the quality of the rest of the system, the ultimate "sound" of a phonograph record can be no better than the performance of the cartridge permits. On the other hand, almost all cartridges sold for use in high-fidelity component systems are good enough to extract reasonable quality from the majority of records. But because audible differences between cartridges are usually subtle (which is not to say insignificant) what is heard is therefore open to highly subjective interpretation.

Much of the mystique that has grown up around the phono cartridge arises from the fact that it has a well-nigh impossible task to perform, yet it manages to function with remarkable near-success. Though totally accurate and complete measurement of all the factors that control the sonic performance of a cartridge is probably not beyond technology's means, we aren't quite sure about what to measure—or the significance of the measurements we do make. This, of course, invites the exercise of personal opinions and prejudices. All cartridge manufacturers are fully aware of the numerous factors that complicate design. To note a few examples (in typical engineering language): torsional and transverse resonances in the stylus cantilever; interaction between the effective moving mass of the stylus system and the record's plastic compliance; the pros and cons of various transducing systems (the part of the cartridge that converts the physical stylus motion to an electrical output signal); and many more. This is not the place to catalog all these difficulties or the ingenious ways cartridge designers have found to get around them. Instead, what we're seeking is a sensible approach to cartridge buying that takes these problematic factors into account where they count.

Cartridges are analogous to loudspeakers in their function, both being electromechanical transducers, though operating in opposite directions. As is true with the speaker, cartridge design involves considerable art in combination with science. Also as with speakers, each cartridge design involves certain "trade-offs" that have been made to achieve particular performance goals. What meaning do these compromises have for the cartridge buyer, and how much influence should they have on his thinking before he goes about selecting a suitable cartridge for his music system? The answers to these questions will be more useful with the help of a little background information, especially about the types of cartridges available and their key features.

Most major cartridge manufacturers use one of these generating systems throughout their entire product line. Although each type has its theoretical advantages, the degree to which they are realized in practice varies with the manufacturer.

For many years, special sonic qualities have been attributed to the moving-coil cartridge. Although there may be a very slight theoretical advantage (in lower distortion) to the movement of a coil in a fixed magnetic field (as opposed to the variation of a field through a fixed coil), the moving-coil cartridge has compensating disadvantages. The need to wind an extremely small multi-turn coil (actually, two coils at right angles to each other) on a tiny bobbin makes moving-coil cartridges somewhat more expensive than most other magnetic material (not an actual magnet) is moved by the stylus system to vary the distribution of magnetic flux between the fixed coils. A subcategory of the moving-iron design is the "induced-magnet" type, in which the magnetic flux from one or more fixed magnets is induced into a magnetic element attached to the cantilever.
types. Their output voltage is usually much lower than that of other magnetic cartridges (with a few notable exceptions), and in most cases a special step-up transformer or a "pre-preamplifier" or "head amplifier" is needed to increase the signal output to the point where it is compatible with the phono-input requirements of typical preamplifiers. These accessory devices, in addition to being expensive, can degrade the signal-to-noise ratio of the system if not carefully designed and installed. Finally, stylus replacement usually requires return of the entire cartridge to the factory or to an authorized service facility.

In spite of these negative aspects, the fact remains that the moving-coil cartridge is today more popular than ever, and it is considered by many record-playing purists to be the best available type. At least two explanations come to mind (there are doubtless more). First, some moving-coil cartridges have a relatively short, direct coupling from the stylus to the coils, minimizing the effects of cantilever resonances on performance. Second, other types of magnetic cartridges are designed with a complementary action between their mechanical stylus resonance and the electrical resonance of their generating systems (determined by the interaction of the coil inductance with the total circuit capacitance) to produce a flat overall frequency response. When properly executed this can result in an impressively flat meas-

response of a moving-coil cartridge is determined, for better or worse, by its mechanical performance; there is no possibility of masking its mechanical characteristics—resonances and all—with electrical equalization. For flat frequency response a moving-coil cartridge's mechanical performance must be intrinsically very good, and some believe this counts in terms of the sound you hear.

There are only a few nonmagnetic cartridges available to the quality-conscious phonophile. Because of their total lack of winding inductance, they have the same quality of independence from external loading that characterizes moving-coil cartridges. Among the better known is the electret cartridge (manufactured by Micro Acoustics), which uses small capacitive elements to produce a voltage when "stressed" by the stylus.

The Stylus

A large part of a cartridge's performance (perhaps the most important part) is determined by something outside the cartridge body itself: the stylus. This is a carefully shaped and polished piece of diamond almost too small to see with the unaided eye. It must faithfully follow the microscopic undulations of groove walls whose scale is minute even compared to that of invisible dust particles. This is the almost impossible task mentioned earlier, since it is not reasonable to expect a stylus tip whose dimensions are larger than the recorded wavelength to follow the groove modulation accurately. In spite of this, the stylus manages to trace the complex record groove with remarkable accuracy.

Elliptical styli, now common at all but the lowest price levels, present a smaller radius (that is, a "sharper" edge) to the groove wall, and this improves the tracing of high frequencies. A variation of the elliptical stylus is used in CD-4 cartridges, which must reproduce frequencies up to 45,000 Hz—more than twice the highest frequency usually found on stereo records. These special shapes, known by various names such as Shibata, Pramanik, Quadrahedral, Hyperbolic, etc., not only have a very small edge radius to trace ultrasonic frequencies; they also have an elongated contact span in the vertical direction that distributes the tracking force over a larger area of the groove wall in the interest of reducing record wear.

The question of how to select a cartridge for your own system is no easier to answer definitively than the question of what speaker to buy or which neck-
PHONO CARTRIDGES...

tie; in all three cases subjective factors are disconcertingly significant. However, there are some guidelines that, if followed, can help prevent an expensive mistake.

Tone Arm and Tracking Force

The phono cartridge is as dependent on its tone arm as the speaker driver is on its enclosure. Fortunately, the matching of a cartridge to a tone arm is not nearly so critical as the speaker case, but a serious mismatch can be as damaging to the sonic result as an ill-designed enclosure.

If, like most people, you buy an integrated record player, the installation instructions will often specify a range of tracking forces over which the unit’s arm will operate properly. Even if no such information appears explicitly, it can sometimes be inferred with reasonable accuracy from the range of tracking-force adjustment provided by the arm. Make sure that the recommended force range of the tone arm encompasses the range of forces suggested by the cartridge manufacturer. Cartridges are specified over a range of forces (0.75 to 1.5 grams, for example) for several reasons. In a well-designed tone arm the cartridge can operate closer to its minimum rated force than in an arm having excessive pivot friction, incorrect anti-skating compensation, or so much mass that it cannot negotiate

the warps and ripples of an average record. In an inadequate arm extra force is needed to keep the stylus in reliable contact with the groove walls.

The tracking force of a cartridge is also related to the maximum recorded level it is to play. A record with low-to-moderate recorded levels can be tracked by almost any cartridge used at its minimum force. However, some records with extremely high groove velocities can tax the abilities of the finest cartridges used at their maximum rated forces. This is why the test records used by the laboratories to evaluate cartridges include extremely high velocity sections beyond the capability of practically any cartridge to track without distortion. Obviously, one cannot determine the limits of performance of a component without having a signal source that exceeds those limits.

If you have a good reason for doing otherwise, it is a good policy to operate any cartridge slightly above its recommended minimum tracking force (but never beyond the rated maximum force). The difference in record or stylus wear compared to operation at the minimum rated force will be small or insignificant, but the chances of having your musical enjoyment (as well as the records themselves) ruined by the “shattering” sound created by mistracking (the stylus’ loss of secure contact with the groove wall) will be less.

If you study the specifications and prices of cartridges carefully, you will find that the range of tracking forces tends to go down as the price goes up, although there are numerous overlaps and a few seeming contradictions. Low tracking force is desirable from the standpoint of record and stylus wear. Although it does not, in itself, have much to do with sound quality, a number of related parameters (such as stylus mass, which must be low to permit low tracking force) have a lot to do with quality. In fact, the recommended tracking force is about as good a guide to overall cartridge quality as any published rating (the lower the better, in general), assuming that the recommendation is honest and accurate. Note, however, that the tracking forces of CD-4 cartridges (if not the pressure on the groove walls) are often 50 to 100 per cent greater than those for stereo cartridges, and for good reason.

As with all the other components of a music system, it makes sense to match the quality of the cartridge to that of the record player. Even if a $200 moving-coil cartridge can be used in your $100 record player, you would probably be better off selecting a cartridge in the $30 to $40 range. This is especially true if the rest of your system includes a modestly priced amplifier or receiver and compatible speakers in the under-$100 range. It is unlikely that the investment in an expensive cartridge would pay dividends in sound quality unless the rest of the system were of comparable quality.

It should be equally obvious that a low-price cartridge (in today’s market, one with a list price of $30 or so) will usually not match the sound quality of a more expensive one. Such a high-tracking-force cartridge is suitable for a low-price record player, but it would be a poor choice for a $300 direct-drive unit, for example. In the $50 to $60 range, cartridges become very good, often rivaling much more expensive models, and they can be used to advantage in record players selling for $150 or more. If you decide on a de luxe cartridge, one priced from $70 to $100 or more, be prepared to make a comparable (substantial) investment in a top-quality record player as well as in an
equivalent amplifier and speakers (note that top quality does not inevitably mean top price, however).

**Cartridge Specs**

Do not be overly concerned about cartridge performance specifications. They can be used to compare models from a single manufacturer and as a rough guide otherwise, but the lack of universal standards for testing and rating cartridges makes it a risky business to compare competing brand models merely on the basis of advertised ratings. Any cartridge will be rated to cover the audible frequency range with a moderate variation (perhaps ±3 to ±4 dB on lower-price models to as little as ±1 dB on some of the finest ones). The same situation exists with crosstalk, or channel separation, which should be at least 20 dB in the mid-range (and preferably at least 10 dB in the 10,000- to 15,000-Hz range, where it is rarely specified). Almost any cartridge can meet these requirements, and some are far better, but that does not mean that their separation is *audibly* better.

The general similarity in rated performance of many cartridges suggests that they might sound pretty much alike. To a first approximation they do, which makes the task of selection both easier and more difficult: easier because it is harder to make a serious mistake (provided the tracking-force rating of the cartridge is compatible with that of the tone arm); more difficult because the subtle audible differences which may be important to you simply may not appear on the specification sheet—at least not in any clear-cut manner. In other words, if you are truly critical in your sonic tastes, there is no substitute for listening for yourself.

Some of these differences, as described by those who are able to hear and appreciate them, include such scarcely definable qualities as transparency, definition, a sense of "air" or ambience in the sound, superior stereo imaging, "sweetness," and the like. You should be warned again that, as of the moment, these qualities are not susceptible of proof, they are heard differently by different people, and they may in fact often be an expression of un-critical enthusiasm on the part of those who claim to hear them. This is not to denigrate the more esoteric, subjective aspects of sound evaluation. However, it is all too easy to "psych" one's self into hearing what one wishes to hear. Since the final judgment is ultimately in the mind's ear, this is of course a perfectly reasonable basis for selecting a cartridge—or any other component, for that matter. But don't expect to find these qualities defined in laboratory test reports or the manufacturers' numerical specifications (as opposed to advertising literature).

**FOCUS ON STYLUS**

The phono stylus does its work in a world whose dimensions are so small that they defy the probing of ordinary optical microscopes. Conventional photography simply cannot provide sufficient detail or depth of field on this sub-Lilliputian scale, but the scanning electron microscope, a rather exotic laboratory instrument and research tool, can—as the remarkable photographs (courtesy of Stanton Magnetics) on these pages amply demonstrate. —Ralph Hodges

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**Cartridge and Amplifier**

So far, we have been considering only the mechanical compatibility of the phono cartridge with the tone arm and a bit of the economic basis for cartridge selection. There is, in addition, an electrical interface to be considered, that between the cartridge and the amplifier. A considerable degree of standardization exists here, fortunately, making for easy matching of most cartridges to most amplifiers, but you should know that there is at least the outside possibility of an incompatible combination.

As pointed out earlier, magnetic cartridges in general depend on the load capacitance and resistance to equalize their outputs electrically for flat frequency response at high frequencies. This load is provided by the phono-cartridge inputs of the amplifier as well as the cables that connect the cartridge to them. A cartridge termination of 47,000 ohms (nominally 50,000 ohms) has long been accepted as a standard. Some amplifiers can be switched to load the cartridge with other resistances (such as 25,000 or 100,000 ohms) that result in a slight modification of the cartridge's response.

In recent years we have become more aware of the importance of the capacitive part of the cartridge load in determining final response. It is not very critical, and most cartridges work well with the typical circuit capacitance of 250 to 300 picofarads (pF). A few cartridges, however, should have a load of 400 to 500 pF for best results. Most CD-4 cartridges, on the other hand, should be loaded with not more than 100 pF (special cables are used to connect the tone arm to the amplifier to achieve this).

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Fig. 3. Note how the CD-4 stylus "fits" the angle of the groove walls to make contact over a line running up the wall rather than just at a single point. Magnification: 1,000X.

Fig. 4. Styli are attached in various ways. Here cement bonds the CD-4 tip to a base which is then affixed to the cantilever. Some styli are cemented directly or wedged into a tiny hole.
Unfortunately, the consumer has no way of knowing what the effective load capacitance is, and it can vary widely depending on the record player’s arm wiring, the connecting cables, and the amplifier’s own input capacitance. For most purposes you can use the record-player manufacturer’s figures for his arm-wiring capacitance as a guide, and our laboratory test reports on tone arms always include an actual measurement of this parameter. Since the audible effects of capacitance changes are usually about as subtle as those distinguishing the sound of one cartridge from another, many people simply ignore the matter. For others, it can be crucial. For example, the cartridge-coil inductance, interacting with some preamplifier circuits, can cause a gain (or a loss) of several decibels in the

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**INTRODUCING THE DAZZLETRACK MODEL PC-1 PHONO CARTRIDGE**

Entirely a figment of our journalistic imagination, the Dazzletrack PC-1 has been created to provide some insight into the technical language used today in describing phono-cartridge performance. A study of its thoroughly mediocre specifications (and the explanatory footnotes below them) should give the reader a general understanding of what the numbers—singly and collectively—can tell him about a cartridge and what they cannot.

There are cartridge manufacturers who have come up with a few specifications that are all their own, attempts to define aspects of performance they consider particularly important. In some cases they have backed their special ratings with impressive research and validation, so that any consumer can see for himself what is being measured, how, and why. The Dazzletrack Company tends to be a little conservative in this respect, listing only one specification not found on most other spec sheets (see below), and that one a bit obscure and of dubious value. Also remember that, so far, no one in the world outside of Dazzletrack knows how these specifications were derived, since there are few standard test procedures in the phono-cartridge world. Perhaps they can be compared directly with the specifications of other manufacturers but, then again, perhaps not.

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1. **Frequency response**: 10 to 22,000 Hz ±4 dB. Hardly an imposing specification. A frequency-response curve would be helpful in determining whether the largest variations occur at the frequency extremes (possibly tolerable) or in the middle of the audible-frequency range (undesirable).  

2. **Channel separation**: 15 dB. No frequency is given, so we can assume that the test frequency was 1,000 Hz. Stereo separation of 15 dB is probably adequate, but there will no doubt be a tendency for separation to deteriorate at higher frequencies.  

3. **Channel balance**: within 3 dB. This means that the outputs of the two channels are matched to within at least 3 dB of each other. This specification should be directly comparable with those given by other manufacturers. However, it is not of overwhelming importance, although you may have to offset your balance control to compensate for channel-balance inadequacies.  

4. **Stylus**: 0.3 x 0.7-mil elliptical. The stylus has an elliptical shape with a relatively mild edge curvature. Still, for tracking forces above 2 grams, a less "sharp" 0.5-mil spherical stylus might be expected by some to result in reduced record wear.
range of 10,000 Hz and well beyond. Nowadays, amplifier phono inputs usually carry both a sensitivity and an overload rating. The latter is the maximum input the phono preamplifier can tolerate before overload distortion occurs. The former is the input, in millivolts at 1,000 Hz, required to drive the amplifier to its rated power output (in our lab tests, we define the sensitivity as the input needed for a reference power output of 10 watts, which is generally lower than the rated-output sensitivity). There can be a wide latitude in matching this figure with the cartridge’s rated output, which is usually based on a standard reference recorded velocity (perhaps 3.5 to 5 centimeters per second). In most cases, a two-to-one mismatch in either direction can be tolerated, and with a good amplifier the permissible spread between the two voltages can be much greater than that. In other words, if the cartridge’s nominal output is 3 millivolts, it can almost certainly be used with amplifiers whose phono sensitivity is between 1.5 and 6 millivolts. In fact, the only problem likely to be encountered with an even higher (numerically) sensitivity rating is a slightly poorer signal-to-noise ratio. The overload rating of an amplifier, on the other hand, should be at least twenty times the cartridge’s rated output; many feel it should be even larger.

One of the few areas of possible trouble in matching cartridges and amplifiers lies in the use of the lower-price cartridges (whose outputs can be as high as 7 to 10 millivolts) with inexpensive amplifiers whose phono sections can sometimes be overloaded by signals as low as 50 or 60 millivolts (fortunately, even the least expensive amplifiers these days are usually better than that). Another is the use of a typical moving-coil cartridge whose output into the preamplifier may be only a small fraction of a millivolt. In this case, a step-up transformer or booster amplifier may have to be used between the cartridge and the amplifier to obtain an adequate loudness level and signal-to-noise ratio. A preamplifier can be quite expensive, an inferior one could noticeably increase the hiss level, and if transformers are used instead, they must be carefully positioned to avoid hum pickup.

**Quadraphonic Cartridges**

Although four-channel stereo is no longer as prominent in audio headlines as it has been, the reports of its demise are somewhat exaggerated. Matrixed quadraphonic records are, as far as disc-tracing is concerned, no different from stereo records, and the cartridge requirements are therefore the same as for stereo. “Discrete” CD-4 records, on the other hand, must be played with a special cartridge—even in two-channel stereo, if you wish to avoid destroying the ultrasonic content that is responsible for their four-channel performance. This means that the cartridge should have a Shibata or a similarly shaped stylus. Some four-channel cartridges are quite expensive, and in many cases their stereo performance is not on a par with that available from much less expensive stereo cartridges. On the other hand, a few recent ones—most of them still costly—are truly excellent stereo reproducers as well. Let your present and future listening plans be your guide here. If you are positive that discrete four-channel discs are not for you, you can save a lot of money and perhaps get better sound by selecting one of the better stereo cartridges. But if you suspect you’ll want your system to grow along with new developments, a CD-4/stereo model might be worth considering right now. Certainly it cannot impair your compatibility in the future.

5. Compliance: lateral, 12 x 10^-6 cm/dyne; vertical, 8 x 10^-6 cm/dyne. Comparatively low static-compliance figures in the lateral and vertical directions indicate that the stylus is rather stiff and might have trouble tracking large low-frequency groove modulations successfully.

6. Effective tip mass: 0.8 milligram. A high effective tip mass (and this is high for a premium cartridge) indicates that the stylus has plenty of inertia, and hence will probably have difficulty negotiating high-velocity high-frequency signals without mistracking. Increasing the tracking force should help up to a point, but it is not certain how much.

7. Recommended tracking force: 1 to 3 grams. Considering the PC-1’s low compliance and high tip mass, a 1-gram tracking force seems optimistic. Perhaps the manufacturer means the stylus will stay in the groove at 1 gram, but so might a safety pin in a good tone arm. The wise user should expect to apply something close to the 3-gram maximum. Even then, state-of-the-art performance cannot be expected on heavily recorded passages.

8. Output: 5 mV at 3.54 cm/sec. The cartridge yields plenty of output from a reference recorded velocity. In fact, it might be too much for a phono preamplifier that lacks a generous overload margin.

9. Recommended load: 47,000 ohms.

This is the standard load provided by virtually all phono-preamp inputs. CD-4 cartridges generally specify a 100,000-ohm load, which is the termination provided by the CD-4 demodulators into which they are presumably plugged.

10. Optimum total capacitance: 250 pF. The total capacitance is the sum of the capacitances of the phono inputs plus the interconnecting cables and arm wiring. You may have to make some inquiries to find out what these are in your system, but even a sizable mismatch will not make a great audible difference.

11. Inductance: 650 millihenries. From the inductance of the coils an expert might be able to judge how the frequency response of the cartridge will change with different resistive and capacitive loads, but that is a job for an engineer, not an audiophile.

12. D.C. resistance: 950 ohms. Likewise, from the d.c. resistance of the cartridge and certain known characteristics of the phono preamplifier certain generalizations about the noise performance of the system might be made. But, again, by experts only.


This is now standard, and it is gradually superseding the previous 15-degree standard. The difference between 15 and 20 degrees will have no practical significance for most audio systems, however.

14. Elastic rebound characteristic (ERC): 4.7 millimeters. A little something extra from Dazzletrack: a spec no one else gives you. This one is meant to indicate how high the cartridge will bounce when dropped onto a flat marble surface from a distance of 1 meter. Clearly the PC-1 would not make a good golf ball. But be on the lookout for other unfamiliar specifications and acronyms that may supply valid and useful information once they are understood.

15. Weight: 10 grams. The PC-1 is a hefty little package, and its ample mass could very well undo the benefits of an expensive low-mass tone arm. Also, some arms do not have a sufficiently heavy counterweight to balance such a cartridge. All in all, it would be best to consider using the Dazzletrack PC-1 cartridge only as part of a modest system—if at all.

—Ralph Hodges
PLAQUES MARK THE SPOT: A COLLECTION OF MUSICAL LANDMARKS

Sissieretta Jones (1869-1933), an operatic soprano, was honored in her native city, Portsmouth, Va.

A plaque marks the Florence, Ala., birthplace of W.C. Handy (1873-1958), "Father of the Blues."

The Shed at Tanglewood, Mass., received a plaque honoring conductor Serge Koussevitzky (1874-1951), founder of the Berkshire Music Center.

The Central City Opera House in Central City, Colo., was built in 1878 and since 1932 has been the site of a summer music festival. Douglas Moore's opera The Ballad of Baby Doe was premiered there in 1956.
American music was honored in many ways during the Bicentennial celebrations. As part of the National Music Council’s Bicentennial Parade of American Music, financed by a grant from Exxon, bronze plaques were installed at two hundred sites across the country in recognition of important musical events or the contributions of prominent composers, performers, or educators. The people and places shown on these two pages are a representative sampling of those selected for recognition in the plaque program.

In West Orange, N.J., a plaque was put on the home of Thomas Edison (1847-1931), inventor of the phonograph.

A plaque in Honolulu commemorates songwriter Lydia Liliuokalani (1838-1917), the last Queen of Hawaii.

In Arlington, Vt., the home of the composer Carl Ruggles (1876-1971), which was once a schoolhouse, was designated a musical landmark.

Except where otherwise indicated, all photos courtesy of Exxon.
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- Damped S-shaped tonearm with knife-edge support
- Die-cast aluminum headshell with gold-plated terminals
- Stroboscopic fine speed adjustment
- Low resonance cabinet with detachable hinged dustcover

FR-1080 AUTOMATIC RETURN
- Two-speed turntable
- Four-pole synchronous motor
- One-touch operation with automatic tonearm return
- Statically-balanced S-shaped tonearm
- Shock-mounted, low resonance cabinet with detachable hinged dustcover

SR-929 QUARTZ-SERVO
- Quartz-servo system with PLL circuitry
- S-shaped tonearm with knife-edge support
- Stroboscopic fine speed adjustment
- Resin composite, piano-finished particleboard base with detachable hinged dustcover

Model
SR-525

FR-5080S, DIRECT-DRIVE AUTOMATIC TURNTABLE
- Brushless DC servomotor
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It's easy to produce a high quality turntable under $100. All you need is imagination, technical know-how, advanced engineering, flawless production techniques and beautiful styling. Presto, you have the Sansui SR-222. Just one of several new Sansui turntables with so many features and so much performance you'd wonder why they're priced so low. You'll find a full array of Sansui turntables at your nearest franchised Sansui dealer.

SANSUI. A WHOLE NEW WORLD OF PRECISION TURNTABLES.
If it is true, as Frederic Grunfeld says in the preface to his *Art and Times of the Guitar*, that there are twenty million guitars in circulation in the United States, then we must once again be in the grip of the passion that the French call *la guitaromanie*.

Since the guitar is one of the most difficult instruments to master—though anyone can easily learn to play a few chords—it is doubtful that even one million of those twenty million guitars are played well. Still, interest in playing the instrument naturally leads to inter-
cine, that "classical music is good for you," and partly because the well-played classical guitar is so dulcet that some people automatically assume it is lacking in emotional depth. When I was first learning to play, I remember having my efforts dismissed by a fellow critic who complained that classical guitar music "had no guts."

When the Western world became technologically oriented in the late nineteenth century, the popularity of handwork diminished and with it the popularity of the guitar, one of the very few musical instruments played directly with both hands with no intervening bows, keys, pedals, or other mechanical devices. Because of this decline in popularity, most of the existing repertoire of serious guitar music comes from an earlier period (roughly 1550-1900) when recognizable tonalities or modalities, prepared and resolved dissonance, and modest dynamics were the general rule.

For these reasons classical guitar music may seem to fervent modernists (classical or popular) to "lack guts," but that is just a mid-twentieth-century aesthetic position, not immutable fact. The *fact* is that the instrument, which was played by Mary Queen of Scots, Catherine of Aragon, Henry VIII, Rossini, Schubert, Weber, and Berlioz, is capable of an enormous technical and emotional range which audiences, performers, and composers are coming more and more to recognize.

Andrés Segovia, the acknowledged leader of the twentieth-century guitar revival, has inspired many Spanish and Latin American composers to write works for him. Julian Bream and John Williams have had the same effect on contemporary British composers. As composers become more convinced of the guitar's potentiality for serious musical expression, so do more performers. The increasing number of guitarists a generation younger than Bream and two or three generations removed from Segovia attests to this conviction.

Since there is nothing in armchair listening more stimulating than hearing someone play an instrument that you play yourself, recording companies readily see the wisdom of producing records (particularly records that don't cost a great deal to make) for the owners of those twenty million guitars.
Consequently, over the last several years there has been a marked increase in the number of classical guitar recordings released. Master instrumentalists naturally head the lists, but recording activity is not limited to just the big names, for many young guitarists are being given a chance to show what they can do also.

Though he is just thirty, Ángel Romero hardly qualifies as a "young guitarist"—he made his debut when he was six as soloist with Los Romeros, the family quartet which includes his father, Celodonio, and his two older brothers. Recently, Ángel has made his solo recording debut with two important albums: "Classical Virtuoso" (Angel S-36093) and "Spanish Virtuoso" (Angel S-36094).

In the classical pieces Romero displays a crisp, bell-like tone. The big numbers in the album are Mauro Giuliani's Grand Overture, Op. 61 (Bream and Siegfried Behrend have also recorded it), Fernando Sor's Variations on a Theme by Mozart, and a series of dances by Gaspar Sanz (1640-1710). Romero's playing is less resonant than Bream's, but no less accurate. In the Grand Overture, where the bass consists of rapidly repeated notes, Romero manages to sound rather as if he had ten fingers on his right hand. Beethoven, who is reported to have called the guitar a "miniature orchestra," would have approved.

Sor's variations on "Das klinget so herrlich" from The Magic Flute are played with charm and a secure virtuosity, while the Spanish rhythms of the Sanz pieces are perceptively related to one another with musicianly understanding. The album also includes four Scarlatti sonatas transcribed by Romero from keyboard originals. The "Spanish Virtuoso" recording is subtitled "Romantic Music for Guitar," and Romero takes advantage of this invitation to reveal a seductive, honey-and-lemon tone. His rubato (those elegant hesitations that steal time from some notes and add it to others), his range of coloristic effects in pieces such as Albeniz's Córdoba and Granados' La Maja de Goya, and the slightly astringent harmonics in Turina's Andaluenga are joined to technical virtuosity in Tárrega's Estudio Brillante, a work in which the treble melody floats serenely over swift bass figurations.

Ángel also appears with his older brother Pepe playing Rodrigo's Concierto Madrileño on Philips 6500 918. It is a work written especially for the two brothers in 1968, and it is not so much a concerto as it is a series of variations on a theme—"Felices ojos mios" from an anonymous madrigal—which sets two guitars against a full orchestra, in this case that of the Academy of St. Martin-in-the-Fields. Its yeasty Renaissance feeling is emphasized by brass fanfares, lively dance rhythms, and the variation in which the guitars are pitted against the piccolo, flute, oboe, and trumpet. The slow movement, Arieta, is perhaps too extended for some tastes, but Rodrigo's richly romantic string writing is as certain to appeal here as it does in the popular Aranjuez concerto.

Liona Boyd, blond and beautiful, smiles a Mona Lisa smile from the jacket of her debut album for London Records ("Classical Guitar," CS 7015). It is hard to believe she is for real until one looks at her hands. They are the hands of the serious guitarist: the long, bony, spatulate fingers and the prominent veins indicating that intense muscular development has pared away subcutaneous fat. Ms. Boyd plays the inevitable debut pieces, selections from Bach's Lute Suite in G Minor (BWV 995, transposed for guitar to A Minor) and Scarlatti sonatas (transcribed from the keyboard works), cleanly but in a rather subdued, "correct" manner, as if she were afraid to impose her own personality on such eminent masters. But the album is more than rescued by the fact that most of it is devoted to unusual compositions by obscure contemporary composers: Julio Sagreras, Eduardo Sainz de la Maza, João Guimarães, Francisco Calleja, and Henri Tomasi.

These delightful works, plus two Albeniz sketches, are vignettes depicting Spanish and Latin American life: hummingbirds, bells at dawn, Brazilian street dances, a mule driver in the Andes. Ms. Boyd discovers the individual character in each piece through her highly imaginative playing. Her technique is flawless in rapid figurations such as the tremolo in Sainz de la Maza's Campanas del Alba or the one in Calleja's Canción Triste. Herтонsensitivity to color, her phrasing of the haunting melodies, her rhythmic vigor, and (particularly) her sweet tone are recorded with life-like fidelity.

Liona Boyd studied with Alexandre Lagoya, the great French guitarist whose "Viva Lagoya!" (Philips 6833 159) is one of the most stimulating solo albums I've heard in years. Like his pupil, Lagoya essays part of the Bach Lute Suite BWV 995 (the Prelude and Presto), but with all the difference in the world. Where Ms. Boyd is somewhat timid, Lagoya attacks with dash, élan, and exhilarating technical freedom, with the result that we hear every strand of the polyphony standing alone, we feel the rhythmic muscle and drive of the Presto. Bach is followed by a superbly mellow, mature performance of Handel's Sarabande in D (the title theme of Kubrick's film Barry Lyndon) and a magisterial reading of Silvius Weiss' Passacaglia, a dance form with variations on a ground bass. Lagoya's performing magnetism carries over to the flip side with two of the most popular pieces in the guitar reper-
CLASSICAL GUITAR

Albeniz’s Asturias (Leyenda) and Tarrega’s Recuerdos de la Alhambra. The pedal drone and flamenco elements of Asturias are well mixed with Lagoya’s coloristic gift, while his noble tremolo is exploited for deep emotional impact in Recuerdos. The side ends with spirited accounts of Villa-Lobos’ Etude No. 11 and Torroba’s Nocturno. [See also Claude Bolling’s Concerto for Classic Guitar and Jazz Piano, reviewed on page 112, in which Lagoya is a soloist.]

Angel Romero

Deutsche Grammophon keeps two fine guitarists before the public: Narciso Yepes and Siegfried Behrend. Neither is a particularly charismatic performer, but what they lack in showmanship they make up for with their sympathetic interest in adventurous repertoire. Behrend’s “Chitarra Italiana” album (DG 2530 561) spans four centuries, from anonymous early lute music to music of the avant-garde composer Sylvano Bussotti (b. 1931). Behrend favors a clean, slightly metallic guitar tone, and his lute imitations are often uncanny. He also plays music by Mauro Giuliani (the ubiquitous Op. 61) and by Mario Castelnuovo-Tedesco, composers whose extensive association with the guitar has led many people to think of them as Spanish rather than Italian.

I heard the Behrends (speaker Claudia Brodzinska on the DG disc is the guitarist’s wife) perform Bussotti’s pop song ultima rara? (sic) at the Goethe Institute in San Francisco several years ago; it was one of the most provocative experiences I have ever had at a guitar recital. The work’s dynamic and melodic gestures are fragmentary and self-contained. There is no gradual rise to a climax; the piece could stop anywhere (in fact, Behrend’s earlier recording of it—now deleted—is three minutes longer than this 1974 version). Mme. Behrend shrieks, gulps, sobs, yelps, sighs, groans, yawns, laughs, cackles, and moans the vocal part. The previous recording, with Bussotti himself as speaker, may be slightly preferable because the guitar is more forward, but this performance is quite sufficiently hair-raising.

Narciso Yepes’ two latest Deutsche Grammophon albums unearth four contemporary Spanish concertos, all of which he plays on a ten-string guitar of his own invention. With Rafael Frühbeck de Burgos and the London Symphony, Yepes performs Mauricio Ohana’s Tres Gráficos and Antonio Ruiz-Pipó’s Tablas (2530 585); and Odon Alonso and the Orquesta Sinfónica of Spanish Radio TV accompany him in concertos by Salvador Bacarisse and Ernesto Halffter (2530 326). The guitar parts in the Ohana and Ruiz-Pipó works owe their improvisatory character to the cante jondo of Andalusian flamenco. Bacarisse’s concerto is conservative in a melodic, classical idiom; Halffter’s work stresses polyphony and rhythmic variety. Yepes’ playing of all four works is introspective and artistically immaculate.

The immense popularity of Julian Bream, whose platform manner is to me the most beguiling of all of today’s concert artists, has not closed his inquiring mind to further explorations. His musical sympathies stretch from Dowland through transcriptions of piano pieces by Debussy to contemporary composers. It was for Bream that Benjamin Britten wrote the Nocturnal, a fiendishly difficult guitar solo which has become a modern classic. Bream’s latest adventure is a concerto by his compatriot Lennox Berkeley (RCA ARL1-1181). It is a quiet, sophisticated work in three movements scored for winds, horns, and strings. Its essentially English character is defined by characteristic harmonic subtleties and pastoral nuances, and few guitarists could

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perpetual motion. Electric energy quickens the music's guitar from its original guitar and violin Scoring. And in the vivacious Partita by the limpid melodies of Paganini's with his tenderly expressive handling. Virtuosity does not necessarily mean "fast and loud." He proves it. Point out, virtuosity does not necessarily mean "fast and loud." He proves it. William's latest guitar record, a group of Scarlatti sonatas and Villa-Lobos preludes, is reviewed by Eric Salzman on page 126.

Guitar lovers are fortunate that surveys of contemporary guitar recordings must continue to include the latest by Andrés Segovia, the father of the twentieth-century guitar renaissance. Like Pablo Casals, whom he resembles physically as well as spiritually, Segovia is a romantic. His guitar tone is warm and opulent, his bel canto phrases sings with the heart's simplicity. Among the more interesting contemporar.

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perhaps others as well) has called the Chaconne "the single greatest piece of music ever written." The twenty-nine variations of this monumental work give Williams no apparent difficulties. His playing goes well beyond mere technical considerations, plumbing structural depths and rising to emotional heights. For the rest of the program, two Dowland galliards and Sor's "Mo.

On "More Virtuoso Music for Gui-

classic guitar is...
SMALL LABELS HAVE A LOT TO OFFER IN FOLK, JAZZ, AND BLUES

"W"e wanted to put out the records the other companies wouldn't put out. When we found out how cheaply we could start, we just went ahead and did it." That was six years ago. The amount of money involved was $1,000. With that cash, Ken Irwin and Bill Nowlin founded Rounder Records. At this writing, Rounder has released nearly one hundred albums.

Much the same story could be told about any of hundreds of small record companies. Someone who was not satisfied with what was otherwise being made available took it upon himself or herself to do the job, and another label was born.

Folkways is in many ways the granddaddy of the "small" labels. Certainly it is the company most mentioned by those who run the newer labels as the example they followed. Folkways has issued more than 1,500 titles since its founding just after World War II, and all of them remain indefinitely in print. Its catalog has remained a model of taste, quality, and diversity.

Founder Moses Asch is today in his early seventies, but he is still actively releasing records of every conceivable type: ethnic, spoken-word, jazz, sounds of nature, and folk music from virtually every part of the world. And Asch's attitude is very much one that has been adopted by those who followed in his footsteps: "I'm dedicated to keep on issuing. My competitors concentrate on what moves best. I can't do that." Asch readily admits that it is the Seeger, Guthrie, and Leadbelly albums that sell the best year in, year out. But that has not kept him from making available discs he feels are musically or socially valid or of historical significance, despite the probability of small sales.

This is not to say that Asch, or any of the other people operating small labels, is not a businessman. Some Folkways releases, for example, are geared primarily to the needs of libraries and educational institutions on a standing-order basis, a special but dependable source of income. Others are more likely to be "commercial," in the Seeger-Guthrie-Leadbelly vein, and these Asch will quite sensibly do his best to direct to stores around the country by way of a number of local distribution companies which buy at wholesale from Folkways.

It should also be kept in mind that production costs for the kinds of records we are talking about are relatively low. The small labels either own and operate their own usually unprepossessing recording studios or they lease time from other small labels that do maintain their own facilities. And most of the music is recorded "live," which is to say that musicians and vocalists perform as they would in concert and the mikes take it down all at once. (Commercial pop music, in contrast, has become a studio art in many instances, with instruments and voices added one at a time to a master tape, followed by hours and hours of mixing and editing.)

Other expenses are minimized too. Little is spent on advertising or promotion. A few free copies are mailed to reviewers who are known to be interested in a particular field, copies are sent to sympathetic radio stations, and an occasional ad is placed in a specialized newspaper, magazine, or festival book. Word-of-mouth and, frequently, mailings to past customers tend to be the most significant factors in spreading the news of new releases.

But one area in which production costs are greater for the small labels—and here again Asch was the pioneer—is in packaging, for while most of these companies stick to two-color covers, many include elaborate booklets with lyrics, background information, photos, and other pertinent data with their albums. Nearly every Folkways album comes with its own booklet, whether four pages on one sheet or sixteen pages enclosed in its own pocket inside the record jacket, and many of the newer labels emulate that example.

In view of this background, and of the attitude that has brought about the development of ever-increasing numbers of new small labels in the first place, it is plain to see that artistic control is of prime concern. For instance, most Philo records of North American folk music bear the inscription "Philo Records encourages the artist to assume full creative control of his or her album. This record is as conceived by the artist." This policy is typical of most of the small labels. There are those at the major record companies who might object at this point that their artists have total control too. But the degree of involvement is different. At most of these small companies the "staff" is the owner and a spouse or one or two friends, and they all deal with the artist personally at every level of production. Also, while some of the owners of the smaller labels might enjoy earning a gold or platinum record (signifying sales of 500,000 or a million albums, respectively), few will be disappointed at the fact that they never reach that point, for that is simply not why they are in business.

BY IRA MAYER

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There will also be a few disgruntled artists who, because of situations that didn’t work out for them, won’t insist that the “total control” so frequently spoken about doesn’t really exist. In looking through the records that have been made available by these small companies, though, an unbiased observer will find few of which an artist might be ashamed and an enormous number of which an artist might well be proud. Contrast that with the number of LP’s released by major companies—ECM never discovers the wealth of avant-garde jazz music. The Schwann Catalog lists many small independent labels, but that is not definitive even for the major labels. Nor can it help you track down a particular item in an offbeat record shop. There will also be a few disgruntled artists who, because of situations that didn’t work out for them, will insist that the “total control” so frequently promised as well as musical motives. Rounder was started Roundup Records, did so with political and classical musicians who perform, issue records of their own, and run the mail-order business for other labels—Roundhouse. In its first incarnation—was founded in the hopes of generating income to support Rounder’s efforts. It has become more of a service, though, than a money maker.

Roundup became the name in the fall of 1975 when the operation was moved from Irwin, Nowlin, and Leighton’s living room to a warehouse. Outside employees were hired for the first time about a year later. “We don’t emphasize the collective aspect nearly as much as we used to,” Nowlin explains. “We run things today 99.9 per cent the way any other record company or distributor would.” The current Roundup catalog includes two hundred labels and several thousand discs. The concentration is on North American folk music, but Roundup carries the entire catalogs of some companies whose own reaches exceed beyond that boundary. Of late it has also added a number of jazz labels.

**Catalog Sources**

While descriptions of some individual specialty labels appear below, the bulk of information on small record companies can be found in several well-organized and extensive catalogs. Most of the labels have their own catalogs, and most sell their records by mail and at concerts and festivals as well as through selected stores. But there are also three mail-order houses which publish general catalogs. These are indispensable to the serious enthusiast of folk, jazz, blues, and traditional country music.

- **New Music Distribution Service.** 6 West 95th Street, New York, N.Y. 10025. A division of the Jazz Composers Orchestra Association, NMDS is a nonprofit organization made up predominantly of avant-garde jazz and classical musicians who perform, issue records of their own, and run the mail-order service. It is the latter that supports many of JCOA’s own projects. The catalog—free for the asking— lists approximately one hundred labels and more than four times that number of records. Some are what would be referred to in publishing terms as “vanity press” items. Others are individual listings from companies that release records of other than avant-garde music.

- **Roundup.** 186 Willow Avenue, Somerville, Mass. 02144. Irwin and Nowlin, who started Rounder Records, did so with political as well as musical motives. Rounder was set up as a collective, and anyone who worked with Irwin, Nowlin, or Marion Leighton (who joined early on) was a member. And everything was done by the members. “When we started we barely knew what an invoice was,” Nowlin has stated on several occasions. Irwin, a political scientist, taught for the first few years in order to pay the rent, while the others—activists themselves—handled Rounder. The mail-order business for other labels—Roundhouse. In its first incarnation—was founded in the hopes of generating income to support Rounder’s efforts. It has become more of a service, though, than a money maker.

**Individual Labels**

The label descriptions that follow, in alphabetical order, are an arbitrary grouping of folk- and jazz-oriented companies. The emphasis is on folk partly because there are more labels devoted to that genre and partly because many of the jazz labels consist of one or two LP’s by a given artist. Also, there is much avant-garde and contemporary jazz being issued on labels distributed by major companies—ECM (Keith Jarrett, Gary Burton, Jan Garbarek) via Polydor, and Freedom (Cecil Taylor, Roswell Rudd, Dewey Red-
man) through Arista. Interestingly, both of these are European labels which have been more successful in the United States than most American-based companies.

- **Arhoolie**, 10341 San Pablo Avenue, El Cerrito, Calif. 94530. The catalog offers contemporary and traditional blues from the likes of Mance Lipscomb, Mississippi Fred McDowell, Clifton Chenier, and Bukka White, as well as several fine anthologies organized along geographical lines. It is run by blues lover Chris Strachwitz.

- **Biograph**, P.O. Box 109, Canaan, N.Y. 12029. Arnold Caplin's label has amassed a considerable amount of historically important blues and early jazz material, some culled from the Columbia vaults, some from various out-of-print catalogs. Blind Lemon Jefferson, Ma Rainey, Ethel Waters, Reverend Gary Davis, and Leadbelly are among those represented, along with contemporary bluesman Johnny Shines and progressive bluegrassers Bottle Hill. There are also about a dozen LP's of piano-roll recordings by or of Fats Waller, Scott Joplin, and Eubie Blake, among others.

- **Choice Records**, 245 Tilley Place, Sea Cliff, N.Y. 11579. Gerry Maconald's Choice label specializes in what used to be called modern jazz. Among the many fine artists on the Choice roster are Zoot Sims, Toots Thielemans ("Captured Alive," Choice CRS 1007), and Jimmy Giuffre.

- **County**, P.O. Box 191, Floyd, Va. 24091. String-band music as it developed during the Twenties and Thirties is the mainstay of this label, with the Delmore Brothers, Wade Mainer and the Sons of the Mountaineers, and Charlie Poole leading the way. Contemporary recordings of traditional bluegrass and old-timey artists are also released on County, with Red Allen and the Kentuckians; the Lilly Brothers, the Stanley Brothers, and long-time Bill Monroe fiddler Kenny Baker heading the list.

- **Delmark**, 4243 North Lincoln Avenue, Chicago, Ill. 60618. The Chicago blues as played by Roosevelt Sykes, Junior Wells, T-Bone Walker, and Mighty Joe Young are all that concern this most respectable outfit. Additional classics come from Sleepy John Estes and Arthur "Big Boy" Crudup, the latter being the man from whom Elvis Presley learned "Hound Dog.

- **Eubie Blake Music (EBM)**, 284-A Stuyvesant Avenue, Brooklyn, N.Y. 11221. At the age of ninety-three Blake continues to perform and record the ragtime songs associated with him since just after the turn of the century. The man who, with Noble Sissle, wrote "I'm Just Wild About Harry" and other classics has his own label dedicated to the preservation of his music. John Arpin, a fine Canadian ragtime pianist and jazz historian, has also recorded for EBM.

- **Famous Door**, 4008 155th Street, Flush- ing, N.Y. 11354. Harry Lim's Famous Door label is dedicated, in the company's own words, to producing "jazz records of the finest quality, using the most up-to-date recording techniques and equipment and the best pressings obtainable." Famous Door's specialty is mainstream jazz; a representa- tive recent release features John Bunch, Uri- bie Green, and Milt Hinton ("John's Bunch," Famous Door HL-107). Like all the label's releases, it is available by mail for $7.50.

- **Flying Fish**, 3320 North Halstead, Chicago, Ill. 60657. Begun by Bruce Kaplan, who spent a brief period with the Rounder collective, Flying Fish features the talents of John Hartford, Norman Blake, and Tut Taylor in solo outings. There is also an outstanding double-record set titled "Hillbilly Jazz," a latter-day country-swing effort with Vassar Clements, David Bromberg, and some of their friends, which is something of an underground classic.

- **Folk Legacy**, Sharon, Conn. 06069. Sandy and Caroline Paton, performers themselves, concentrate their recording activities on contemporary interpreters of traditional mu- sic, though the early part of their catalog does include a few field recordings. Rosalie Sorrels was at her finest when she made her Folk-Legacy album (she has since recorded for several other labels), and Gordon Bok's recordings of Maine sea lore are excellent additions to any folk library. "The New Golden Ring," in two volumes, is a collec- tion of songs performed by the Patons and such friends as Bok, Michael Cooney, Joe Hickerson, and Ed Trickett; it serves as an excellent introduction to their early tal- ents. Trickett, a hammered-dulcimer player and singer, is heard to beautiful advantage on his own LP, "The Telling Takes Me Home." A few of Folk-Legacy's albums include songs by the early American composers William Billings among the folk songs.

- **Folkways**, 43 West 61st Street, New York, N.Y. 10023. The company's catalog is an education in and of itself, and no one else stocks the whole thing. There are records on handwriting analysis, hypnotism, and Sena- tor Joseph McCarthy, along with the most extensive collection of Americana available on record. Of special note are the six-record "Anthology of American Folk Music," spanning the full spectrum of traditional country and blues with such artists as the Carter Family, Mississippi John Hurt, Charlie Poole, Bascom Lamar Lunsford, Blind Lemon Jefferson, and Uncle Dave Macon; Pete Seeger's four-volume "American Favorite Ballads"; "Berkeley Farms," a collection of old-timey-string-band music; and any of the black music anthologies, many recorded at the height of the civil- rights movement and reflecting the crossing of traditional forms with contemporary needs and consciousness. Too, there are dozens of LP's of international folk music and a good variety of early-jazz anthologies.

- **Halcyon**, 302 Clinton Street, Bellmore, N.Y. 11710. Founded in the late Sixties, Halcyon is the brainchild of jazz pianist Marian McPartland. Not surprisingly, the bulk of the label's catalog consists of jazz piano recordings, many featuring Ms. McPartland either on her own ("Solo Concert at Haverford," Halcyon 111) or teaming with such venerable artists as Teddy Wilson, Joe Venuti, and her ex-husband, cornetist Jimmy McPartland.

- **Improvising Artists**, 26 Jane Street, New York, N.Y. 10014. Improvising Artists is run by avant-garde jazzman Paul Bley, who has worked with Ornette Coleman, Charles Mingus, and the Jazz Composers Orchestra Association, among others. In all, it is somewhat similar to the more widely distributed ECM label. Among the artists represented in the Improvising Artists cata- log are such major contemporary jazz figures as Sam Rivers, Ran Blake. Charlie Haden, and, of course, Bley himself. "Quiet Song," Improvising Artists 373839, on which he is joined by Bill Connors and Jim- my Giuffre, is particularly recommended.

- **Jazzology**, P.O. Box 748, Columbia, S.C. 29202. Jazzology is one of the oldest of the small independents, founded in 1949 by George Bick, Sr., and now run by his son George Jr. As the name implies, it is primarily dedicated to traditional, classic jazz, and the company has an enormous catalog of
new releases and reissues. Jazzology has done a superb job of documenting on records the work of older but still functioning jazzmen, survivors of the great tradition; their numerous recordings of the great New Orleans clarinetist George Lewis (1900-1969) are a splendid case in point. Jazzology puts out a nice, folksy little publication, a 1966 issue of which was dedicated to the memory of their late ‘faithful and beloved Cock•er spaniel dog Bootie.’ The loss was undoubtedly felt, but it apparently hasn’t adversely affected the label.

**JCOA**, 6 West 95th Street, New York, N.Y. 10025. Founders Michael Mantler and Carla Bley got the JCOA label off to a brilliant start with two critically acclaimed sets: Mantler’s “Jazz Composer’s Orchestra,” with Cecil Taylor, and Bley’s three-record opus “Escalator over the Hill.” (Mantler and Bley now record for their own Walt label.) The thin line between classical and jazz in the realm of the avant-garde makes it most difficult to categorize either work, and, as with Don Cherry, Roswell Rudd, or any of the other JCOA artists, a high level of sophistication must be brought to the music by the listener.

**Master Jazz**, Box 579, Lenox Hill Station, New York, N.Y. 10021. Master Jazz, founded and run by jazz buff William Weilbacher, has an extensive catalog of jazz releases, some new (produced for the label) and some old. Most notable among the latter is a reissue series comprising all the Mainstream sessions produced for English Decca in the Fifties by Stanley Dance, featuring, among others, albums by Rex Stewart and Bud Johnson. There is also a nifty series called “Master Jazz Piano,” Volume I of which earned a Stereo Review Record of the Year Award for 1970, and there are some fine Earl Hines discs among many others.

**Paredon**, P.O. Box 889, Brooklyn, N.Y. 11202. Political activist and singer Barbara Dane is the force behind Paredon, a distinctly political label. The catalog includes such titles as “Che Guevara Speaks,” the three-record “The Second Declaration of Havana” (the 1962 speech by Fidel Castro with printed text in Spanish and English), and “FTA: Songs of the GI Resistance,” sung by Dane.

**People’s Music**, 237-10 Hempstead Boulevard, Queens Village, N.Y. 11429. Though I’ve avoided those labels limited to one or two releases, People’s Music is included because of the number of people represented on its two People’s Victory Orchestra and Chorus LP’s, Weitschmerzen” and “The School.” As with Bley’s “Escalator over the Hill,” a wide variety of jazz and rock personalities participate, and the results are strikingly original, if not to everyone’s taste.

**Philo**, The Barn, North Ferrisburg, Vt. 05473. Philo is one of the most interesting of the folk labels because of the scope of its endeavors. Located in Vermont, the company feels the Canadian influence heavily, and there are excellent French-Canadian recordings by Montreal accordionist Philipe Brunaud and fiddler Louis Beaudoin. Bruce “Utah” Phillips and Mary McCaslin have put out two excellent albums each; Phillips, a Wobbl y organizer and train lover, and McCaslin, a sweet-voiced country singer/writer, both bring things a little closer to home. Many of the other Northeast folk labels use the facilities of the Earth Audio Techniques Studio run by Philo for recording their own artists.

**Rebel**, Route 12, Asbury, W.Va. 24916. Similar to County, but limited to the contemporary vein, Rebel is open to modern developments in the basic blues form. The Country Gentlemen and the Seldom Scene, generally considered progressive bluegrass bands, are probably Rebel’s most popular groups. Both County and Rebel can usually be found on sale at booths at bluegrass and folk festivals.

**Rounder**, 186 Willow Avenue, Somerville, Mass. 02144. Though it is relatively young, Rounder has done an impressive job of reissuing some Library of Congress recordings (an excellent set from labor-activist singer Aunt Molly Jackson) and some rare country blues (Blind Alfred Reed’s Depression songs under the title “How Can A Poor Man Stand Such Times and Live?”). Rounder, however, is also active with contemporary folk idioms and artists from the bluegrass-jazz-country swing fusion of Tony Trischka and Breakfast Special to the thirties-sounding 1975 record by fiddle and guitar champion Mark O’Connor. The latter is assisted by John Hartford, Norman Blake, and others. Recording quality and packaging care are above the average, and the taste is impeccable.

**Spivey Records**, 65 Grand Avenue, Brooklyn, N.Y. 11205. Spivey was founded by the late Victoria Spivey, a well-known blues singer who recorded for Okeh in the Twenties and was featured in the Warner Brothers film Hallelujah. Spivey was one of the first to record the young Bob Dylan (she appears on the cover of Dylan’s “New Morning”), and two cuts that predate his signing with Columbia (Dylan providing harmonica accompaniment for Big Joe Williams) are available on “Three Kings and a Queen” (Spivey 1004). Other albums in the label’s small catalog include performances by Roosevelt Sykes and Lonnie Johnson as well as a reissue of some of Miss Spivey’s best Okeh work.

**Strata East**, 156 Fifth Avenue, New York, N.Y. 10010. This is the label responsible for establishing Gil Scott-Heron and Brian Jackson as major forces in contemporary black musical poetry. Their “Winter in America” sold very well and continues to be the duo’s strongest work. (They now record for Arista.) Additional records come from Clifford Jordan, Pharoah Sanders, Cecil Payne, Stanley Cowell, and Sonny Fortune, among others, and the emphasis is clearly on the jazz end of the spectrum.

**Takoma**, P.O. Box 5369, Santa Monica, Calif. 90405. Guitarist John Fahey, who crosses traditional folk guitar idioms with classical technique, records his own music along with that of his protege Leo Kottke, dobro player Mike Auldridge, and other friends. Fahey’s own “The New Possibility,” featuring solo guitar renditions of traditional Christmas songs, is a masterpiece.

**Yazoo/Blue Goose**, 245 Waverly Place, New York, N.Y. 10014. Yazoo releases are devoted primarily to reissues of old blues, country, and novelty 78’s in LP form; Blue Goose takes on contemporary blues and old-timey artists. In the former category one is as likely to come across Blind Willie McTell or Charlie Patton as Cliff Edwards, better known as “Ukulele Ike” and the voice behind the Humpty Dumpty. The Blue Goose catalog is highlighted by LP’s from Larry Johnson, an exceptional blues interpreter, and Roy Bookbinder, a combination bluesman and novelty writer. Much of the cover art is done by underground cartoonist R. Crumb, whose own Cheap Suit Serenaders have released two LP’s and a 78 (yet) on Blue Goose. Both labels were developed by Nick Perls.

Ira Mayer, who has written on music for the New York Times and the Village Voice, is the reviews editor for Record World, a prominent recording-industry trade publication.
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STEREO REVIEW’S SELECTION OF RECORDINGS OF SPECIAL MERIT

BEST OF THE MONTH

“H owever much it is overplayed and over-recorded, Vivaldi’s Seasons will always delight an audience and challenge a performer. The cycle is, after all, a masterpiece unique in the repertoire, certified by a deserved and unquestioned popularity, and it will therefore continue to remain fresh in good performances. Conductor Trevor Pinnock has turned in such a performance in a new release on the CRD label, a superb account from every point of view.

The most striking feature here is the use of low-pitch instruments, originals from the eighteenth century or copies of them. Although the sound might at first seem somewhat flat and colorless compared with some of the whiz-bang treatments the work has suffered on disc in the past, one soon grows accustomed to it and begins gradually to realize how marvelously subtle and delicate Vivaldi’s string writing is. This, in turn, brings out the finer programmatic qualities of a work which, when performed on modern instruments, often seems rather crude and even naive. This is apparent from the very first “bird” solo of the “Spring” section, and it is consistently demonstrated right through to the frenzied tumult of the final storm of “Winter.” Never have I heard so convincing a reading of the “fountain” passage in “Spring,” or such delicate sounds as those produced by the “zephyrs” in “Summer.” And, for the first time, the faithful dog in “Spring” stands out from the suave violin cantilena and the murmuring breezes.

Ensembles of old instruments frequently sound as if they were hampered by instrumental limitations—they either just barely get the notes out, or one senses that they are frustrated in not being able to express themselves as fully as they could on modern instruments. Not so with the English Consort: not only are they technically perfect, but they bring out the full expressive capability of their instruments as well. They are aided in this by Mr. Pinnock’s carefully wrought interpretation: the conductor scrupulously observes all of Vivaldi’s original dynamic markings, but he is not afraid to use effective crescendos.
The Nighthawks: There's More To the Blues Than the Form

The Nighthawks are a pugnacious and delightful combo who make love to rock and blues rather than trying to wrestle them to the ground. Where most combos and bands assume they are dealing with the rich content of the blues by dealing with its limited form, the Nighthawks score because they reverse the process. The blues, like a coconut, is hairy and hard on the outside, but the meat inside is mighty sweet, and the Nighthawks know how to get at it.

Mark Wenner's harmonica and Jim Thackery's guitar are instruments of pure delight. Wenner's understanding and use of the harmonica, though grounded in urban blues, takes the instrument beyond its traditional roles in blues and folk; he has a fine romantic streak in him, and an independence of thought in solo ideas and construction of choruses. Thackery's hot and steamy solos are economic and exciting; he plays what is right to play, with occasional decoration, but he avoids the clutter-and-fast-finger syndrome that makes so many rock and blues guitarists annoying and wasteful.

The three wildest cuts on this live album are Shake and Fingerpop, Nineteen Years Old, and an all-stops-out Shake Your Moneymaker. The audience yells, stomps, whistles, and presumably shakes its moneymakers. They've got a right to: the Nighthawks are all right and mighty tight.

—Joel Vance

Jules Massenet's Esclarmonde: The French Understand These Things

Completed in 1888 at the peak of Jules Massenet's creative inspiration (between Manon, 1884, and Werther, 1892), Esclarmonde was written for Sybil Sanderson, an American soprano of captivating beauty and remarkable vocal endowments. The opera enjoyed great success for a while but failed to enter the international repertoire; after 1934 it seems to have disappeared from the stages of France and Belgium as well.

The team of Joan Sutherland and Richard Bonynge is responsible for the opera's return to currency in a sweep that began with a San Francisco revival (October 1974), continued with the recording I am about to discuss (London, July 1975), and led to a Metropolitan Opera production (November 1976), all three built around the same principals and an almost unchanging cast.

Though Esclarmonde is strongly indebted to Wagner, this influence should not be overemphasized. For one thing, Massenet's orchestration, for all its fleeting Wagnerian touches, is characteristically French in sound and transparency. Furthermore, Massenet no more abandoned the conventional arias and ensembles in this opera than he did in Manon and Thais, nor did he surrender to Wagnerian overstatement: his expression is concise, elegantly proportioned, and (so far as the murky and involved story makes possible) reasonably clear.

According to one Massenet biographer, Esclarmonde is a "bewilderingly eclectic" opera. It is eclectic, without a doubt, but one is amused rather than
bewildered on encountering, as the story unfolds, reminders of Armide, Il Trovatore, Les Troyens, Lohengrin, Die Walküre, Parsifal, Tristan und Isolde, and even anticipations of Turandot. The libretto by Alfred Blau and Louis de Gramont contains dashes of all these seasonings added to a knightly tale about the Byzantine princess Esclarmonde, a dabbler in the magical arts who becomes infatuated with and eventually seduces the Chevalier Roland—whose heroism, suffering, and ultimate triumph are also described. That magical French mixture of religion and eroticism that lies at the core of so many successful operas (Manon, Thais, Hérodiade, Samson et Dalila, and others) works well in this instance too. Massenet’s music, sensuous and at times richly evocative of medieval mysteries, fits the poetic text elegantly, and the opera’s rescue from oblivion is eminently justified for these reasons as well as for the quality of the recorded performance.

The elusive and mysterious character of Esclarmonde is a good choice for Joan Sutherland, whose singing style is usually rendered somewhat mystical by cloudy enunciation anyway. It is a demanding role calling for extended lyric passages à la Manon alternating with the sort of dizzying ascents and high staccatos we usually associate with Mozart’s Queen of the Night. Miss Sutherland sensibly ignores the high F and G in alt the music actually calls for, settling for a number of high D’s delivered clearly and firmly. In all, her voice is in admirable shape, pure and full-bodied, and her technique is as good as ever.

Giacomo Aragall’s part is less demandingly written, most of it lying in the tenor’s attractive and effective upper mid-range, but the higher demands, when they do occur, are also met with a free and ringing top. Except for an awkward passage in the Epilogue, where the tessitura lies in the register “break,” he sounds youthful and heroic, as the role requires, and sings with intelligence and sensitivity. The supporting cast is also good: Louis Quilico is strong and secure as the fanatical Bishop, Clifford Grant is sonorous in his solemn pronouncements, and Huguette Tourangeau supports her fine singing with exemplary enunciation.

Richard Bonynge must know this music better than anyone living. His leadership is justly paced, sensitive, and considerate of the singers’ needs—so considerate, in fact, that some of the composer’s forte markings seem to have been sacrificed to this concern, though without any major detriment to the overall effort. Where the performance fails somewhat short is in the area of precision and incisiveness; choral tone and accuracy, in particular, are not always what they should be. Technically, the sound is satisfactory if in no way exceptional.

Works plucked from opera’s capacious oulattice seldom prove to be transcendental masterpieces, and Esclarmonde is no exception. But it is viable, colorful, and enjoyable, with a marvelous second act in which Scene I ends with a Tristanesque Liebesnacht followed by a Scene II that is all morning-after languor. The French understand these things.

—George Jellinek

**MASSENET: Esclarmonde.** Joan Sutherland (soprano), Esclarmonde; Giacomo Aragall (tenor), Roland; Clifford Grant (bass), the Emperor Phorcas; Louis Quilico (baritone), Parsés; Ryland Davies (tenor), Enées; Robert Lloyd (bass), Cleomer; others. John Allard Choir and National Philharmonic Orchestra, Richard Bonynge cond. LONDON OSA 13118 three discs $20.94.

**Ry Cooder’s “Chicken Skin Music” Revitalizes Some Still Lively Roots**

HAVING chosen to make himself a dynamic in the folk process, Ry Cooder keeps tracking our music back to its roots and showing us that the little devils are still alive. He plays source music with respect and understanding, but he also plays it his own way. In “Chicken Skin Music” for Reprise he mixes Tex-Mex instrumentation with country and Leadbelly songs, Hawaiian styles with such manufactured pieces as Yellow Roses and Chloe! He does it as an instrumental—the words would be just too dang Spike Jones much—but bringing it up in the first place is a typically sly Cooder stroke), and gospel with various seemingly incongruous elements, and it all
comes out with its flavor not only intact but spiced up like you just wouldn’t believe.

All this music—just about all of Cooder’s chosen music—is from poor people. Spiritually, therefore, it doesn’t want to be dressed up lavishly or expensively but colorfully, the way that Staggerlee-type character in I Got Mine would dress. Cooder understands this perfectly. He never plays fancy licks for their own sake and he never seems to bend his vision for the sake of selling a few more records. “Chicken Skin Music” has a jagged, free-for-all sound that deepens your impression of what life must have been like for the people behind the music.

Cooder’s singing, which seemed to reach nearly its full maturity about one album back, is sure and sympathetic, but it has its own integrity. The songs, like their sources, represent a variety of styles and approaches (this album is, in a quiet way, wildly experimental) but they’re all going to the same place.

One experiment—putting a bolero beat and Flaco Jimenez’s slightly overplayed diatonic accordion to He’ll Have to Go, an old country song popularized by Jim Reeves—comes off only half-baked; he needed to live with that idea a little longer. But less likely appearing experiments have worked out beautifully, and in all Cooder makes quite a coherent and detailed statement about himself. You may find yourself mentally underlining long passages of it.

—Noel Coppage

Formal Integrity and Astonishing Substance
In Luigi Cherubini’s Six String Quartets

Luigi Cherubini, productive to the end of his long life (1760-1842), was a working contemporary of Mozart, Haydn, Beethoven, Schubert, Weber, Mendelssohn, and Schumann. In his own time he was regarded as highly as they; Beethoven himself spoke of him as the greatest of his contemporaries. Cherubini is remembered today for a handful of works—Medea, the two Requiems, the Symphony in D Major, and perhaps the Overture to Anacreon. The idea of associating his name with chamber music is one that would never occur to most of us, and for that reason alone the Deutsche Grammophon Archiv set of his six string quartets is an intriguing release. One might have thought one or two of these works would have been an adequate sampling, but after hearing the splendid performances by the Melos Quartet of Stuttgart one is inclined to replace the word “intriguing” with “important.”

The quartets, all mature works, are fascinating for the influences suggested here and there (not always supportably), but still more for their formal integrity and frequently astonishing substance. For example: No. 1, in E-flat, composed in 1814, is notable for a remarkable scherzo whose main section echoes the particular Spanish style identified with Boccherini and whose trio even more sharply “pre-echoes” Mendelssohn. And No. 2, in C, is immediately recognizable as the same music as the aforementioned Symphony in D; Cherubini adapted the orchestral work of 1815 some fourteen years later, replacing the original slow movement with a Lento whose greater depth and expressiveness are more effective in the chamber-music context.

The first two quartets were separated by fifteen years, the second and third by five, but then Cherubini went on to produce a quartet each year from 1834 through 1837. Each of these final four is, to a greater or lesser degree, striking for its parallels with the style of Beethoven in his late quartets—works with which, as Ludwig Finscher observes in his annotation, “Cherubini was probably unfamiliar.” There is, in any event, no suggestion of imitation, but simply of resemblance; the style seems as natural and uncontrived on Cherubini’s part as on Beethoven’s. Quartet No. 4, in E Major, is a masterwork by any measure: the theatrical echoes one
might have heard (or imagined) in the earlier works are entirely absent now, and in their place is a dramatic tension achievable only in the most intense and intimate chamber works. That tension is enhanced here by a subtle scheme of thematic relationships and a wholly original finale in which the drama is deepened rather than resolved. The Fifth Quartet, in F, reverts in part to the more ingratiating style of the earlier works, with the Rasumovsky set rather than the later Beethoven works as possible models (Finscher considers the finale of Beethoven’s Op. 59, No. 3, the “definite source of inspiration” for this work’s finale). The Sixth, in A Minor, is again different; it is cooler and more serene than its predecessors, yet not without drama—a conscious summation, it would seem (as it does to Finscher), of Cherubini’s entire creative life as he worked through the second half of his eighth decade.

The performances are communicative in the best sense, exuding an air of real affection and deep commitment. The recorded sound is near-perfect in its clarity and balance, and in the accompanying booklet Finscher’s invaluable notes are augmented by an essay by Wilhelm Melcher (leader of the Melos Quartet) on the sources and interpretation of the quartets, with several musical examples. This music is a good deal more than a “novelty,” as anyone already acquainted with the quartets of Beethoven, Schubert, et al. will delight in discovering.

—Richard Freed

CHERUBINI: String Quartets: No. 1, in E-Flat Major; No. 2, in C Major; No. 3, in D Minor; No. 4, in E Major; No. 5, in F Major; No. 6, in A Minor. Melos Quartet of Stuttgart. **DEUTSCHE GRAMMOPHON ARCHIV 2723 044 three discs $23.94.**

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At the Planetarium in Vancouver, B. C.: Fraser MacPherson’s Good, Live Jazz

If you live in the Vancouver, B.C., area, chances are you’ve heard the music of Fraser MacPherson, Oliver Gannon, and Wyatt Ruther. If not—and if you like your jazz served ever so mellow and swinging—I strongly suggest that you track these men down and catch their next appearance. At this point I should confess that I had never heard of MacPherson, Gannon, and Ruther until I received for review an album on the West End label, so I really don’t know if they play together regularly. Judging by the rapport in evidence on the record, however, I’m quite willing right now to lay a little money on it.

The album—a consoliation to those of us who are at a geographical disadvantage—captures MacPherson and his colleagues in concert at Vancouver’s MacMillan Planetarium on an inspired Monday evening in December of 1975. Fraser MacPherson’s tenor style is Getz-based, he plays with the fluidity—and, occasionally, the phrasing—of Lester Young, and he has the full-bodied tone of Don Byas. Like Charlie Christian, Oliver Gannon plays an amplified guitar, which—unlike the electric guitar—retains some of the tonal qualities of its Spanish ancestor. His touch is delicate, his technique is flawless, and he has the soulfulness of Django Reinhardt—an obvious influence. Not surprisingly, then, Gannon solos extensively on Django, John Lewis’ hauntingly beautiful tribute to the late Belgian guitarist. It is a tune that suffers not at all from being lovingly nudged along by MacPherson’s tenor, and throughout the album Wyatt Ruther’s acoustic bass is the perfect complement.

The three players don’t break any new ground, but they plant a little new life in the old, and they do it so tastefully and with such obvious love that you simply have to be moved. The album appears to be a private release, the kind that usually ends up in somebody’s basement, stacked up in cartons and collecting dust for want of proper distribution and promotion, but if that happens to “Fraser—Live at the Planetarium” there is simply no justice.

—Chris Albertson

FRASER MACPHERSON: Fraser—Live at the Planetarium. Fraser MacPherson (tenor saxophone); Oliver Gannon (guitar); Wyatt Ruther (bass). I’m Getting Sentimental Over You; Li’l Darlin’; Lush Life; My Funny Valentine; Tangerine; Django; I Cried for You. **WEST END 101 $7.95 (from Record Search, 1294 Gladwin Drive, N. Vancouver, B.C., Canada).**
ASLEEP AT THE WHEEL: Wheelin' and Dealin'. Asleep at the Wheel (vocals and instrumentals); Johnny Gimble (fiddle, mandolin); Joel Sonnier (accordion); other musicians. Route 66: Miles and Miles of Texas; The Trouble with Lovin' Today; Shout Wa Hey; Blues for Dicky; and five others. Capitol ST-11546 $6.98, © 8XT-11546 $7.98, © 4XT-11546 $7.98.

Performance: Good and stylized
Recording: Very good

Asleep at the Wheel is pretty much Bob Wills' Texas Playboys revisited; it's the best country swing band there is, probably, which makes it a slave to form and formula. Country swing, or "hillbilly jazz," seems to me theoretical music. Your head can tell you it's "good," but your heart doesn't tell you a damned thing—the stuff is cold, dry, academic. Dan Hicks used the precision of it as a forum for his offbeat sense of humor, and I liked that, some of it, while it lasted. Asleep at the Wheel plays it straight, being "funny" in prescribed ways on schedule but mostly being clean and machine-like. I realize in an aca-

monic sort of way that it's possible to have a dissertation schlock—and the words in it about love, boredom, jaded feet. Make pop music this way. and spasm-racked the way their music (par-

adox the expression) has, or they think your attention span has gone bust. There are those who claim a steady diet of television can do that to a race. And then there is this new vocabulary around now that has to do with how the right hemisphere of the brain, which han-

dles the hunches, intuition, instantaneous, nonlinear, and unwordable concepts, etc., is taking over in Western man from the left half where logic and empirical thinking reside. Or you can fit an album like this into a slightly messy thesis tying disco to Marshall McLu-

han. So go ahead—I'd much rather hear the right half of the brain do his thing, its way, and not happy feet either, but bored feet, jaded feet. Make pop music this im-

personal—particularly if you're a band with a strong reputation for nice old harmonized schlock—and the words in it about love, or anything else human, are a travesty. This is my idea of decadence, which is boring. Beyond that, the Gibb brothers have snatched up a style that has no use for the mostly me-

lodious special gifts they have. I've seldom seen a group work so hard at throwing away its uniqueness.

N.C.

BUCKEYE POLITICIANS: Look at Me Now. Buckeye Politicians (vocals and instrumentals). Only You; Getaway; Unity; Take My Hand; I'll Be Home; and five others. Utopia BUL1-1823 $6.98, © BUS1-1823 $7.98, © BUK1-1823 $7.98.

Performance: Good
Recording: Good

All the high-tension excitement produced by this six-man group can't quite hide the fact that their material, mostly written by lead vocal-

ist and guitarist Rosco (that's it, just Rosco), is as earthbound as a lead balloon. The musical blend is often sensational; it ranges from gospel to rhythm-and-blues to jazz to quasi-classical, and it is all performed at white heat. But despite the expert sound and fury, a certain boredom eventually creeps in. You have to have something to set your fireworks against. These are Roman candles at high noon.

P.R.

CHER: I'd Rather Believe in You. Cher (voc-

als); orchestra. Knock on Wood; Spring; Borrowed Time; Flashback: It's a Cryin' Shame; and five others. Warner Bros. BS 2898 $6.98, © M8 2898 $7.98, © M5 2898 $7.98.

Performance: Boring
Recording: Elaborate

Here's Cher, looking just great—and sounding just awful. Singing lessons won't help, the fussy elaborate arranging and conducting here by Michael Omartian certainly don't help, nor, apparently, will anything ever help until she learns somehow to project her spec-

ial kind of flip, sexy, impertinent charm voc-

ally. Her records must sell to the all-day hair-curler set who just can't get enough of her in movie magazines and her TV variety show. There's no question that in many re-

spects Cher is a star in the old-time razzle-dazzle sense, but on recordings she is just a gorge-

ous bore.

P.R.

RY COODER: Chicken Skin Music (see Best of the Month, page 83)

DEADLY NIGHTSHADE: F & W—The Dead-

ly Nightshade. Deadly Nightshade (HeLEN

Hooke, Anne Bowen, and Pamela Brandt,
guitars); Funky & Western (vocals and instrumen-
tals). Comin' Thru; I'm Feelin' Fine; Murphy's Bar; No Chicken Today; and seven others. Phantom BPL1-1370 $6.98, © BPS1-1370 $7.98, © BPK1-1370 $7.98.

Performance: Fun
Recording: Good

Here's a tidy trio of girl-persons, benign enough despite their Agatha Christie-ish
name, running through a group of their own songs. Ain't I a Woman is about the best of them—"I stand on no more auction blocks or other pedestals"—a bit hard-breathing but nonetheless effective. No Chicken Today is a rowdy amusing caper about four waitresses in an eatery who neatly skewer a "hard-drivin' diesel cowboy" and his lecherous ideas. Most of the album is good fun, but man(person)-oh-man(person), have we come a long way from the days of the Andrews Sisters!

P.R.

BRYAN FERRY: Let's Stick Together. Bryan Ferry (vocals, keyboards, harmonica); Chris Spedding (guitar); Paul Thompson (drums); Chris Mercer (tenor sax), John Wetton (bass); other musicians. Let's Stick Together; Cassanova; Sea Breezes; Shame, Shame, Shame, 2 HB; The Price of Love; Chance Meeting; and four others. ATLANTIC SD 18187 $6.98, © TP 18187 $7.98, © CS 18187 $7.98.

Performance: Very good
Recording: Sumptuous

Bryan Ferry is an interesting songwriter who's coming into his own now, apparently getting past the fear of making what he has to say coherent. There are five of his own songs here, not a chinker among them, each one hinting at a fresh individualism. He's also picked out a bright sampling of other people's songs and assembled an agile little studio band. The only thing that bothers me is his singing, which, stylistically, is still blobbing from one shape to another. The easiest way for him to do it makes him sound too much like Marc Bolan (Ha! You'd already forgotten T-Rex, eh? Good for you!), which is to say unnecessarily ugly. Here he risks some other approaches, but they seem peremptory, as if he has no clear idea of what he sounds like. He does seem to be trying to get beyond mannerisms, though, and communicates a jaunty feel for several of these tunes, and the band picks up on that. Ferry has a good ear, which he should now train upon himself and work his problem out. This album, contrasted with some he's been involved with in the past, his problem out. This album, contrasted with some he's been involved with in the past, should prove to him that he doesn't have to do something silly to get your attention. N.C.

DAVID FORMAN. David Forman (vocals, piano, guitar); orchestra. Dream of a Child; Treachery; Rosalie; The Seven Sisters; Endless Water; and six others. ARISE AL 406 $6.98, © 8301-4084 H $7.98, © 5301-4084 H $7.98.

Performance: Fair
Recording: Good

David Forman dispenses heavy-handed, blues-inflected music with lyrics, most of which he provided, that are gummy with a weighty "meaning" and "sensitivity." Most of his vocal performances have a throaty, drained sound that fairly well fits such things as Dream of a Child ("When I was a boy I dreamed of Philip Marlowe/He took me as his partner, took me as his friend/Dr. Lawrence and塑料/He dreamed of Phillip Marlowe/He took me as his partner, took me as his friend/Dr. Lawrence and plastic."); and Treachery ("You take my life, then you are free . . ."). On If It Take All Night, however, he suddenly adopts an archly coy falseto that sounds like a cross between Butterfly McQueen and the Maharishi. It's probably just Forman's attempt at "lightness," but it isn't any more successful than his attempts at "seriousness." P.R.

D ON McLEAN, one of the pop world's Real People, has deliberately kept a very low profile since his initial smash hit American Pie in 1971. That's a sign of a lot of good things: his taste and self-possession, his healthy disdain for the wheeler-dealer cannibals of the music biz, his confidence that his work is strong enough to speak for itself, and his evident intention to stay around for a long, long time, focusing his energies on creating rather than exploiting himself (and his public) as a get-rich-quick Personality.

McLean's latest United Artists release Solo is a stunning retrospective of his work. In it, he sings twenty-seven of his (and others') songs in that oddly affecting voice of his, punching through credibly with the drama of Masters of War, toying teasingly with the gentle fantasy of Wonderful Baby, and ironically narrating The Legend of Andrew McCrew without ever lapsing into one of those character impersonations so many pop performer-composers offer us as proof of their "seriousness." We'll never know, for example, just where Bob Dylan picked up that hokey Okie accent or what, precisely, it is supposed to add to his performances. McLean has the enormous good sense to stay himself, and he therefore becomes that much more convincing.

He sings alone here, accompanied only by his own banjo or guitar, and the resulting intimacy gives even more power to performances of this mostly familiar material. The tracks were picked up from appearances McLean made in Manchester, Bristol, and Oxford, and the responses of the English audiences are uniformly respectful and enthusiastic: pin-drop quiet during the performance, a slight breathless pause at the finish, and then bursts of appreciative applause.

There is none of that waa-hoo! yippee!!!-look-Mu-I'm-in-a-rock-concert!!! exhibitionistic racket so often heard on live recordings. That's probably because McLean's audiences seem actually to listen to him, as well they might—he has much to say and he says it well.

McLean is already an important artist, and everythng points to his becoming a recognized major force in pop music within the next couple of years, United Artists willing. That's only one reason why you should have this album. All the other reasons you can figure out for yourself while you listen to it. He is, simply, terrific.

—Peter Reilly

Don McLean: Simply Terrific

He sings alone here, accompanied only by his own banjo or guitar, and the resulting intimacy gives even more power to performances of this mostly familiar material. The tracks were picked up from appearances McLean made in Manchester, Bristol, and Oxford, and the responses of the English audiences are uniformly respectful and enthusiastic: pin-drop quiet during the performance, a slight breathless pause at the finish, and then bursts of appreciative applause. There is none of that waa-hoo! yippee!!!-look-Mu-I'm-in-a-rock-concert!!! exhibitionistic racket so often heard on live recordings. That's probably because McLean's audiences seem actually to listen to him, as well they might—he has much to say and he says it well.

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—Peter Reilly
Nothing to be afraid of, a trip to the planets is safe, economical, and closer than you think.

RICHIE HAVENS: The End of the Beginning. Richie Havens (vocals, guitar, piano); William D. Smith (keyboards, vocals); Booker T. Jones (keyboards); Steve Cropper (guitar); Donald "Duck" Dunn (bass); other musicians. "I'm Not in Love," a strong tune from that excellent British group 10cc, and on James Taylor's "You Can Close Your Eyes." The arrangements for eight of the ten selections are by keyboardist-writer-singer William D. "Smitty" Smith, the former captain of the (alas!) defunct Canadian group Motherlode. Smith is a first-rate talent with a highly personal style. The remaining two arrangements are by rock's original chamber-music group, Booker T. & the MG's (sadly missing their original drummer, the late Al Jackson, Jr.).

The performances by Havens and his backers are low-key and mellow, even on the uptempo selections, and they're presented with the calm assurance that the remarkable talents assembled dispense with the grace of experience. Ah, there's nothing like a pro, and pros together are welcome indeed.

J.V.
After people learn what we’ve done, no one will heckle our speakers.

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Our new speakers color sound. Anybody’s do. Should they tell you otherwise, they speak with forked frequency response. We at Sony developed the SSU-2000 with this grim reality in mind.

Our goal was to create a line of speakers with a minimum of coloration. With a frequency response flat and wide. With low distortion. And with repeatability. Which means each speaker we make will sound like the one before and the one after.

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Before you can make a good speaker you have to make a lot of bad ones. We turned out dozens of prototypes that were made with the same specs, but sound like they weren’t. That’s because your ear is more sophisticated than our measurements. You can hear how pure water is, for example.

The purity of the water in which the pulp for the speaker cone is pressed influences the sound. But it would hardly change the frequency response—or any other measurements. Now there are dozens and dozens of elements that interact this way. Changing one changes the other and almost changed our minds about going into the speaker business.

But we stuck it out. Applying the age-old technique of 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.

Understanding how to control the sound of our speakers, we realized we had to control what went into them. So we did the only logical thing. We built a plant. Which does nothing but produce—all outrageously close control—the components for our speakers.

Few companies watch what you hear so carefully.

Don’t judge a bookshelf speaker by its cover.

As you can see, a lot goes into producing a speaker that’s not easily seen. (One beautiful exception—the handsome finish on our cabinets.) That includes the carbon fiber we mix into the speaker cone paper. Carbon fiber is light and strong. Light, so our speaker needs less power to operate it, and is therefore more efficient. Strong, so the cone won’t bend out of shape in the high frequency range.

Moreover, carbon fiber won’t resonate much. It has a low Q, and it took someone with a high IQ to realize it would absorb the unwanted vibration. Unwanted vibration is also reduced by our cast aluminum basket, which is superior to a cheap stamped metal one.

We’re confident that the results of our three year effort 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-2000 $150 each; SSU-1250 $100 each; SSU-1050 $130 a pair.
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Pearlcorder-S®.

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CIRCLE NO. 32 ON READER SERVICE CARD

Russ Columbo, "Radio's Valentino"

The saxophone and its human equivalent, the crooner, filled the airwaves all through the Thirties. The chief practitioners of the art of moaning and moaning love songs into the microphone were Rudy Vallee, Bing Crosby, and Russ Columbo. In 1931, Al Dubin and Joe Burke wrote a song about the whole thing, which Morte Goode quotes in the fascinating booklet that accompanies RCA's recent Columbo collection, "A Legendary Performer": "Who always sang about a couple 'neath the stars above? (Crosby, Columbo and Vallee.)/And though I call it nonsense they insist it is love, (Crosby, Columbo and Vallee. . ."

Russ Columbo, who studied violin as a child in Los Angeles, started his career fiddling "emotion" music for Pola Negri on the sets of silent movies. He looked a lot like Valentino, who was Negri's screen lover at the time, and he later replaced the screen actor in her boudoir. By 1929 he was playing the violin and sharing vocal stints with Bing Crosby and a band at the Cocaanut Grove in Hollywood. He went on to sing in movies and night clubs billed as—what else?—"Radio's Valentino," eventually replacing Bing Crosby on NBC's Blue Network. Meanwhile, there was a whole series of love affairs, culminating in the celebrated one with Carole Lombard and a fictitious liaison with Garbo dreamed up by his manager. At twenty-six, he was visiting his friend Lansing Brown, a Hollywood photographer, when Brown, demonstrating a dwelling pistol from his collection, accidentally shot Columbo in the eye. The whole of the entertainment world kept the news of his death from his mother, who had just suffered a heart attack. Reports of his imaginary successes abroad were read to her regularly by the family, and she went to her grave ten years later without ever knowing her son was dead.

So much for the legend; how does the voice of this once-popular crooner hold up today? The original recordings, dating back to 1931 and 1932, provide the singer's munirous pipes with lush settings in the sumptuous manner of the period. Big studio orchestras led by Nat Shilkret and Marlin Skiles back his daydreamy treatments of I Don't Know Why, All of Me, Time on My Hands, and other heartfelt ballads of the period. From his violin-playing days Columbo borrowed the trick of supplying a kind of vocal obbligato when repeating a chorus; it's still effective. And some of the songs he sings on this carefully remastered disc he wrote or collaborated on himself—haunting old-time favorites of a sentimental nature including You Call It Madness, My Love, and Prisoner of Love. All this may be faintly embarrassing to today's resolutely tough-minded Spartans, but to me it's as relaxing as a nice hot bath. Columbo never displayed the soignée detachment of Vallee or the sly humor of Crosby, but when it came to putting over a schmaltzy serenade he was tops in his class. Even the modern liberated woman may find something here to swoon over.

—Paul Kresh

RUSS COLUMBO: A Legendary Performer. Russ Columbo (vocals); instrumental accompaniment. I Don't Know Why; You Call It Madness: Time on My Hands; Prisoner of Love; Where the Blue of the Night; Just Friends; Save the Last Dance for Me; All of Me; Auf Wiedersehen, My Dear; Paradise; Just Another Dream of You; My Love. RCA CPL-1-1756(e) $7.98, © CPS1-1756 $8.98, © CPK1-1756 $8.98.

STEREO REVIEW
Akai receivers.
Spread the word.

Howdy, pardner. I'm spreadin' the word about Akai receivers. Them there Akai receivers sound as clear and sharp as a cowboy playin' his geetar by a prairie campfire. Why, they sound so powerful:

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Just consider the Akai AA-1050. It's got 50 watts per channel continuous output power at 8 ohms from 20 to 20,000 Hz with no more than 0.15% total harmonic distortion.

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So spread the word. Akai! A right fine name in stereo receivers.

Akai America, Ltd., 2139 East Del Amo Boulevard, Compton, California 90220
LYNYRD SKYNYRD: One More from the Road. Lynyrd Skynyrd (vocals and instrumental). Workin' for MCA; I Ain't the One; Saturday Night Special; Sweet Home Alabama; The Needle and the Spoon; Crossroads; Free Bird; and seven others. MCA 2-6001 two discs $7.98, © MCAT2-6001 $9.98, © MCAC2-6001 $9.98.

Performance: Mechanical
Recording: Good

This is a well-drilled outfit, and I admire precision in execution in bands, but technique can't make up for pale material. Listening to the first few cuts of this double-disc live album is okay—you can admire the crispness and zip of the band's delivery—but shortly thereafter things get dull: the material doesn't improve, and the rendering of it sounds more and more mechanical. At the end of the fourth side, I applauded—with relief. J.V.

THE WALTER MURPHY BAND: A Filth of Beethoven. Walter Murphy (composer, adaptor, arranger, conductor); orchestra. A Filth of Beethoven; Flight 76; Russian Dressing; Night Fall; California Strut; and five others. (Continued on page 96)
The ultimate product of the transistorized receiver revolution

The transistor revolution is producing an increasing variety of high-quality receivers and amplifiers to choose from, many with more watts per channel than ever before. However, it's the low-to-medium powered units that offer the real breakthrough, since most of them now actually measure less than 3% distortion up to their rated power output, producing sonic quality formerly found only in high-powered modes. This created the need for an efficient speaker that would utilize the advantages of these new receivers; but not until the creation of Synergistics has such a high degree of sonic accuracy been possible in a system driven by a low-to-medium powered receiver. In spite of their low-power requirements, these speakers have all the plus features of their high-power-dependent competitors: wide frequency response (including the lowest octaves of bass), excellent transient response, wide dispersion and high power-handling capability.

Most listeners agree that speakers account for the greatest audible difference in the way a system sounds, but because most high-accuracy speakers require a lot of power, they spend up to twice as much on a receiver as they spend on speakers. With Synergistics, your power requirements are cut in half; you can substitute higher quality speakers for higher powered electronics at no sacrifice in low-distortion acoustic output. In test markets for any given system price range, well over 75% of listeners interviewed preferred systems with low-to-medium powered receivers and Synergistics speakers when compared to top-selling, low-efficiency speakers with high powered receivers. Without any explanation from us, they heard with their own ears why we chose Synergistics as the name for our speakers. SYNERGISTICS: Cooperative action in a system where the total effect is greater than the sum of its parts.

For More Information Write To: Synergistics, P.O. Box 1245, Canoga Park, California 91304.

CIRCLE NO. 33 ON READER SERVICE CARD
Pattie Page was waltzing—Tennessee style—off the charts and Les Paul and Mary Ford were giving us How High the Moon in the second week of May 1951, if not Steviand Morris was born. Few black artists had access to the national charts in those days, though much of the music that did make it was directly traceable to black roots. Twelve years later, when Steviand—as Little Stevie Wonder—made his vinyl debut with I Call It Pretty Music, Ruby and the Romantics topped the charts briefly with a “soul version” of Our Day Will Come, but in the main the radio stations—the holders of the keys—locked most black artists out in favor of white derivatives. I Call It Pretty Music didn’t make any of the charts, but it gained Stevie Wonder some attention and marked the start of an illustrious career that has made the blind singer something of a cult figure, one whose record releases are as eagerly awaited by black people as Bob Dylan’s used to be by white people. And if Wonder’s youth and blindness were factors contributing to his early success, genuine artistry has long since taken over.

By the end of 1963, more singles—most notably Fingertips—and an album entitled “Twelve-Year-Old Genius” had endeared Little Stevie Wonder to a vast, mostly black audience. Packaged and choreographed in characteristic Motown fashion, he became a headline on the soul circuit, playing the harmonica and singing about puppy love. By the end of the Sixties, Wonder had emerged as Motown’s most original property, with a string of hits including Uplift (1966), I Was Made to Love Her (1967), You Met Your Match (1968), and For Once in My Life and My Cherie Amour (1969). As these songs attest, Stevie Wonder—no longer “Little”—developed tremendously as an artist between 1963 and 1969, but he was to grow even more with the arrival of a new decade.

Unlike many Motown acts, Wonder resisted regimentation and consistently expanded his horizons. After studying composition and theory at the University of Southern California, he began to reveal in his music, if not in his lyrics, a degree of sophistication and maturity that belied his tender age. No longer restricted to three-minute chart contenders, his compositions became longer and more complex, and with his 1971 release of the album “Where I’m Coming From” (Tamla TS308) he reached a turning point similar to that which the Beatles had previously marked with their “Revolver” album. Subsequent album releases—Talking Book (1972), Inversions (1974), and Fulfillingness’ First Finale (1974)—put Stevie Wonder in a position by himself, gained him a more mature audience, and won him the respect of an industry that in 1974 awarded him four Grammies.

The release of a new Stevie Wonder album came to be looked upon as a special event, but all of 1975 and most of 1976 went by without a release from the Wonderkind, which of course considerably heightened the amount of attention given to his new “Songs in the Key of Life” when it finally saw daylight recently. Was it worth the wait? Well, perhaps the question should be, is it worth the weight? The album contains twenty-one songs totaling one hour, forty-four minutes, and thirty-eight seconds of playing time; they are spread over two twelve-inch and one seven-inch 33⅓-rpm discs. That is a generous portion by any body’s standards, but one that is praiseworthy only if the material presented on all that vinyl warrants so much of one’s time. In this case it doesn’t.

Let me point out right away that I am a Stevie Wonder fan. In fact, I went out and bought this album as soon as it became available, and buying albums is something people on my end of the record business rarely do. Though I confess to being disappointed, I must add that I don’t feel the expenditure was a total waste—the album, besides representing the latest work of an important artist, does contain material of musical value, and, had I been given the opportunity to hear it beforehand, I would still have bought it.

Starting at the top of the program, side one provided me with my first disappointments. Village Ghetto Land attempts, in semi-baroque Beatles fashion, a social comment, but it is an embarrassing high-school level; an instrumental aptly named Contusion sounds like a bad Weather Report out-take; Sir Duke seems to have something to do with Ellington, Basie, (Glenn?) Miller, and some-one the printed lyrics call Sachimo (sic); and there are two other songs of Love and God that are best forgotten. I Wish, a highly rhythmic, catchy recollection of childhood, starts off the second side in a more promising vein, but, with the exception of that and Past Paradise—featuring the twenty-four voices of a Hare Krishna chorus and the West Los Angeles Church of God Choir—this side, too, is dispensable.

The Wonder of the Sixties opens side three with Isn’t She Lovely—and she would be, if she didn’t go on so interminably. There follows a mildly interesting six and a half minutes called Joy Inside My Tears, but it is followed by a wretched eight and a half minutes of Black Man. This pits no less than forty-three vocal participants against one of those “we-all-must-live-together” message songs; the theme is tiresomely common, and this example is among the worst examples. Much has been said and written lately about pop lyrics as “poetry,” but reading Wonder’s lyrics in the accompanying booklet I was struck by their puerility—and they do seem to be a little worse this time around. However, Stevie Wonder usually manages to rise above even the most inane lyrics, so their inadequacy is less noticeable in the listening.

The song As Here must be considered Wonder’s pièce de résistance, for it is a marvelously infectious, exciting song that will surely be remembered long after most of the others are forgotten. It leads right into Another Star, a spirited song of love—and Stevie Wonder’s new album finally comes alive. But look, we’ve reached the end of side four, and, though there is something arresting about the tango rhythm of Ebony Eyes (one of the four selections on the seven-inch “bonus record”), the party is, I’m afraid, over.

In the final analysis, “Songs in the Key of Life” is a disappointment, but bear in mind that we have come to expect the extraordinary from Stevie Wonder. If this album does not live up to expectations, much of it is still noteworthy when measured against most of the other pop offerings of the day. The ingredients for an exceptional single album are here, but like its accompanying booklet (on one page alone I've found three errors, but it's judged by name) this latest Stevie Wonder offering is marred by excess.

Chris Albertson

Stevie Wonder: Songs in the Key of Life. Stevie Wonder (lead vocals, keyboards, and harmonica); various musicians, including Hank Redd (reeds), Bobbi Humphrey (flute), Herbie Hancock and Ronnie Foster (keyboards), George Benson (guitar). Love’s in Need of Love Today; Have a Talk with God; Village Ghetto Land; Contusion; Sir Duke; I Wish; Knocks Me off My Feet; Pastime Paradise; Summer Soft; Ordinary Pain; Isn’t She Lovely; Joy Inside My Tears; Black Man; Ni- culela—Es Una Historia—I Am Singing; If It’s Magic; As; Another Star; Saturn; Ebony Eyes; All Day Sucker; Easy Goin’ Evening (My Mama’s Call). TAM 15-340EC two twelve-inch discs plus one seven-inch 33⅓-rpm “bonus” record $13.98, © T15-340ET $15.98, © T15-340EC $15.98.
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CIRCLE NO. 10 ON READER SERVICE CARD

THE NIGHTHAWKS: Nighthawks Live (see Best of the Month, page 82)

ANNE MURRAY: Keeping in Touch. Anne Murray (vocals); instrumental accompaniment. Things; Caress Me Pretty Music; Dancing All Night Long; Sweet Music Man; Sunday School to Broadway; and five others. CAPITOL ST-11559 $6.98, @ 8XT-11559 $7.98, @ 4XT-11559 $7.98.

Performance: A good girl kept down Recording: Very good

Anne Murray has as attractive a voice as I have heard any season, and, on the basis of her many previous records, I am sure she is thoroughly capable of putting over any good song in her vibrant, quasi-country way. Unfortunately, there aren’t many good songs to put over on this particular program. The album really should have been titled “Songs for (futile) lovers.” There’s one about a ship that’s never going to come in, one that mutters gloomily that there will be “ten thousand tears till I dry my eyes,” one about the painful memories of a long-dead love affair brought on by hearing a “golden oldie” on the radio. When the ballads aren’t downbeat, they are downright truculent, as is Sweet Music Man, in which a pop singer is berated for the distastefully act of changing the dedication of one of his songs from his old girl to a new one. It isn’t only that the songs are downers in subject matter, but that their quality seems to match. Once only does Murray get the chance to show the warmth of her personality and her marked ability to make persuasive music: in a song called Smooth, which just happens to be one of the songs on the album. All I Can Do. Dolly Parton finally is getting the recognition she’s deserved for years as one of the most engaging, stylish, and convincing musicians in any genre, but the songs in this album are almost mindless compared to what she can do. I’m a Drifter; Falling Out of Love with Me; Preacher Tom; Hey, Lucky Lady; and three others. A&M SP-4601 $6.98, @ 4601 $7.98, @ 4601 $7.98.

Performance: Disappointing Recording: Very good

Just as I couldn’t get over my delight with one side of their last album (“Car over the Lake,” A&M SP-4549), so I find it hard to shake off my disappointment with both sides of the Daredevils’ present release. Though the band is still commendable for its arrangements and its execution of instrumental portions, the material is a stock-market plunge below the value of some of the songs on the previous effort, and the singers mewl and whine where they should croon and bawl. I hope they come up with something better next time. Much better.

J.V.

DOLLY PARTON: All I Can Do. Dolly Parton (vocals); instrumental accompaniment. All I Can Do: The Time That Keeps You Warm; I’m a Drifter; Falling Out of Love with Me; Preacher Tom; Hey, Lucky Lady; and three others. RCA APL-1165 $6.98, @ APS-1165 $7.98, @ APK-1165 $7.98.

Performance: Much better than she can do Recording: Good

Dolly Parton is getting the recognition she’s deserved for years as one of the most engaging, stylish, and convincing musicians in any genre, but the songs in this album are almost mindless compared to what she can do. I’m a Drifter has a nice sound to it, and what it has to say is mostly beyond words; you listen that way and it works. Shattered Image is a fair example of how Parton can say a little and imply a lot and of how deftly she handles metaphor. But I feel uneasy with a Dolly Parton album in which the strongest, most moving song was written by someone else—Boulder to Birmingham, by Bill Danoff and Emmylou (Continued on page 98)
The Sensuous Speaker.

Yamaha’s new two-way beryllium dome NS-500.

A very responsive speaker with a rich, luscious sound. A deeply involving sound. Highly defined, finely detailed.

The NS-500 is created from the same advanced beryllium technology that’s made Yamaha’s revolutionary NS-1000 Series speakers, in the eyes and ears of many audio experts, the highest standard of sound accuracy. (Specific benefits of Yamaha’s beryllium technology have been documented in a paper presented to the 52nd Convention of the Audio Engineering Society.)

With the NS-500, you get all of beryllium’s advantages (transparency, detail, and lack of distortion that go beyond the best electrostatic speakers), but at a price roughly half that of the NS-1000. Only $850 the pair, suggested retail price.

The joy of beryllium.

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The beryllium dome found on the NS-500’s high frequency driver is the world’s lightest—about half the weight of one petal of a small sweetheart rose. Which is one of the reasons for this speaker’s exceptional sensitivity and response, and for its sensual sound.

A closer look

To be able to offer the sophistication of beryllium at a more affordable price, without sacrificing quality of performance, Yamaha designed the NS-500 as a two-way bass reflex system.

This gives the NS-500 a trace more extension at the low end than the relatively objective NS-1000. But it also gives the NS-500 more efficiency (91dB SPL at one meter with one watt RMS input), which means you don’t have to invest in the highest powered amplifiers or receivers in order to drive the NS-500 to its full rated output.

For an optimum match with the beryllium tweeter, Yamaha developed a very light, very rigid “shell” woofer. And a specially hermetically-sealed air core LC crossover with a carefully selected 18k-12 crossover point.

As a result of these design parameters, the NS-500 boasts an insignificant 1.3% THD below 50 dB SPL, from 40 Hz to 20 kHz, making it the perfect complement to Yamaha’s state-of-the-art low distortion electronics.

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BRIAN PROThEROE
Songs with the surreal quality of a Magritte painting

Recording of Special Merit

BRIAN PROThEROE: I/You. Brian Protheroe (vocals); orchestra. I/You; Battling Annie; Evil Eye; Lucille; Hotel; and five others. CHRYSALIS CHR 1108 $6.98.

Recording: Interesting Performance: Good

Brian Protheroe's work here is interesting, intelligent, and imaginative. His songs often have the quality of a Magritte painting: the commonplace rendered with absolute fidelity but transformed by a surreal repetition or juxtaposition of the unexpected. Battling Annie, for instance, is about a mysterious and fearsome lady at a typical English county fair—described in atmospheric detail—who challenges young men to box with her. Young Billy ("He was a shy boy") decides to give it a try. Once in the ring he is floored, literally, by Annie's request, "Billy, look at me..." Well, authentic sirens never do have to la...
academy, and you wouldn’t want Rod Stewart to sing certain words and melodies. Here he works well within those limitations, tossing off an occasional potboiler for the kidder aspect of his audience, but exercising a rather fine care and control over song selection and production. The result is a sketch from a limited palette. Look for line instead of color and you may decide this is a durable album. N.C.

STRAWBS: Deep Cuts. Strawbs (vocals and instrumental). I Only Want My Love to Grow in You; Turn Me Round; Hard, Hard Winter; My Friend Peter; The Soldier’s Tale; Simple Visions; and four others. OYSTER OY-1-1603 $6.98, © ST-1-1603 $7.98, © CT-1-1603 $7.98.

Performance: Prissy
Recording: Clean

If we ever get out of this depressing era of lousy rock music still trying to live off its reputation from the Sixties, we may be able to take comfort in the fact that the era at least produced some remarkable album-cover photographs and paintings. I hope, for their sakes, that the painters and photographers have retained the rights of possession to their works; they might be valuable someday.

The album cover for “Deep Cuts” is a case in point. It would be a disservice to the painting to describe it, so I suggest you go to your record store and see it for yourself. You need not buy the album unless you intend to be a pop-art collector, for the ersatz music inside is limp and conceited.

The songs, as usual these days, depend on the rock mystique and the producer’s sound a bit. The production still has the characteristic Spartan quality, though; it has a little more muscle here, but no suggestion of fat. The Brand New Tennessee Waltz is redone in a warm, sentimental way; all the other songs are new, and there’s something—something short of a major revelation, but something—worth waiting for in almost every one. The overall tone or feeling of it is slightly abstract; I suspect it would be more concrete if

Jesse Winchester is one of those songwriters whose words sometimes have a special sparkle behind them and whose tunes generally can be relied upon to go somewhere. He hasn’t been consistently at top form, though, and the depth of some of his albums, as they age, seems to be spotted in certain songs. I’m not sure how this one will age, but it seems to have its depth spread about pretty well. I never get a major revelation from it and don’t know exactly why I keep expecting one, but Step by Step has that sparkle (“... Jacob’s ladder gets slippery at the top...”) and many a happy-go-lucky saint has made that long, long drop”)

BEARSVILLE BR 6964 $6.98, © M8 6964 $7.98, © M5 6964 $7.98.

Performance: Very good
Recording: Very good

TANYA TUCKER: Here’s Some Love. Tanya Tucker (vocals); orchestra. Short Cut; The Gospel Singer; Holding On; Comin’ Home Alone; I Use the Soap; and four others. MCA MCA-2213 $6.98.

Performance: Very professional
Recording: Excellent

Here is Tanya Tucker offering another of her essays in absolute, on-the-button professionalism. She’s matched by the arranging perfectionisms of Bergen White and the super-efficient soundless hum of Jerry Crutchfield’s production. If all that sounds a bit cut and dried, I’m afraid that’s because it is. Tucker’s strongest appeal, since her astonishing youthful debut several years ago, has been her complete understanding and communication of the real and basic feelings and emotions that even the average c-&-w lyric is all about.

But of late her albums have been getting fancier and fancier, with the result that such things here as the title song and Round and Round the Bottle evoke only admiration at the way she performs them instead of that old familiar down-home heart tug. What she hopes to gain by all of this haute professionalism is hard to guess. What she’s lost is pretty obvious. P.R.
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FOLK

NORMAN BLAKE: Old and New. Norman Blake (vocals, guitar, mandolin, fiddle, viola); Tut Taylor (dobro); James Bryan (fiddle); Ben Pedigo (banjo); Nancy Blake (cello, viola, bass). Widow's Creek: Bristol in the Bottle; Billy Gray: Forked Deer; Ruth Bogre; Cuckoo's Nest; Witch of the Waves; My Old Home on the Green Mountain Side; and nine others. FLYING FISH 010 $6.98.

Performance Mostly agreeable
Recording Good

Norman Blake strums a sassy guitar and sings folk songs in rural arrangements devised by himself and his colleagues, who play the dobro, fiddle, and banjo along with such less backwoodsly instruments as the viola, cello, and bass. Blake also writes "folk songs" (as if there weren't already enough of them) which sound just as rustic as the real thing. When he and his friends are whooping it up to a whirlwind finish in such instrumental numbers as his own Rubagre and the traditional Cuckoo's Nest, their excitement is contagious, and when Blake sings such time-honored material as My Old Home on the Green Mountain Side, the going is still agreeable though the idiom and the singing style are almost painfully familiar. When he starts mourning the passing of the "iron horse," though, and the takeover of the tracks by freeways in Railroad Days, the results are simply dismal. One interesting ballad Blake resurrects here is Sweet Heaven, with its chorus of "Let her go, let her go, God bless her" and the lines, "She may search this wide world over/She'll never find a friend as true as me," which all these years I had supposed traced their origins to the St. James Infirmary Blues. Something blue turns out to be something borrowed. P.K.

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TEN-MenSICIAN from U.S.A. and closer to home. With Tut Taylor (dobro); James Bryan (fiddle); Ben Blake (vocals, guitar, mandolin, fiddle, viola); NORMAN BLAKE: Old and. New. Norman Blake strums a sassy guitar and sings folk songs in rural arrangements devised by himself and his colleagues, who play the dobro, fiddle, and banjo along with such less backwoodsly instruments as the viola, cello, and bass. Blake also writes "folk songs" (as if there weren't already enough of them) which sound just as rustic as the real thing. When he and his friends are whooping it up to a whirlwind finish in such instrumental numbers as his own Rubagre and the traditional Cuckoo's Nest, their excitement is contagious, and when Blake sings such time-honored material as My Old Home on the Green Mountain Side, the going is still agreeable though the idiom and the singing style are almost painfully familiar. When he starts mourning the passing of the "iron horse," though, and the takeover of the tracks by freeways in Railroad Days, the results are simply dismal. One interesting ballad Blake resurrects here is Sweet Heaven, with its chorus of "Let her go, let her go, God bless her" and the lines, "She may search this wide world over/She'll never find a friend as true as me," which all these years I had supposed traced their origins to the St. James Infirmary Blues. Something blue turns out to be something borrowed. P.K.
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Side by Side by Sondheim

The new RCA album "Side by Side by Sondheim" is a tribute, bouquet, what-have-you to the work of Stephen Sondheim, probably the most gifted and productive creative force now at work in the American lyric theater. It is a collection of songs from an astonishing career that began—at the top—with West Side Story (he was then only twenty-five years old) and has continued on to the recent Pacific Overtures.

The release is a recorded version of the "musical entertainment" first presented at London's Mermaid Theatre last year by three young English performers. In the recent past we've also had original-cast recordings, from that same stage, of evenings devoted to the works of Noel Coward and Cole Porter. If this last go with Sondheim is the least successful of the three, it is so for reasons that have little to do with the quality of his work or with Ned Sherrin's direction of his three talented performers. It has to do, oddly enough, with the problem of translation. Just as the plays of Montherlant are so very much the quintessence of all that is French that they are, even in English, rather mystifying experiences for British or American audiences, so Sondheim's work is so characteristic a dissection of the overexposed nerve endings and quirky responses of the genus "New Yorker" that any transplantation, either geographical or simply out of the context of such strong "books" as Gypsy, West Side Story, or A Little Night Music, is likely to disorient the audience from a necessary frame of reference.

Further, as Sondheim himself observes in the album's liner notes, "I like writing songs that take place in dramatic situations within the proscenium arch. I'm not particularly interested in art songs or pop songs that stand on their own." I am prepared to take him at his word on that, for the songs in the album don't work nearly as well as the Coward and Porter songs do in theirs. Those two, of course, were the determination and the ability to create "hits" that could sustain themselves apart from the shows they were written for.

Again, Porter and Coward were charter members of what used to be called the International Set, a rather motley crew, to be sure, but one quite serious in its determination to shake off any lingering traces of Victorian provincialism—or any other kind, for that matter. Their particular brand of gossamer sophistication and arch playfulness traveled beautifully—it was equally at home in New York or London or, indeed, anywhere that speakers of English thrashed for the champagne sparkle of their cheerful fatalism.

Sondheim, on the other hand, coldly brilliant, rigidly committed to intelligence-above-all, and with the eye and ear (and heart) of a night-desk detective sergeant laying out the evidence in a crime of passion, is hardly a lighthearted boulevardier. He is New York. He is also—dare one say it?—more than a little provincial in being trapped in the very small, very select, very social reaches of New York's upper Bohemia. So much of his work reflects the attitudes of that milieu: at once clever and mistrustful, intelligent yet oddly disquieting, crisp and chic but still wildly, unpredictably (and only temporarily) sentimental. Perhaps one remark he makes in the liner notes will clarify this: "Bach was an acquired taste for me, Mozart I don't understand. It doesn't reach me." (Yet one of his most successful shows is named after one of Mozart's most "reachable" musical entertainments.) "I admire it, but I don't like it." Admires it but doesn't like it! God, how that detachment comes through in his songs for such characters as Rose in Gypsy, Leona in Do I Hear a Waltz?, and in practically every song he wrote for every character in both Follies and Company! There is much understanding—no, comprehension—but little pity, gentleness, or compassion in Sondheim's work.

Performers Millicent Martin, Julia McKenzie, and David Kernan seem somewhat adrift in the (for them) new-worldly scorch of Sondheim's lyrics. Everything goes well enough when, for instance, Millicent Martin can have a jolly romp through I'm Still Here, a hymn to a Hollywood dragoness that enlivened Follies, or when Kernan and McKenzie trot through We're Gonna Be All Right, a cheerful (the music is Richard Rodgers') number about a young couple counting their blessings. But when the program gets around to the Real Stuff, the brooding anger of You Could Drive a Person Crazy, Everybody Says Don't, There Won't Be Trumpets, or even the obsessionally Losing My Mind, then the company is as out of its depth as three schoolchildren doing a Strindberg play. If you really listen to Sondheim's lyrics—and you have to listen, they are that good—then you know that his is a very dark talent indeed, that it needs a very specific kind of instinctive, indigenous, New York performance to put it across. Otherwise, the result is what we get here: singing actors trying to fake emotions that are utterly foreign to them.

The success or failure of this particular album makes no real difference, for Sondheim is still, if for no more than his mastery of lyric techniques (and there is a great deal more), one of the contemporary greats. But what he does is quite special, traveling a course that is parallel to without being a part of the mainstream of the American musical theater. This is not, in other words, the kind of place you want to show up at without a firm invitation.

—Peter Reilly

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TECHNICAL DESCRIPTION

October 29, 1976

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Engineering Dept., Pickering & Co., Inc.
JAZZ

SIDNEY BECHET: Sidney Bechet Album. Sidney Bechet (soprano sax); Wild Bill Davison, Oran "Hot Lips" Page (trumpet); Albert Nicholas, Mezz Mezzrow (clarinet); Jimmy Archey (trombone); Ralph Sutton, Sammy Price (piano); Danny Barker (guitar); "Pops" Foster (bass); Sidney Catlett, "Baby" Dodds (drums). Baby, Won't You Please Come Home; Sheik of Araby; Dardanelle; I Never Knew; House Party; Perdido Street Stomp; and four others. SACCHAR $6.98. The award-winning 3" Model 3C500 ($14.95) is available from CMS Records, 14 Warren Street, New York, N.Y. 10007.

Performance: Uninspired

Recording: Variable reprocessed mono

Sidney Bechet was a distinguished jazz reed-man from New Orleans who settled in New York in the 1920's and spent the latter part of his life in France, where he was adored. He was adept at several instruments but was best known for his playing of the soprano saxophone, with which he "invented" for jazz purposes as his contemporary Joe Venuti "invented" the violin and Eddie Lang the guitar as a melody instrument.

Unfortunately, this collection of odd pick-up sessions from the 1940's doesn't display Bechet to much advantage. He plays as a sideman in some excellent company, but the performances don't have much energy; the music is rather tired and tinny neo-Dixieland.

Occasionally one of the players sounds interested—trumpeter Oran "Hot Lips" Page has a fine solo on House Party—but things generally just grind along and muddle through. The selections on the second side of the album unfortunately feature Milton "Mezz" Mezzrow, a clarinetist of limited ability but with a talent for self-advertisement and a line of jive about the Meaning of Jazz that caused him to be revered by French jazz intellectuals. Mezzrow's playing on these sessions is dull—when it isn't ghastly.

There is some comic relief, however, in the hilariously stuffy and overwritten liner notes, the mauve prose of which is rendered by an English jazz critic. European fans, critics and the Meaning of the World Needs Now Is Peace and Love, what we hear here are new (well, six-year-old) versions of tunes that have been in the Blakey repertoire since the Fifties. But the fifty-eight-year-old drummer's ear for budding talent has kept the Jazz Messengers young (for all these years, and the periodic infusion of new blood has given the group an ever au courant sound. The version of Night in Tunisia heard here is therefore significantly different, stylistically, from the 1954 Messenger version, and neither can be said to repeat what was offered in the performances recorded in '57, '59, and '60. While I prefer the 1958 Blues March (on Blue Note, with Lee Morgan, Benny Golson, and Bobby Timmons), the present version of It's Only a Paper Moon is a step above the one made ten years earlier with Morgan and Wayne Shorter.

Pianist Joanne Brackeen—who's predecessors include Horace Silver, Bobby Timmons, and Cedar Walton—has matured considerably since this concert took place, but she need not...
If you’re surprised to learn that tubes solve some amplifier problems best, you have something to learn about amplifiers.

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It may seem courageously retrogressive for a company to introduce a tube amplifier—even a highly advanced type—to the semiconductor audio world of 1976. Especially for a company only recently established in the U.S. market with a comprehensive line of solid-state amplifiers and tuners. But for LUX, it is simply consistent with our philosophy: whatever path may lead to improvement in the accuracy of music reproduction will be explored by our audiophile engineers. Whether it leads to transistors or tubes.

Certainly, transistors are not about to be obsoleted by tubes. However, there are some amplifier problems that tubes still handle better than transistors. Overloading is one such problem.

When a solid-state amplifier is driven beyond its rated power, it clips abruptly. Engineers call it “hard” clipping. The term is apt, as the sound from the spurious high-order odd harmonics is raspy and irritating. Further, if the overall circuitry is not stable, and the protective circuits not very well-designed, the distortion is extended in time beyond the moment of overload. Drive a tube amplifier beyond its rated power and it too clips the waveform, but gently and smoothly. This “soft” clipping introduces much smaller amounts of odd harmonics. The distortion is far less irritating, hence less noticeable.

Notch (or crossover) distortion, present in many transistor amplifiers, is another source of spurious high-order odd harmonics. It occurs when the transistor output circuits are not able to follow the musical waveform accurately at the points where it changes from positive to negative and back again. Since notch distortion, unlike clipping, is at a constant level regardless of the power the amplifier is delivering, the ratio of this distortion to signal is worse at lower power. The gritty quality heard from many transistor amplifiers, particularly when they are playing at low levels, is usually due to crossover distortion.

Of course, tubes also have their limitations. Especially conventional tubes. The only tube previously capable of high-power amplification—the pentode—has inherently higher levels of distortion than the triode. Existing lower-distortion triode tubes cannot deliver sufficiently high power as a simple push-pull pair. But LUX, together with NEC engineers, has developed the first of a new breed of triode tube, the 8045G, which with other related technological advances, makes possible a high-power, low-distortion triode amplifier—the Luxman MB-3045. Among the differences in this new triode, the plate-electrode uses a special bonded metal with high heat-radiation characteristics. Also, the fin structure further aids heat dissipation.

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FREQUENCY RESPONSE
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High Level Inputs—Within 0.1dB of absolutely flat response, 20Hz to 20kHz, within 3dB of absolutely flat response, 5Hz to 100kHz.

OUTPUT CAPABILITIES
Rated Output—2 volts rms into 10K ohm load, resistive. Output at Clipping—Greater than 9 volts rms into 10K ohm load, greater than 5 volts rms into 600 ohm load at 1kHz.

be embarrassed by her work here. Bill Hardman is another musician whose growth has not been stunted, and rarely have I heard him play as effectively as in this welcome delivery by Art Blakey's Jazz Messengers.

CLAUDIE BOLLING AND ALEXANDRE LAGOYA: Concerto for Classic Guitar and Jazz Piano (see Classical Reviews—BOLLING)

DUKE ELLINGTON: His Most Important Second War Concert. Duke Ellington and His Orchestra. Ring Dem Bells; The Star Spangled Banner; Moon Mist; Black, Brown and Beige (excerpts); and eight others. SAGAPAN PAN 6902 $6.98 (from CMS Records, Inc., 14 Warren St, New York, N.Y. 10007).

Performance: Good vintage Duke
Recording: Low-fidelity mock stereo

The date was December 11, 1943. It was the Ellington orchestra's second Carnegie Hall concert, and someone was there to preserve it on acetate discs while the recording industry hibernated under the now famous AF of M ban. Judging by a 1967 release of this material on a Swedish bootleg album, whoever made the original recording did a better job of it than the Sagapan people did of mastering—there is an annoying rumble throughout this edition, and the so-called stereo processing only muddles things further.

The music, however, is good—except, of course, for The Star Spangled Banner, which even Ellington can't salvage—and there is a fine crew to spark it. Just why this concert is regarded by the Sagapan people as more important than the band's previous one at Carnegie Hall escapes me, but no Ellington collection should be without it, for it does represent an edition of the Ellington band not available on any commercial recordings, and it has some fine solos by Johnny Hodges, Joe "Tricky Sam" Nanton, Taft Jordan, and other Ellington regulars.

Finally, even if you hate Ellington's music, you must read a Mr. Colin Grogan's absolutely incredible piece, "The Saga History of Jazz," which appears on the back cover of this album and is like no other history of jazz you've ever read. Just the literature is rife with nonsense and drivel, but this tops them all for naivete and conjecture.

FRASER MACPHERSON: Fraser—Live at the Planetarium (see Best of the Month, page 85)

PAT METHENY: Bright Size Life. Pat Metheny (guitars); Jaco Pastorius (bass); Bob Moses (drums); Sirabhorn; Midwestern Night's Dream; Round Trip/Broadway Blues; and five others. ECM ECM 1073 $6.98; © 8T-1-1073 $7.98, © CT-1-1073 $7.98.

Performance: Searching
Recording: Excellent

Guitarist Pat Metheny is from Missouri, and I have enjoyed his playing as a member of vibist Gary Burton's group, but I am somewhat disappointed in this, his recording debut as a leader. The support from bassist Jaco Pastorius and drummer Bob Moses is excellent; Moses, of course, is a long-time associate of Burton's, and Pastorius recently made his first album as a leader. But put them all together—that is, Metheny, Pastorius, and Moses—and the result seems to be three talented musicians in search of something they can't find, at least not here.

JEAN LUC PONTY/STEPHANE GRAPPELLI: Ponty/Grappelli. Jean Luc Ponty and Stephane Grappelli (violins and violas); rhythm section. Bowing-Bowing; Valerie; Memorial Jam for Stuff Smith; and two others. Inner City IC 1005 $6.98 (from Inner City Records, 43 West 61st Street, New York, N.Y. 10023).

Performance: Mostly boring
Recording: Good
I have had a fondness for Stephane Grappelli's playing ever since I first heard a record by the Quintet of the Hot Club of France, and of all the modern jazz violinists no one comes close to Jean Luc Ponty for that magic combination of imagination, swing, and vitality. Given all that, I should really love this album, but, alas, I love only parts of it—where the two violinists (who also double on violas) get a chance to play without too much interference from the stereotyped, electrified (in the literal sense) rhythm section. As I say, the album has its moments, very good moments, but.

STEVE REID: Nova. Steve Reid (drums); Ahmed Abdullah (trumpet); Joe Rigby (reeds); Les Walker (keyboards); Luis Angel Falcon, Richard Williams (bass). Lions of Judah, Long Time Black; Sixth House; and no others. MUSTEVIC SOUND MS 2 001 $5.98 (from Mustevic Sound, Inc., 193-18 120th Avenue, New York, N.Y. 11412).

Performance: Lofty
Recording: Good
As the major labels move farther and farther away from jazz and sink deeper and deeper into that stagnant pool of electronically generated "sounds," more and more dedicated musicians are finding it necessary to finance, record, and release their own albums in order to be heard as they want to be heard. Such ventures rarely bring the artist a measurable financial reward, but they do give him the satisfaction of having a record done his way and of knowing that possible profits won't have to be shared with a faceless corporation or someone whose only interest is a material one.

The uncredited notes for this album are hopelessly amateurish, but I am happy to report that the music is not. In fact, this is a very worthwhile album of what can perhaps best be described as "loft jazz," a term that may not mean much to you unless you have had the experience of taking in the music currently thriving in the lofts of New York's Lower East Side. Steve Reid has drawn praise from some of the newer critics, but I don't think his drumming exceptional—good, perhaps very good, but not exceptional. Trumpeter Ahmed Abdullah, on the other hand, does have a quality that stands out; his name is new to me, and chances are that it's new to you, but I don't think I have heard his playing before. Les Walker's acoustic (sic) piano work, generally much better than his organ playing, is most effective on Sixth House. I'm sorry that we only get a total of thirty minutes in this album and I wish the engineer hadn't ended each selection quite so abruptly, but I hope Steve Reid and his colleagues soon come back with more.

JACK REILLY: Tributes. Jack Reilly (piano). Someone to Watch Over Me; Nana; Suffering; and seven others. CAROUSEL CLP 1002 (Continued on page 108)
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Latin Jazz:
Dizzie & Machito

Though he’s a lot better known as one of the leaders of the bebop movement, Dizzie Gillespie was also a key figure in the joyous music called Latin jazz. Afro-Cuban jazz, as it was called in the late Forties, was the product of a very fertile era for both jazz and Latin dance music. Machito’s big band of the middle and late Forties was as important in the hot New York Latin style that has come to be called salsa as Gillespie’s was in bop, with a sound built by musical director Mario Bauza out of ten years’ experience in Thirties black swing bands—including a stint playing alongside Gillespie in the trumpet section of Cab Calloway’s band.

Latin jazz, an instrumental hybrid combining jazz solos and ensemble work with salsa-style rhythm sections, is an exciting music, enriching the full-blooded complexity of Afro-Cuban percussion with bop’s harmonic adventurousness. Gillespie and the Machito-Bauza team weren’t its only creators; Stan Kenton, for one, was doing on the West Coast much of what they were doing on the East. But it was Gillespie who, in the year or so during which he featured conga-player Chano...
Pozo with his big band, gave Latin jazz prestige in the East Coast bop scene.

Unlike their jazz counterparts—and Ellington aside—Latin-jazz arrangers soon developed a taste for extended suites, a natural one given the possibilities for contrasting movements presented by Cuban music's many different rhythms. Among the most important of these arrangers was Arturo "Chico" O'Farrill, a Cuban jazz freak who came to the States in 1948. O'Farrill wrote *Manteca Suite* for Gillespie in 1949 and *Afro-Jazz Suite* the year afterward for a session produced by Norman Granz in which Machito's band backed Charlie Parker, Flip Phillips, and Buddy Rich.

All in all, when Mario Bauza suggested last year that Granz's Pablo label record a couple of O'Farrill suites with Gillespie fronting Machito, he was suggesting a real reunion of the heavies. But the resulting "Afro-Cuban Jazz Moods" is not merely Nostalgia Time, though it is in the eclectic tradition of Latin-jazz suites at their most idiosyncratic. It's a splendidly ambitious work whose harmonic writing ranges from early big-band section punch to occasional tone clusters and a little serialism. Its overall sound highlights the classic Machito brass-sax-and-percussion big-band sound, though a synthesizer supplies an effective tonal garnish. At times grandiosity creeps in, but O'Farrill's willingness to take risks gives him a richness lost by men too afraid of being vulgar, and his loftier aspirations are balanced by a solid base in Cuban rhythms and melodies.

Unlike Johnny Richards in his 1956 *Cuban Fire* suite for Stan Kenton, O'Farrill doesn't base each movement on a different rhythm, but alternates rhythms for contrast and progression within each section, setting a traditional Cuban *guaguancó* against a basic syncopated Latin-jazz six-eight, flicking from a building brass break into a light montuno piano vamp like a fish moving from shade to sunlight. Above it all Gillespie soars and dances, never making obvious concessions to the "non-jazz" context, darting in and out of the brass, chopping across or floating freely over the percussion patterns with the ease of a man who has soaked himself in Latin music for nearly forty years.

Latin-jazz suites vanished along with the big band—possibly for a lot of reasons and certainly because big bands got too costly. But recently there have been signs of a revivification. The linchpin of Eddie Palmieri's *Sun of Latin Music* album, *Un Dia Bonito*, moves from introduction to climax like a dance-band number, but its long freeform prelude and contrasting percussion, vocal, and orchestral sections give it the feel of more extended works. Bandleader/conga-player Ray Barretto's new rock-jazz experiments have also included a salsa suite that he has played a couple of times in concert, though he has not yet recorded it.

Some of the older Latin-jazz suites are still available on record. The classic *Afro-Jazz Suite* and *Manteca Suite*, alas, are not, though they certainly should be. But Stan Kenton has reissued his recording of Johnny Richards' *Cuban Fire* on his Creative World label (ST 1008). Richards, who studied with Arnold Schoenberg, wrote for Gillespie as well as Kenton, and *Cuban Fire*, which has six movements based on Cuban rhythms and plenty of classical elements, makes particularly interesting listening alongside the new Pablo release. A less ambitious work, Perez Prado's *Concerto para Bongó*, is also still around on West Side Latino LS61005. Like "Afro-Cuban Jazz Moods" and *Cuban Fire*, it is strongly brass-and-percussion oriented, but with Latin percussion rather than jazz solos.

The Latin-jazz suites were a real attempt at a pan-Afro-American extended form, and though they could be overblown at times, at their best they had a sweep as well as an excitement that's missing nowadays. Check them out. And start with this one.

—John Storm Roberts


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**CLASSICAL DISCS AND TAPES**

Reviewed by RICHARD FREED • DAVID HALL • GEORGE JELLINEK • PAUL KRESH
STODDARD LINCOLN • ERIC SALZMAN

**RECORDING OF SPECIAL MERIT**

**BEETHOVEN:** Military March in D Major (WoO 24); Twelve German Dances (WoO 8); Minuet of Congratulations (WoO 142); Turkish March from “The Ruins of Athens,” Op. 113. MOZART: March in D Major (K. 408, No. 2); March in C Major (K. 408, No. 3); Five Contredanses (K. 609); Two Minuets with Contredanses (K. 463); Contredanse La Bataille (K. 535); Six German Dances (K. 509). Rotterdam Philharmonic Orchestra, Edo de Waart cond. PHILIPS 9500 080 $7.98.

**Performance:** Stylish

**Recording:** First-rate

It is not very original to fall back on Wolf’s “Auch kleine Dinge” by way of describing this marvelous collection, but that is what comes to mind. The music consists entirely of “little things,” but they are miniatures compounded of such taste, such charm, and such happy inventiveness that the matter of dimension is no matter at all. Edo de Waart brings out all these qualities in the most stylish and enlivening readings, and Philips’ first-rate recording lets us all but see how much the musicians are enjoying themselves. The Beethoven side is especially welcome, for there is no recording of the Beethoven violin concerto, given the formidable competition it faces in the catalog, may not attract much attention. It should, for this is a beautifully proportioned, altogether masterly performance, conforming extremely well to Boult’s customary rock-solid orchestral framework. Theirs is a massive, serene, lovingly detailed view, which is perhaps a shade unsmiling in the Rondo, but which cannot fail to delight in its totality. The sound—of English EMI origin—is warmly resonant. Mr. Suk plays the unfamiliar but beautiful passages cannot be denied, but Bolling’s emulation of the 1930’s Ellington style—which led to some recordings featuring cornettist Rex Stewart—met with enormous success in Europe during the late Forties and brought praise from Duke himself. In recent years, Bolling has devoted much of his time to arranging for such diverse singers (and non-singers) as Charles Trenet, Brigitte Bardot, and Liza Minnelli, and to composing film and television scores. He has also turned to composing extended works that blend jazz and Baroque elements in the form of an instrumental dialogue. One of these, the Suite for Flute and Jazz Piano, featuring flutist Jean-Pierre Rampal and himself, appeared on the American Columbia label (M 33233) in 1975.

The present work was suggested by guitarist Alexandre Lagoya after he heard Bolling’s Sonata for Two Pianos performed on the radio. That the concerto contains pleasing, even beautiful passages cannot be denied, but Baroque music and jazz are such obvious—and, by now, old—partners that there don’t seem to be any new roads to explore in that direction, or, if there are, Bolling has chosen the beaten path. Sections employing South American and Mexican themes suffer from the same triteness. The performance itself is not displeasing, but the music—like so many jazz-classic amalgams—comes out being neither fish nor fowl. I would rather hear Lagoya perform a classical guitar work than what he does here, and I much prefer Bolling’s “Original Ragtime” album (Columbia PC 33277) to this one.

**BOLLING:** Concerto for Classic Guitar and Piano. Claude Bolling (piano); Alexandre Lagoya (guitar); Michel Gaudry (bass); Marcel Sabiani (drums). RCA FRL1-0149 $6.98.

**Performance:** Mexico meets Mississippi in France

**Recording:** Excellent

C. Albertson

Claude Bolling, now forty-six, studied guitar and piano as a child, and at fifteen he entered an amateur contest sponsored by the Hot Club of France. He was unsuccessful that time, but his luck changed three years later when he brought a traditional jazz band into the competition. This led to a series of recordings on various French labels during which the band underwent a transformation from a New Orleans style to early Ellington to modern swing. Bolling’s emulation of the 1930’s Ellington style—which led to some recordings featuring cornettist Rex Stewart—met with enormous success in Europe during the late Forties and brought praise from Duke himself. In recent years, Bolling has devoted much of his time to arranging for such diverse singers (and non-singers) as Charles Trenet, Brigitte Bardot, and Liza Minnelli, and to composing film and television scores. He has also turned to composing extended works that blend jazz and Baroque elements in the form of an instrumental dialogue. One of these, the Suite for Flute and Jazz Piano, featuring flutist Jean-Pierre Rampal and himself, appeared on the American Columbia label (M 33233) in 1975.

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**Performance:** Delicate

**Recording:** Okay

There is a delicacy in these performances that approaches wussiness. This is particularly disturbing in the Ballades, which cry out for a firm, bardic treatment. Side two—a set of lyr-
Those who saw on public TV Artur Rubinstein's performance of Brahms' heaven-storming youthful masterpiece will have a fine souvenir in this. The old master's first recording was on RCA and EMI. As in television broadcast, the miking of the soloist is on the close side; even a Rubinstein can hardly be expected to produce the dynamic range at age ninety that he did twenty-two years earlier in his fire-eating interpretation of the concerto with Reiner and the Chicago Symphony (RCA LM 1831). But for a man of his age, and with failing eyesight as well, Rubinstein can still do wonderful things with and for the music. There is a rather leisurely and ruminative traversal of the opening movement, followed by a slow movement that increases in its intensity of expressive phrasing to a point of alacrity, but also contains a leisurely and ruminative dim violins, but it is good to hear it without the heavy surface noise. And it is a welcome and valuable bit of historical preservation, for this was the first electrical recording of a Brahms piano concerto and was done with great care, but not with the fire he brought to it in 1942 and which the highly virtuosic music truly deserves. 

D.H.

COOLIDGE: Rhapsody for Harp and Orchestra; New England Autumn; Pioneer Dances; Spirituals in Sunshine and Shadow. Westphalian Symphony Orchestra, Siegfried Landau cond. TURNABOUT QTV-S 34635 $3.98. 

Performance: Lively 

Recording: Excellent

The conscientious music-lover is always threatened by the feeling that he might be missing something. Peggy Stewart Coolidge? Born in Massachusetts in 1913, she wrote her first song when she was nine, took piano lessons, and planned a career as a concert pianist. Then she turned to film work, in 1937, she started writing scores for ballets and films, orchestral suites, and tone poems. Her work has been compared to Gershwin's and Copland's, but in reality the music on this disc tends to make one think of the American Eric Coates. It also bears strong affinities to the "serious" contributions of Morton Gould. The latter particularly comes to mind when one hears her Spirituals in Sunshine and Shadow. Like Gould's Spirituals, this is a suite of works inspired by black Americana. A strongly appealing piece, with a pleasing transparency in the scoring, it lacks the sinews of the Gould treatment, but it is even more intriguingly orchestrated. 

The Pioneer Dances have that outdoory ring we have come to associate with such offerings, but the wholesomeness sounds rather secondhand and self-conscious. The Rhapsody for Harp and Orchestra and New England Autumn, with one movement devoted to a regional sunrise and the other to a country fair, are long on mood and atmosphere but short on the kind of substance that might keep the impressionist colors from sounding richer, more spacious, and more detailed texture. Even so, the music deserves better than this. The Viennese players seem ill at ease with the music, and the recording does not begin to approach today's standard in capturing percussion detail. List's performance is done with great care, but not with the fire he brought to it in 1942 and which the highly virtuosic music truly deserves. 

D.H.


Performance: Good 

Recording: Historic, vintage 1928

I grew up with this performance as released on 78-rpm gold-seal Brunswick pressings, heavy surprise noise and all. It was, even then, a finely proportioned, lyrical reading, though its drama was diluted by somewhat dim and glassy violin tone. Unicorn has transferred the performance to LP format as part of its project of documenting Heifetz's interpretations. It could be done about the dim violins, but it is good to hear it without the heavy surface noise. And it is a welcome and valuable bit of historical preservation, for this was the first electrical recording of a Bruckner symphony in its entirety, preceding the Ormandy one by some eight years. D.H.

CHÁVEZ: Piano Concerto. Eugene List (piano); Vienna State Opera Orchestra, Carlos Chávez cond. WESTMINSTER WGS-8324 $3.49. 

Performance: Good, but not good enough 

Recording: Likewise

With still-vivid memories of the 1942 broadcast premiere of the Chávez Piano Concerto, I snatched the first copy of this recording I could get my hands on when it was first issued by Westminster in 1964. I was bitterly disappointed by an all-too-careful rendition and so-so recorded sound—with none of the heroic intensity I remembered from twenty-two years before.

Westminster's reissue offers a considerably improved sonorite picture, however, thanks to an excellent job of reprocessing and the resulting richer, more spacious, and more detailed texture. Even so, the music deserves better than this. The Viennese players seem ill at ease with the music, and the recording does not begin to approach today's standard in capturing percussion detail. List's performance is done with great care, but not with the fire he brought to it in 1942 and which the highly virtuosic music truly deserves. 

D.H.

CHERUBINI: String Quartets Nos. 1-6 (see Best of the Month, page 84)


Performance: Elegant 

Recording: Dated

Saga is a budget label in England; it is a bit of a jolt to find it imported at what we regard here as full price, though this particular disc would have been a treasure at almost any price until about a year ago, even with the phony stereo. These are apparently the same recordings that were available here more than fifteen years ago on MK imports from the U.S.S.R. and turned up a bit later on the Brunn label. For all the occasional patches of muddy sound and crunchy surfaces, it was an exciting release then, identifying the young pianist as a master. The disc's appeal is severely diminished now, though, because only a year ago London issued Ashkenazy's new recording of the etudes (CS-6844), in which he not only benefits from immeasurably superior sonics but also shows even greater poetry and depth than in these earlier performances, elegant though they remain. R.F.

Pianist Lazar Berman is a true Beethovenian. He works close to the idea and lets the piece pour out of a central conception with incredible energy. Except in its demonic intensity, there is nothing especially "romantic" about this way of playing, nor is it structurally weak. Quite the contrary, the foundation is firm, the superstructure powerful. The trick is in the marshaling of forces, the disposal of energy.

Berman is not a "careful" pianist; there is no tiptoeing-through-the-tulips here. There is, on the contrary, an almost spur-of-the-moment quality that I like—no Hamlet-like agonizing over every note, but rather a very direct reliving of intense experience, Beethoven presented as the narrative-dramatic composer he most essentially was.

The sound is clear—and clangorous. It is not beautiful, but it's not bad for the playing either. Just wait until you hear the Presto of the Appassionata.

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Performance: Committed Recording: Crisp

Ginastera describes his Second Piano Concerto as a work of "tragic and fantastic nature." It was written in 1972 for Hilde Somer, whose performance of the First Concerto had pleased the composer; she introduced it with the Indianapolis Symphony Orchestra, which commissioned it. The orchestral writing is rather sparse through most of the four movements, with percussion instruments frequently prominent. In his violin concerto Ginastera wrote an "Evocation of Paganini"; the first movement of the new piano concerto is a set of "32 Variations on a Chord by Beethoven" (taken from the finale of the Ninth Symphony), and in the concluding movement Ginastera cites a theme from the end of Chopin's Second Sonata. The two inner movements—a "Scherzo for the Left Hand" and an adagio headed Quasi una fantasia—exude what might be called Ginastera's own counterpart to Bartok's "night music." In all, the concerto is a strong piece, but one that not every listener will find digestible on a single hearing. Somer's proprietary zeal should be more than enough to draw anyone back for further aural exploration, and she is well supported by the very able UCI (University of California at Irvine) Symphony Orchestra under the Portuguese composer-conductor Alvaro Cassuto.

The piano quintet is nearly a decade older than the Second Concerto, and it has circulated more, but this is apparently the first recording for both works; both benefit from genuinely committed performances. If the instrumentation sounds richer in the chamber work, it is both because the four string players are given somewhat fuller partnership than the orchestra enjoys in the concerto and because of the greater presence and more...
equable balance in the recording of the quintet, taped by Marc Aubort in Charlemont, Massachusetts, following a performance in the Mohawk Trail Concerts there. The documentation includes the composer's own notes on the concerto and Nicolas Slonimsky's on the quintet.

R. F.

HAYDN: Cello Concerto in C Major (Hob. VIIb:1); Cello Concerto in D Major (Hob. VIIb:2). Mstislav Rostropovich (cello); Academy of St. Martin-in-the-Fields, Mstislav Rostropovich cond. ANGEL S-37193 $6.98.

Performance: Opulent
Recording: Close-up

The C Major Concerto is a work Rostropovich has embraced enthusiastically and plays frequently. In his dual role as both soloist and conductor he gives it an opulent performance, if not the most stylish one on all counts. The intense expressiveness in the slow movement is surely overdrawn by half, but in general the cellist's exuberance and his downright gorgeous playing make this a pleasurable side. No harpsichord is heard; no one will miss it, though it would have been appropriate in this work of the 1760's, and there is one in the picture in Rostropovich's earlier recording of the concerto (London CS-6419), which was conducted by Benjamin Britten, who also provided him with the cadenzas he still plays.

The other side of this disc is less appealing. Rostropovich gives us the authentic version of the more familiar D Major Concerto rather than the Gevaert edition we always used to hear, but he gets in the way of the music by fussing too much with dynamics and rhythms. His habit of stretching individual note values and inserting gratuitous little crescendos and diminuendos becomes as distressing as his unwillingness to hold to a given tempo. These traits are especially obtrusive in the slow movement and finale (which follows here without a pause), the latter so labored and fussed over that it has no spring. The cadenzas are not attractive. In short: too much Rostropovich, too little Haydn. Angel's sound is close-up but clean, the Academy (for which Iona Brown is listed, confusingly, as "director") in fine fettle.

Philips really should reinstate Maurice Gendron's recordings of these concertos; his clean, straightforward elegance is just what is needed. In the meantime, I would be happier with the similarly elegant Pierre Fournier in this coupling (DG 139.358), even though Rudolf Baumgartner's conducting is rather lackluster and there are cuts in the first movement of the D Major.

KASTALSKY: Four Motets (see RACHMANINOFF)

MASSENET: Esclarmonde (see Best of the Month, page 82)

MENDELSSOHN: Violin Concerto in E Minor, Op. 64. TCHAIKOVSKY: Violin Concerto in D Major, Op. 35. Ruggiero Ricci (violin); Netherlands Radio Philharmonic, Jean Four
net cond. LONDON SPC-21116 $6.98.

MENDELSSOHN: Violin Concerto in E Minor, Op. 64. MOZART: Violin Concerto No. 3, in G Major (K. 216). Leonid Kogan (violin); Paris Conservatoire Orchestra, Constantin

(Continued on page 118)

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Although he is known to most American
listeners solely through his deservedly
popular Swedish Rhapsody No. 1, Midsum-
marvaka (Midsummer Vigil), Hugo Alfven
(1872-1960) has not been exactly a stranger to
alert and curious record buyers over here. In
the Fifties Westminster issued the compos-
er's own recording of Midsommarvaka as
taped by Swedish Society Discofi, together
with the Swedish Rhapsody No. 2 (Dalecarli-
an Rhapsody) and the ballet scores Bergakun-
gen (The Mountain King) and The Prodigal
Son. Even so, were one to judge Alfven solely
on the basis of these works, the inclina-
tion would be to dismiss him as an appealing but
minor master of the nationalist-romantic per-
suasion. It is just what would probably hap-
pen to Dvořák if we knew only the Slavonic
Dances, the Slavonic Rhapsodies, and the
Scherzo Capriccioso.

Now, however, thanks to the enterprise of
HNH Distributors of Evanston, Illinois, in
making available here the 1962-1972 Swedish
Society Discofi recordings of Alfven's sym-
phonies, listeners on this side of the Atlantic
can become better acquainted with the Swed-
ish composer. On the evidence, he was, if not
a master to be ranked with Sibelius and Niel-
sen, still a creative figure of very considerable
stature.

Alfven's First Symphony was first per-
formed in 1897, just three years after Carl
Nielsen's first essay in the medium and two
years before Sibelius'. Like Nielsen, the
twenty-four-year-old Alfven had been a violi-
nist in the opera orchestra, and his First
Symphony, like Nielsen's, has stylistic ele-
ments in common with Dvořák and with
Grieg's compatriot Johan Svendsen. The spir-
it of the piece, not unexpectedly, contrasts
Sturm und Drang and the idyllic, and Swedish
dance music comes winningly to the fore in
the finale.

It is the Second Symphony of 1899, though,
that demonstrates what Alfven might have
accomplished had he chosen to pursue this di-
rection relentlessly. The Second is an often
fascinating and vital score, replete with boldly
original touches. The Dvořák element is still
present in the first movement, but in what fol-
lows Alfven really let go, producing a slow
movement of strong thematic substance and a
powerful fugue-textured central section, a mi-
nor/major scherzo full of restless energy and
brilliant orchestral writing, and a remarkable
prelude-and-fugue finale that makes powerful
use of an old Swedish chorale.

But Alfven did not choose to pursue the
path hinted at in the Second Symphony, and
between it and the Third Symphony came the
famous Midsommarvaka and the atmospheri-
cally romantic Legend of the Skerries, whose
richness of harmonic texture suggests the
influence of Richard Strauss. The Symphony
No. 3, composed in Italy during the summer

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On the evidence, he was a creative figure of considerable stature

of 1907, is sunny and lightweight; the serene slow movement has a distinct Swedish folk flavor, and the scherzo is a brilliant neo-Mendelssohn affair.

In the Fourth Symphony (1918-1919), Alfven essayed a decidedly more ambitious canvas in which Richard Straussian textures serve as tonal warp for a continuously woven symphonic narrative of idyllic and tragic love. Where Nielsen in the slow movement of his Third Symphony (1912) used an off-stage soprano-and-tenor vocalise to heighten the atmosphere, Alfven used the device intermittently throughout his symphony in thematically functional and highly dramatic ways. The work as a whole is unified by a distinctive germinal motive.

In 1942 Alfven completed the first movement of his most ambitious symphony, his Fifth, and the movement was performed alone as a seventieth-birthday commemoration. The remaining three movements waited another decade for completion, and the entire work was performed in Stockholm on April 30, 1952, to mark the composer's eightieth birthday. However, Alfven was not happy with the finished product and withdrew all but the first movement. Having heard the broadcast acetates from this occasion, I rather wish he had elected to keep the fascinating danse macabre scherzo. This, together with the massive first movement, is death-haunted yet curiously death-haunted yet curiously deft music, a poignant testament of sorts whose spirit is reminiscent of Gustav Mahler. It must be said with some regret that the symphonies of Alfven, for all their brilliance, for all their many fine pages, are no match for those of Sibelius or Nielsen in terms of a sustained line of development or of consistently arresting and powerful substance. They are, however, extremely beautiful and appealing music on their own, somewhat lesser, terms. As for the recorded performances on the five discs considered here, the readings are one and all noteworthy in their authenticity and conviction. Those of veteran conductor Nils Grevelius (1893-1970) are marred to some degree by the rather dead acoustic of the Stockholm Konserthuset recording locale, but the Stig Westerberg and Leif Segerstam discs boast first-rate sonics throughout. Forced to a choice, I would recommend the Second Symphony first, with no reservations whatever, and would supplement it with the excerpt from the Symphony No. 5. —David Hall


ALFVEN: Symphony No. 4, in C Minor, Op. 39 ("From the Seacoast"). Gunilla af Malmberg (soprano); Sven Erik Vikstrom (tenor); Stockholm Philharmonic Orchestra, Nils Grevillius cond. SWEDISH SOCIETY DISCOFIL SLT 33186 $7.98.


(All discs may be ordered from HNH Distributors, P.O. Box 222, Evanston, Ill. 60204.)
There is some fine fiddling on both of these discs, but neither of them would displace a pre-existing first choice among recordings of any of the respective concertos. Ricci faces more than a half-dozen competing versions of the same coupling, including those of Heifetz, Milstein, and Stern, which offer a greater feeling of "lift" in the playing, more distinguished orchestral collaboration, and a more natural balance within the orchestra.

Kogan's Mendelssohn does have "lift" and rather more warmth than Ricci's. The 1960 sound does not show its age, but Silvestri is not as alert a partner here as in the splendid Tchaikovsky performance he and Kogan recorded at the same time (Seraphim S-60075); he lets too many details go by and actually lags behind his soloist at times. The Mozart side is a more successful collaboration, though here Kogan himself has a somewhat heavier touch than in his earlier version with Otto Ackermann. In their own right, both of these new issues are enjoyable, but the competition is too formidable.

R.F.

Mozart: Marches and Dances (see Beethoven)

Mozart: Der Schauspieldirektor (K. 486). Ruth Welting (soprano), Madame Herz; Ilene Cotrubas (soprano), Mlle. Silberklang; Anthony Rolfe Johnson (tenor), Monsieur Vogelsang; Clifford Grant (bass), Monsieur Buff.

Lo Sposo Deluso (K. 430). Felicity Palmer (soprano), Eugenia; Ilenea Cotrubas (soprano), Bettina; Anthony Rolfe Johnson (tenor), Don Asdrubale; Robert Tear (tenor), Pulcherio; Clifford Grant (bass), Bocconio. London Symphony Orchestra, Colin Davis cond.

Performance: Good
Recording: Excellent

Here is a worthy addition to the Mozart operatic shelf: two rather unfamiliar works spanning the period between Die Entführung (1782) and Le Nozze di Figaro (1786). Der Schauspieldirektor (The Impresario) is a one-act Singspiel that was composed for a courtly event on an always timely subject (the vanity and rivalries of opera singers) chosen by the emperor himself. Lo Sposo Deluso, for which Lorenzo da Ponte might have been the librettist, is an opera buffa that has survived only in fragments (two arias on the disc have been orchestrated by Erik Smith). By usual Mozartian standards both are minor achievements, yet they are not insignificant. Both reveal intermittent flashes of brilliant inspiration as well as anticipations of the masterpieces to come.

Der Schauspieldirektor has been recorded several times, but right now the only other available version is included as a filler with DG's complete Entrführung set (2709 051). Both versions omit the connecting dialogue—a sensible solution to the problem of rendering all the music complete on one record side. Davis favors brisker pacing than does Karl Böhm on DG, but the choice is difficult between two excellent orchestral treatments. The familiar overture is sparklingly performed and the singers are good in both sets. DG's Reri Grist handles Madame Herz's tricky vocal line with more assurance than Philips' Ruth Welting, but the latter realizes more of the part's comic character.

Lo Sposo Deluso has a soprano aria that anticipates the resolute character and the wide interval leaps of Fiordiligi's "Come scoglio" (Cosi Fan Tutte) and concludes with a delightful final ensemble. Davis again excels, and the singers, though not quite as impressive as in Der Schauspieldirektor, are never less than acceptable. The Italian text, however, is not handled very idiomatically.

G.J.

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SONY

CIRCLE NO. 42 ON READER SERVICE CARD
MOZART: Violin Concerto No. 3, in G Major
(see MENDELSSOHN)

PUCCINI: Tosca. Galina Vishnevskaya (soprano), Tosca; Franco Bonisolli (tenor), Cavaradossi; Matteo Manuguerra (baritone), Baron Scarpia; Antonio Zerbini (bass), Angelotti; Mario Guggia (tenor), Spoletta; Guido Mazzini (baritone), Sacristan; Domenico Versaci Medici (bass), Sciarone; Giacomo Bertusi (bass), Jailer. Orchestre National de France, Mstislav Rostropovich cond. DEUTSCHE GRAMMOPHON 2707 087 two discs $15.96.

Performance: Uneven
Recording: Not the best

If I read the annotations correctly, conductor Rostropovich and the musical score of Puccini's Tosca met for the first time professionally on the occasion of this recording. This tells us a great deal about the way things are done nowadays, and the results, under the circumstances, are not surprising. This is a reading without any serious mishaps, to be sure, but it is no more than a "reading." Act I, in particular, is uninteresting: the orchestral playing lacks incisiveness and dynamic contrasts, the Angelotti episodes come and go without sufficient tension, and the extended love duet sounds tentative. The second and third acts move more convincingly, but suffer from such eccentricities as the unduly slow pacing of the crucial andante sostenuto passage preparatory to the stabbing (Act II) and the exaggerated downward slide the strings are persuaded to do in the slow march that leads to Cavaradossi's execution.

Among the singers, the standout is baritone Matteo Manuguerra, an absolutely first-rate Scarpia, who succeeds in a vital characterization through expressive use of his rich and resplendent voice without resorting to theatrical effects. Galina Vishnevskaya is a superb singing actress with many individual touches that make dramatic sense; her delivery of the famous line "E avanti a lui tremava tutta Roma" is refreshingly original. Vocally, alas, she is erratic: her finely shaded, inward "Vissi d'arte" and other thoughtful passages are offset by extended stretches of shrill and off-pitch singing above the staff. Franco Bonisolli is also inconsistent in matters of style and intonation, though he can modulate his voice sensitively at times and the material he works with is of solid timber and good extension.

Except for the Sacristan, who is only adequate, the supporting singers are good, including the unnamed boy soprano in the third act. The engineering, however, is disappointing in its overall low-level sound and ineffective placement of the orchestra in the total perspective. G.J.

RECORDING OF SPECIAL MERIT


Performance: Highly polished
Recording: Good

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Vespers. These are solemn, frequently austere, a cappella hymns, most of them moving at a slow tempo, but the expert harmonization enhances the melodies with a richness that triumphs over the threat of monotony.

The English choir under Wyn Morris' skillful leadership offers singing of great beauty, rich-toned and sensitively shaded. The overall effect is that of a perfectly drilled and highly refined ensemble. A previous and deservedly much-praised version by the USSR Chorus under Aleksander Sveshnikov (Melodiya/ Angel 4724) approaches the music in a similarly cultivated manner but with more drama, stressing wider dynamic contrasts and more incisive attacks. Significantly, this is somewhat specialized repertoire, yet I think that many lovers of singing will be delighted and moved by it. G.J.

Ravel: Le Tombeau de Couperin (see Stravinsky)

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This is one of those records with the wrong side up. The Villa-Lobos preludes, exquisite, idiomatic, superbly played guitar music, are the stellar attraction. The idea of playing Scarlatti sonatas on the guitar is appealing in principle—Scarlatti was influenced by Spanish guitar music—but not too successful in practice. The most basic problem is range. The Scarlatti sonatas make striking use of the crisp, plucked, treble sound of the harpsichord. On the guitar, basically a sweet, baritone instrument, everything sounds an octave low—an octave too low for the music—and all of Williams' wizardry cannot put it right. E.S.

RECORDING OF SPECIAL MERIT


Schumann's so-called "Concerto Without Orchestra"—a title bestowed by a nervous publisher—is probably best known for the tempo directions in the finale. Schumann marked the movement "As fast as possible," and then, on at least two later occasions, the performer is told to speed up! Actually, however, these directions are more than an amusing gaffe or exaggeration. The striving toward the superhuman, the sublime, is extraordinary in this work. No wonder pianists have been frightened off in droves. Even Horowitz used to play only the slow movement—a set of variations on a theme of Clara Schumann. He is quite right, however, when he says that these pages are much more beautiful within the context of the whole sonata. Horowitz performed this monumental work on his 1975-1976 tour, and this recording—paired with the even more off-beat Scriabin sonata—is billed as a "celebration" of that tour. But the circumstances of the recordings go unmentioned, and, except for the rather uniformly mediocre quality of the piano sound, there is no evidence that they are real live "live" recordings (as opposed to invited-audience performances for the express purposes of recording). Nevertheless, the desired result is achieved: music of exceptional interest in recorded performances of great expressive impact.

Jean-Philippe Collard is a young French pianist who tackles Schumann with energy and skill but without the depth that Horowitz brings. There are many good things to be said about Collard's recording. The pairing is more apropos (Schumann's early and charming (Continued on page 128)
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homage to his future wife makes a nice addendum to the sonata's slow movement), and the quality of the piano sound (Pathé-Marconi in origin) is a good deal better than RCA's. Collard's version of the scherzo is livelier and perhaps more convincing than Horowitz's, and the young Frenchman's version of the slow movement is most attractive. Even his finale, although more straightforward and less romantic, has real sweep. But the comparison of the first movements gives all the advantage to Horowitz. Horowitz makes the music sing, breathe, laugh, and cry, and that's what it must do to live.

E.S.

SCRIABIN: Sonata No. 5, Op. 53 (see SCHUMAN)

RECORDINGS OF SPECIAL MERIT

STRAVINSKY: Divertimento, Suite from "Le Baiser de la Fée"; Suite Italienne from "Pulcinella" after Pergolesi; Duo Concertant. Itzhak Perlman (violin); Bruno Canino (piano). ANGEL S-37115 $6.98.

STRAVINSKY: Suite d'après des Thèmes, Fragments et Morceaux de Giambatista Pergolesi; Variation d'Apollon; Berceuse and Scherzo from "The Firebird"; Chanson Russe from "Mavra"; Ballad from "Le Baiser de la Fée; Danse Russe from "Petrouchka". Eudice Shapiro (violin); Ralph Berkowitz (piano). CRYSTAL S302 $5.98.

Performances: Good to excellent
Recordings: Angel superior

It comes as a surprise that Stravinsky wrote so much solo violin music. In fact, most of it is in the form of arrangements, either written by Stravinsky himself or sanctioned by him. Much of this music was created for a famous series of performances and tours in the 1930's with the American violinist Samuel Dushkin. But Stravinsky made an arrangement for violin and piano of music from Pulcinella as early as 1925 for the violinist Paul Kochanski. It is this suite, not the more elaborate Suite Italienne, that has been recorded—presumably for the first time—by Eudice Shapiro. The Variation d'Apollon from the Balanchine ballet was arranged by Joseph Szigeti with the composer's blessing. The other four pieces on Miss Shapiro's record are Stravinsky-Dushkin collaborations. Eudice Shapiro had a long and successful collaboration with Stravinsky in Los Angeles, and, although she is not as well known elsewhere as she might be, Stravinsky's admiration for her playing was obvious. Perlman's playing is superb, his performance of the divertimento—the music is from the ballet Le Baiser de la Fée, which is itself a large-scale work, the most attractive on the record. All of this is immensely well played (Continued on page 130)
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by Perlman, who has the knack of producing a rich sound and lots of expression without losing the rhythmic tension of the music. A really beautiful recording. E.S.

RECORDING OF SPECIAL MERIT


Performance: Brilliant
Recording: Brittle

Petrouchka started out as a work for piano and orchestra, and even in its final, balletic form the piano plays an important role. So it was not really farfetched that, in 1922, Stravinsky made a set of piano pieces from the score (for Artur Rubinstein, who, I believe, never performed it). The hard-edged qualities of Stravinsky’s imagination are particularly strong in this performance. The Petrouchka we know and love is overlaid with a rich Rimsky-like orchestration, but there’s none of that here; the bones are laid bare in this brilliant, biting, ironic performance.

Le Tombeau de Couperin has a similar history in reverse. It started out as a piano work and ended up as an orchestral suite. The composer’s orchestration lends a softness and a beauty that must be coaxed out of the piano version. Weissenberg, however, is the neo-Classicist par excellence, and it is this side of Ravel—high culture, homage to the great past, wit and clarity, individuality tempered by good taste and a certain sang-froid—that is emphasized here. 

E.S.

TALLIS: Motets. O Nata lux de lumine; Gaude gloriosa; Ecce tempus idoneum; Loquebantur variis linguas; Spem in alium; If ye love me; Hear the voice and prayer; Lamentations I. The Clerkes of Oxenford, David Wulstan cond. SERAPHIM S 60256 $3.98.

Performance: Excellent
Recording: Evocative

Ranging from the simple but disarming “O Nata lux de lumine” to the intricate sonorities of the forty-voice motet “Spem in alium,” this disc presents the splendors of Thomas Tallis as no previous record has done. The ravishing music contrasts full-bodied choral sounds with a long, sinuous tracery peculiar to the early English Renaissance. Also very English are the all but excruciating cross-relations that endow the sweet triadic sound with a surprising bite.

The women singers here have been carefully trained to sound like boys, and the overall sound of the Clerkes is clear and serene, a quality intensified by the ambiance of the Merton College Chapel, Oxford, and beautifully caught by the recording engineers. David Wulstan moves the music along with well-chosen tempos and articulates the highly wrought lines in such a way that the imitative writing is clearly heard. This in turn lends the music a compositional tightness that is rarely heard in performance. The magnificence of this music and the exquisite performance so accurately caught on this disc will surely put Tallis on the map as an outstanding early Renaissance choral composer. S.L.

VIVALDI: Twelve Concertos, Op. 7. Salvatore Accardo (violin); Heinz Holliger (oboe); I Musici. PHILIPS 6700 100 two discs $15.96.

Performance: Electric
Recording: Sharp

Like so many of my colleagues, I enjoyed an initial enthusiasm and delight in the concertos of Vivaldi and then became so glutted with them that the very name of the composer evoked black thoughts and, on occasion, bad language. But Vivaldi is not to be escaped, and in my recent listening, admittedly forced, I have come to realize that it was not the composer I disliked but rather the many bad performances to which I had been subjected. Vivaldi’s music, with its unquenchable drive and verve, requires technical perfections and, above all, an almost exaggerated rhythmic vi-
Certainly one of the finest ensembles playing today with those qualities is I Musici. There is at the present time a strong trend to return to old instruments for the performance of early music. When in the hands of knowledgeable and fine musicians, the old instruments are, of course, ideal. But there will always be fine ensembles that prefer and will continue to play modern instruments. Unfortunately, purists often turn their noses up at them and forget that their message is a valid one and, at times, stronger than the waves emitted by the old-instrument outfits. I Musici have built up a tradition in their performances of Baroque music, and they doggedly stick to the instruments they know and play superbly. Through the years they have gradually evolved a musically effective style for this repertoire, and the fruits of that effort come out in their full glory in this recording of Vivaldi's Op. 7. The group's tone is rich and vibrant, technically they are spot on, their ensemble is superb, and, above all, they have that rhythmic vitality so necessary for the music. They are also blessed with a top-drawer virtuoso, violinist Salvatore Accardo, whose technique is modern, to be sure, but who also has a sense of style that renders his playing clean and articulate. We never have to worry about Romantic mannerisms here, but we can still enjoy Romantic lyricism within the bonds of Baroque taste. In this album we are also fortunate to have Heinz Holliger turn in exciting performances of the two oboe concertos. As for Vivaldi, there are some grid moments of sequences and formula, but there are moments of sheer animal excitement and lyric beauty. As was the case with I Musici's earlier recording of the master's Opp. 11 and 12, we can revel in the music and judge it for what it is. This recording should serve to return errant Vivaldi lovers to the fold. S.L.


Performance: Stellar
Recording: Good

As Pavarotti's voice matures, it is becoming a bit darker and heavier, but his ability to express feeling remains unchanged. Although he rises to almost operatic passion in some of the selections here, such as Mercadante's Parola Quanta, he can still fine his voice down for the tenderness required by the lullaby Mille cherubini in coro. The eleven selections on this well-planned album provide variety of mood, and some unfamiliar numbers are interspersed among the old favorites. Pavarotti sings them all with great sincerity. Vocal support by the Wandsworth Boys' Choir and London Voices and accompaniment by the National Philharmonic provide a suitable background.

So few of the items on the album are actually associated with Christmas that it might be


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HERE WE COME A-WASSAILING; GREEN GARTERS; FANDANGO; EDI BEO THU; SALTERELLO; ALLE (PSALMITE CUM) LAYA; ROSA DAS ROSAS; DUCETIA; AS I LAY; LA MANFREDINA; ALL HAIL TO THE DAYS; I SAW THREE SHIPS; GOD REST YOU MERRY GENTLEMEN.

PRAETORIUS: TANZ DER BAUERN UND TANZ DER BIAERINNEN; FEUERTZANZ; SCHREITZANZ; DIE WINDMUEHLE; DORFZANZ; SCHIFFERZANZ; TANZ DER FISCHER; AUFMARSCH; Dowland: Captain Diggory Piper's Galliard; King of Denmark's Galliard; Sothcott: Fantasia; St. George's Canzona, John Sothcott cond. CRD 1019 $7.98 (from HNH Distributors Ltd., P.O. Box 222, Evanston, Ill. 60204)

Performance: Charming
Recording: True

Choosing a program of early music requires knowledge, skill, and taste, for without these qualities there can result an aimless procession of one-minute pieces that will bore any listener through sheer diffusiveness. Two concepts will work: music centered around a particular composer or place, and music centered around an intriguing theme. "To Drive the Cold Winter Away" belongs to the latter class and is conceived as a "fireside presentation" of music to dispel the doldrums of winter. The subheadings, which break up the sequence, include "Entry of the Minstrel and Waits," "Festivities in the Tavern," "A Medieval Holiday," "Festivities at the Manor," and "To Entertain a King." The overall results are utterly charming, and one can put the record on for a session of varied fun. The program consists of mostly anonymous and traditional works ranging from the thirteenth to the early seventeenth centuries. Original instruments are used, and the sound is extremely clear.

S.F.

RECORDING OF SPECIAL MERIT
TO DRIVE THE COLD WINTER AWAY.

Anon: Brandle de l'Official; Pavane, Good King Wenceslas; The Dress CD Ship; Staines Morris, Here we come a-wassailing; Green Garters; Fandango; Edi beo thu; Salterello; Alle (psal-mite cum) laya; Rosa das rosas; Ducetia; As I lay; La Manfredina; All hail to the days; I saw three ships; God rest you merry gentlemen. Praetorius: Tanz der Bauern und Tanz der Biaerinnen; Feuertanz; Schreittanz; Die Windmule; Dorfzanz; Schiffertanz; Tanz der Fischer; Aufmarsch. Dowland: Captain Diggory Piper's Galliard; King of Denmark's Galliard; Sothcott: Fantasia; St. George's Canzona, John Sothcott cond. CRD 1019 $7.98 (from HNH Distributors Ltd., P.O. Box 222, Evanston, Ill. 60204).

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Introducing the Staff...

When a personal opinion, particularly a publicly expressed one, grates on our nerves, one of the commoner responses is to ask, either under or at the top of our voices, just who that so-and-so thinks he or she is. The question is asked of Stereo Review with respect to our regular contributors and staff many times each month, and in this column we endeavor to supply the answers. —Ed.

Contributing Editor

Lincoln Perry

I was taught great respect for things; it was much less clear how people were to be treated. It seemed almost a law of nature that records be handled by the edges only, but it was much harder to get a hold on human nature. Finger oil, I was told at an early age, corrodes and destroys discs. Good Lord, what happens when people touch each other? The I/Thou dichotomy continues to baffle me.

It gradually became clear that folks were not like the wonderfully pure and rational Heathkits I assembled as a youth. No instruction manual with sequential steps, no way to stick a voltmeter in here or there to find the trouble. I discovered drawing as a way of creating and controlling worlds of my own. Anthropomorphized animals populated my societies; they were static and orderly like things, but they behaved like us humans, building things and fighting each other. They were fleshed out considerably when Walt Kelly and staff many times each month, and in this column we endeavor to supply the answers.

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*Not shown: Marantz 5420 Top Loading Deck without Dolby, Marantz 5200 Front Loading Deck with Dolby, and Marantz 5020 Front Loading Deck with Dolby.

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