IN STORE FOR 1979: NEW PRODUCTS AT THE JAPAN AUDIO FAIR

A LITTLE TALK WITH FRANK ZAPPA • BEE GEES RETROSPECTIVE

EQUIPMENT TEST REPORTS:
- ADS Model 10 Acoustic Dimension Synthesizer
- Gale GS401A Speaker System
- Harman Kardon HK670 Receiver
- Phase Linear Model 700 Series Two Power Amplifier
- Revox B790 Record Player

REVERSING A TREND: THE NEW MAXISOUND MINICOMPONENTS
AND SO IS THE FIGHT ABOUT TUNERS.

At one time the struggle between amplifiers was won by the amp that had the most muscle. And the tuner that brought in the most stations also brought in the most acclaim.

Today, there's one series of amplifiers whose technology has put it in a class by itself. And now, with Pioneer's new TX 9800 tuner it's met its match.

While other tuners offer features that just sound great, every feature in Pioneer's TX 9800 helps to produce great sound.

Unlike ordinary tuners that are content with ordinary circuitry, the TX 9800 has a new Quadrature Discriminator Transformer that works with Pioneer's exclusive PA 3001-A integrated circuit to reduce distortion to 0.05% at 1 KHz and raise the signal-to-noise ratio to 83 dB. Whew!

Many of today's tuners use sophisticated low pass filters to remove the 19 KHz pilot signal that's present in every stereo broadcast. But while they're effective in removing the pilot signal, they're also effective in removing some of the music.

The TX 9800 has Automatic Pilot Canceling Circuitry that makes sure every part of the music is heard all of the time. And that distortion is veritably unheard of.

The crowning achievement of most tuners today is the sensitivity of their front end. And though it's much to their credit to bring in weak stations, it means nothing unless they can do it without spurious noise or other interference.

The TX 9800's front end has three dual gate MOSFET's that work with our five gang variable capacitor to give you an FM sensitivity of 8.8 dBf. And also make sure that your favorite music is not disturbed by what's playing elsewhere on the dial.

And while most tuners today give you one bandwidth for all FM stations, the TX 9800 gives you two. For both AM and FM. A wide band that lets you bring in strong stations loud and clear. And a narrow one that finds even the weakest station on a crowded dial and brings it in without any interference.

All told, these scientific innovations sound mighty impressive. But they wouldn't sound like much without an even more impressive tuning system.

The TX 9800 has a specially designed Quartz Sampling Lock Tuning System, that fortunately, is a lot easier to operate than pronounce.

Simply rotate the tuning dial to your desired station. When the station is tuned exactly right a "tune" light comes on. By releasing the tuning dial you automatically lock onto that broadcast. And automatically eliminate FM drift.

By now, it must be obvious that the same thinking that went into Pioneer's new amplifiers has also gone into their new line of tuners.

So just as Pioneer ended the class struggle between amps, they won the fight between tuners. With a technical knockout.

PIONEER
We bring it back alive.
PIONEER ELECTRONICS CORP.
Torrance, California 90503

CIRCLE NO. 68 ON READER SERVICE CARD
THE STRUGGLE BETWEEN THE CLASSES IS OVER.

For years people have clashed over which amplifiers are best. Class A or Class B. Expensive Non-switching Class A amplifiers are known to offer the lowest levels of distortion. At the same time, they also offer the highest operating temperatures. And while Switching Class B amplifiers increase efficiency, they also increase distortion.

So if you're not paying through the nose for a heat-producing Class A amplifier, you'll be paying through the ear for a distortion-producing Class B.

At Pioneer, we believe most of today's Class A and Class B amplifiers are pretty much in the same class. The class below Pioneer's SA 9800. Pioneer's Non-switching SA 9800 offers the efficiency found in the finest Class B amplifiers. With a distortion level found in the finest Class A. An unheard of 0.005% at 10-20,000 hertz.

And while you're certain to find conventional power transistors in most conventional amplifiers, you won't find them in the SA 9800. You'll find specially developed RET (Ring Emitter Transistors) transistors that greatly increase frequency response. So instead of getting distortion at high frequencies, you get clean clear sound. Nothing more. Nothing less.

Instead of slow-to-react VU meters that give you average readings or more sophisticated LED's that give you limited resolution, the SA 9800 offers a Fluroscan metering system that is so fast and so precise it instantaneously follows every peak in the power to make sure you're never bothered by overload or clipping distortion.

And while most amplifiers try to impress you with all the things they do, the SA 9800 can even impress you with the one thing it simply doesn't do. It doesn't add anything to the sound it reproduces. An impressive 110dB S/N ratio is proof of it.

While these features alone are enough to outclass most popular amplifiers, the SA 9800 also offers features like DC phono and equalizer sections and DC flat and power amps that eliminate phase and transient distortion. Cartridge load selectors that let you get the most out of every cartridge. And independent left and right channel power supplies.

Obviously, it took revolutionary technology to build the SA 9800. But the same technology and skillful engineering that went into the SA 9800 also goes into every amplifier in Pioneer's new series.

At Pioneer, we're certain that others will soon be entering the class of 9800. And though they all may be built along similar lines, in terms of value Pioneer will always be in a class by itself.
INTRODUCING THE EMPIRE EDR.9 PHONO CARTRIDGE.
IT SOUNDS AS GOOD ON A RECORD AS IT DOES ON PAPER.

It was inevitable...

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

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

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

The EDR.9 utilizes an L. A. C. (Large Area Contact) 0.9 stylus based upon—and named after—E. I. A. Standard RS-238B. This new design, resulting in a smaller radius and larger contact area, has a pressure index of 0.9, an improvement of almost six times the typical elliptical stylus and four times over the newest designs recently introduced by several other cartridge manufacturers. The result is that less pressure is applied to the vulnerable record groove, at the same time extending the bandwidth—including the important overtones and harmonic details.

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

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

But more important, as the EDR.9 cartridge represents a new approach to cartridge design, we ask that you consider it in a slightly different way as well. Send for our free technical brochure on the EDR.9, and then visit your audio dealer and listen. Don't go by specs alone. That's because the new Empire EDR.9 is the first phono cartridge that not only meets the highest technological and design specifications—but also our demanding listening tests.

Empire Scientific Corp. Garden City, N.Y. 11530
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COVER: Design by Borys Patchowsky; photo by Bruce Pendleton. See page 77.
The first high-technology record cleaner was the Discwasher System. Four scientific revisions later, the Discwasher is literally years ahead of all other devices.

**WITH PRIORITY TECHNOLOGY:**
Discwasher D3 Fluid is proven by lab tests to be the safest active cleaning fluid for record care. But a good fluid is not enough. The Discwasher System is also a *precision removal system* that uses capillary action with slanted micro-fibers to lift dust, dirt, and dissolved debris off the record, rather than pushing them around like "dry" and "constant humidity" methods. The real dimensions of record care are safety plus integrated function.

**WITH PROVEN VALUE:**
The uniquely styled Discwasher handle is constructed of hand-rubbed walnut which will long outlast "plastic wonders". This easily held handle is lightweight because of an integral cavity which conveniently holds the D3 Fluid bottle. A special brush to clean the directional-fiber Discwasher pad is included without charge, and also fits inside the handle cavity.

**WITH GENUINE SATISFACTION:**
Only Discwasher gives immediate performance, long-term record safety, pleasing physical characteristics and a price that hasn't changed in five years.

Seek out the Discwasher System, by name. Only Discwasher delivers technology, value and satisfaction.

CIRCLE NO. 15 ON READER SERVICE CARD

YOUR RECORDS DESERVE SUPERIOR CARE: SEEK OUT THE DISCWASHER® SYSTEM
STEREO AM DEVELOPMENTS: The Federal Communications Commission is now in the final stage of preparation for a ruling on AM stereo standards. Having issued a "Notice of Proposed Rulemaking" in October, the Commission will now make a final decision on which of the five proposed systems will be adopted and issue a standard and order probably sometime later this year. Meanwhile, the Institute of High Fidelity, in reply to the notice of rulemaking, has requested that the FCC designate a date before which stereo AM transmissions could not legally begin. The intent of the request is to "allow for an orderly marketplace transition" from current mono AM products to components equipped for stereo AM. The Institute suggests that a reasonable effective date would be six months from the date that a final FCC order is issued.

GOOD NEWS FOR GREASERS: Michael McKean (Lenny) and David Lander (Squiggy), who were responsible (as the Credibility Gap) for the classic underground comedy album "A Great Gift Idea" and have since thrilled millions as the second bananas on "Laverne and Shirley", are returning to vinyl. Casablanca Records has signed the duo (as Lenny and the Squigtones), and their debut album, recorded in live performance at the Roxy in Hollywood, is expected momentarily.

TANDBERG IS ALIVE AND WELL and living in Oslo, contrary to rumors of imminent financial collapse that have circulated in the audio industry. Although the company did pass through a period of financial difficulty in the past several months, the high-fidelity and educational divisions have been recapitalized and given long-term loan guarantees by the Norwegian government. According to company spokesmen, U.S. delivery, sales, and service activities will continue uninterrupted.

BEETHOVEN'S FIDELIO, with Bruno Walter conducting and Kirsten Flagstad as Leonore, has been released as the sixth in the Metropolitan Opera's series of Historic Broadcast Recordings. The recording is taken from the Texaco/Metropolitan Opera broadcast of February 22, 1941, and includes René Maison as Florestan and Alexander Kipnis as Rocco. It is available only as a gift to contributors of $125 or more to the Metropolitan Opera Fund, Box 930, New York, N.Y. 10023.

STRAIGHT-LINE TRACKING (SLT) TURNTABLES: Aiwa will introduce a servo-driven unit at the June 1979 Chicago Consumer Electronics Show. Mitsubishi has shown a number of units in Japan that are now being "seriously considered" for introduction here in June. Pioneer notes that it has no plans to bring in its highly sophisticated multiple-servo-controlled SLT table under its own name, but both Series 20 and Phase Linear are reportedly interested in importing the unit. Meanwhile, CEC, a major supplier of turntables and arms to the European market, has developed a line of five SLT turntables, including two fully automatic (but not multiplay) units, which have already been shown to European buyers. CEC's plans for U.S. distribution are not definite.
UNCLE SAM WANTS YOU to send your comments on radio-frequency interference (RFI) by CB, ham radio, and other interference sources to the FCC. The agency has issued a "Notice of Inquiry" on the subject, inviting public commentary; the move stems from the more than 200,000 complaints of RFI received by the FCC in the past three years. Among other points, the inquiry will examine the questions of whether audio manufacturers should be required to build in special anti-RFI shielding and filtering (with its potential expense and deleterious effect on listening quality) and whether any responsibility should fall on the sources of interference. To make your viewpoint known, write to: Secretary, Federal Communications Commission, 1919 "M" Street N.W., Washington, D.C. 20554, mentioning General Docket 78-369, by May 1, 1979. For a letter to be considered as a formal comment, an original and five copies must be submitted; an informal comment, however, may be in any form.

METAL-PARTICLE TAPE STANDARDS reached the tentative-agreement stage at a conference of the Electronic Industries Association of Japan (EIAJ). Although the participants have been asked not to discuss the technical particulars of the agreement, final details are expected to be resolved at the next meeting of the conference, to be followed by a formal announcement of the standards later this spring.

ODD COUPLES: The Clash, the last major English punk band to reach these shores, is touring the U.S. in the company of r-s-b legend Bo Diddley. Elvis Costello, not to be outdone, has enlisted Carl (Blue Suede Shoes) Perkins as his opening act in the States. And in the songwriting department, everybody's favorite eccentric, Lou Reed, let it be known recently that he has been collaborating with, of all people, perennial contender and noted romantic Nils Lofgren.

DIGITAL DEVELOPMENTS: Among new LP's recorded using the latest digital equipment are "Anita Kerr Does Wonders" (Century CRD-1160), an album of Stevie Wonder songs recorded using Sony's PCM-1600 digital system, and Copland's Appalachian Spring (Sound 80 Records S80-DLR-101), performed by the St. Paul Chamber Orchestra and recorded on the 3M digital system. Four studios now have 3M recorders, and both CBS and Polygram have acquired Sony systems.

THERE IS NOTHING LIKE A DAME! For extraordinary contributions to the British Commonwealth, Queen Elizabeth has made singers Joan Sutherland ("Ah! Non giunge") and Gracie Fields (The Biggest Aspidistra in the World) Dame Commanders of the Order of the British Empire. On the honors list along with Dame Joan and Dame Gracie was conductor Charles Mackerras, who was knighted and is now Sir Charles. Pop singer Olivia Newton-John was made an Officer of the OBE. When she learned of it, Ms. Newton-John said, "The Queen's generosity... left me speechless, thrilled, and delighted." Her current MCA album "Totally Hot" has been certified platinum by the RIAA.

April 1979
While our competitors were listening to Technics Linear Phase speakers, we introduced phase two

When Technics introduced Linear Phase speakers two years ago, we took the audio world by surprise. And why not? After all, Technics Linear Phase speakers were the first speakers to actually show you waveform fidelity. Not simply with tone bursts and sine waves, but by actually comparing the waveforms of live musical instruments to the output waveforms of our Linear Phase speakers.

Now with the 3-way SB-6030 and 4-way SB-7070 (shown below), Technics takes you to phase two. Because compared to our first Linear Phase speakers both give you wider frequency extension, flatter frequency response and even more phase linearity, which means even better waveform fidelity.

How did we make such good speakers even better? We started with BASS (Basic Acoustic Simulation System), an IBM 370-based interactive computer system. With it, Technics engineers can do what they only dreamed of doing in the past: Calculate the sound pressure and distortion characteristics of transducers without physically building and measuring countless prototypes.

Next we took these computer-derived drivers and combined them with Technics unique phase-controlling crossover network. And of course we staggered the drivers to align their acoustic centers precisely.

It's easy to see the result of all this technology. Just compare the waveforms. On the left is a waveform of a live piano. On the right, the piano as reproduced by the SB-7070. That's waveform fidelity.

Listen to the 4-way SB-7070. What you'll hear is its smooth transition between low, midrange and high frequencies. Then notice the bass response. It's deep and tight. With much more punch, better definition and even less IM distortion than its predecessor. That's because when the upper bass frequencies are handled by a separate driver, the woofer does a much better job at handling the lower bass frequencies.

You'll also hear vocals that are smooth and natural. That's because the SB-7070's high-midrange driver was designed with 'free edge' construction to avoid coloration of the critical upper-midrange frequencies.

And by adding a new, smaller tweeter with improved dispersion characteristics, the SB-7070's high-end frequency response was extended to 32 kHz.

Technics 3-way SB-6030 and 4-way SB-7070. For music that sounds like it was originally played. Live.

All cabinetry is simulated wood.

Technics Professional Series
POSTPONING LIFE

In saluting the imminent arrival of the Digital Recording Era in this column in December, I observed that one of its secondary gratifications (better sound is of course the primary one) would be the explosion of new recording activity it would set off—another wholesale replacement of the classical catalog such as we witnessed in the mono-to-stereo changeover starting in the late Fifties. I should have realized that this would raise the Dread Spec- ter of Obsolescence in some minds, and, indeed, one reader wrote to ask whether it makes any sense to buy conventional analog records now when they are going to be made obsolete in only a few years.

My answer to that question is yes, it certainly does, the principal reason being that musical history, like all other kinds, does not stand still. At the time of the changeover from 78- to 33⅓-rpm discs and again at the advent of stereo a great number of valuable performances were inevitably left behind; we could not have duplicated them even had we wanted to, for many of the artists involved were past their prime and others had long since been booked into the celestial choir. It therefore seems to me that an astute collector will begin right now examining the catalog with an eye to preserving for his library those priceless analog recordings that will not be rerecorded digitally by the same artists for the two reasons just cited above. There will be no digital record- ings by Callas, Schwarzkopf, Rubinstein, or Stokowski, for example, and who knows when we shall hear their likes again?

In addition, the transition from analog to digital recording is likely to prove much slower than that from, say, mono to stereo. The equipment involved is very costly and quite likely to remain so. This means that many smaller companies will not be able to afford it, so they will continue to produce analog recordings. Larger companies are likely to proceed slowly in the digital direction not only to develop the new recording, mixing, and editing techniques required, but also to feel out what prices for the discs ought to be and where maximum market impact can be registered (record making is still, after all, a business). And, too, they are not likely, at first, to lavish this expensive technique on just any act that manages to make it into a studio; in many cases, the older method will be "good enough." Analog recordings may, in fact, be around long enough to inspire the creation of a whole new generation of signal processors to deal with their pesky noise problems.

Finally, although this digital/analog prodigy has just slipped onto our turntables, it would appear that its technological successor, the completely digital disc (digitally recorded and digitally reproduced) is right now waiting in the wings. It is therefore possible that some farsighted manufacturer may already have decided simply to skip the half-step and aim for the complete transition instead—two obsolescences for the price of one. The question then becomes, "Shall I buy analog or digital/analog recordings until the digital/digital disc reaches the market?" My answer to that would have to be another question: "How long do you want to postpone your life?"

The speed of technological change in this century has not only been extraordinarily fast but is accelerating. Though it is true that many—perhaps most—people have welcomed the changes with open arms, others have responded by tightening their grip on the buggy whip. I have a friend who postponed buying black-and-white TV "because color is becoming Color TV is here, but now he's wait- ing for the perfection of the large-screen projection system. I find that as incomprehensible as Auntie Mame would, and I'm sure she won't mind my paraphrase: "Life is a con- cert, and some poor souls are sitting there with ear muffs on."
When you
Test-drive the best speakers from Britain
you’ll drive home with real sound.

You’re a confirmed audiophile and nobody can fool you with a lot of promises. You’re ready for the ultimate test and only your ear will be convinced.

When you test-drive the best from Britain we know well have your ear and maybe a lot more.

When you’re ready, take a variety of recorded music into your dealers. (Use direct disc recordings so you can put our speakers to the real test.)

We know you’ll be amazed at the accuracy.

And we’ll have turned another confirmed audiophile into a dedicated Anglophile.

We’ve been convincing lovers of sound in Britain for over half a century. And we’ve earned our reputation as the leader by not compromising.

We don’t rely on gimmicks. Every speaker in our completely new line of systems is based on sound engineering principles and tested thoroughly.

As you know, with everything in audio, it’s the end result that counts, not the means to get there.

But we don’t neglect the means either. To get your ear, we use our English craftsman’s pride in carefully putting together the right components for delivering a broad range of sound smoothly and uniformly so you get the flattest response possible.

When you take a look at the specs you’ll see what we mean.

We’ve shown the Ditton 662, but all three new Ditton speakers, besides being technologically superb and precision engineered, are beautifully styled and assembled in the fine English cabinet-making tradition, to fit into any decor.

And we’ve used a completely different design concept for each of them to satisfy your individual taste and budget.

So now that you’ve grown up to real sound, you can test-drive your choice of the best sound from Britain.

But you won’t be able to find them at just any dealer. For our select list of shopkeepers who carry Celestion, simply drop us the coupon and we’ll send you the list by return post.

But don’t delay, the traffic may be heavy.

Celestion.
Nobody sounds better than the British.
LETTERS TO THE EDITOR

Beverly Sills

I enjoyed February's cover story on Beverly Sills, and I think Stereo Review could not have chosen a more deserving recipient for the 1979 Certificate of Merit award. Miss Sills' name is a household word in an affectionate way that has not been equaled by any other opera star for years. The general public, for the most part uninformed about opera and partially deaf from constant exposure to rock, at least knows who she is and thinks of her kindly. I doubt, however, that she has brought many previously uninterested listeners to opera or that, as William Livingstone put it, "since the death of Enrico Caruso, no singer of any nationality—not even Maria Callas—has brought opera more to the consciousness of the general American public than Beverly Sills."

In 1934 the popular Metropolitan Opera star Grace Moore made a phenomenally successful film, One Night of Love, in which she performed generous chunks of La Traviata, Carmen, and Madama Butterfly. It was one of the top ten money-makers of the year, won a special Academy Award, and made Miss Moore a top box-office star and a figure of popular adulation in a way that was possible only for film stars in the Thirties. For the next few years she balanced her career between the movies, opera, and concerts, then concentrated on opera exclusively. The vast popularity of One Night of Love brought many to see her live performances, for in those days, of course, there was no TV and recordings were few and far between. In the years it was in circulation—it was reissued again and again—One Night of Love must have been seen by millions of viewers in this country and around the world. It still turns up on TV now and again, and it can be recommended for the best use of operatic music in a film to date.

Besides Grace Moore, other singers popularized opera to an extent unequalled today: for instance, Nelson Eddy, Gladys Swarthout, Lily Pons, Lawrence Tibbett, and, above all, Jeanette MacDonald—a true film superstar who performed operatic music in a way the general public found interesting and exciting. Just about the first record I owned was of Jeanette singing arias from Louise and Romeo and Juliet (I still have it).

Mr. Hosking rightly points out, all that was before the days of TV. Millions may have seen, say, One Night of Love in its many turns around the circuit, but their number still wouldn't match that of those who caught Miss Sills in just one of her many Tonight Show appearances.

STEREO REVIEW showed outstanding taste in giving the 1978 Certificate of Merit to Beverly Sills. I have been a Sills devotee for almost ten years and own almost everything she's recorded. I particularly cherish an experience several years ago when, after seeing and hearing her Lucia at the New York City Opera, I followed a crowd of well wishers out after she finished a demanding performance, but this lovely lady stood and greeted everyone—smiling, chatting, signing autographs, joking, and spreading warmth and good cheer all around.

Beverly Sills will be missed as a performer, but how marvelous that she will be in a position to carry opera into new and promising directions in the future. She is a national treasure, and I am so pleased that Stereo Review recognized it before she reached her "golden years."

JOE BRONSTEIN Rochester, N.Y.

Thank you for William Livingstone's interview with Beverly Sills in the February issue. The article certainly made Miss Sills appear to be a breath of fresh air of the sort the world needs so very often. As someone once said, and as has been many times repeated, it is in giving that we receive. Perhaps that is the secret of Miss Sills' success in her life and work.

BR. EUGENE PATERNAUDE Rock Hill, S.C.

The Certificate of Merit awarded to Beverly Sills was certainly much deserved. The world of music has been well served by Miss Sills for many years; may good luck and much success be hers in her new and challenging career as director of the New York City Opera.

GEORGE DURMAN, Randallstown, Md.

Consistent Chicago

Yes, those of us who are fans of Chicago sometimes feel annoyed with the sameness of their music (which Rick Miz complained about in his February review of "Hot Streets"), but we also enjoy the consistency of their sound. Whether it's chocolate ice cream or pizza or music, if you like it, why change it?

ANTHONY BELLINO Bayshore, N.Y.

Opinions of Clash

After reading Steve Simels' review of "Give 'Em Enough Rope" by the Clash (February issue), I went out and purchased the album. I expected to hear a band in "the early Who/Kinks tradition" who would remind me of Mott the Hoople (Steve's other comparison). What they sounded like was the New York Dolls. The lyrics are buried by poor production and a frenetic rhythm section. Tell Steve that I'm old enough to remember the Sixties too, so I gave the album to my little sister.

TOM RUGZA Unita, N.Y.

Mr. Simels replies: Well, at least one member of the family will be dancing.

More Digital!

Being an optimist by nature, but usually a dissatisfied one, I ventured $15 to audition the Telarc digital-master recording by the Cleveland Symphonic Winds described by David Hall in a January review. Though not a fan of wind-band music, I must say bravissimo! for a very significant improvement in musical reproduction. I hope the big record companies out there are listening: Give me more!

J. M. RATHBUN Cumberland, Wis.

Installing Cartridges

I have a problem I am sure is shared by others who, like me, enjoy reading about and studying product specifications, test reports, and new developments in the audio field. I read about new turntables with no wow, no flutter, quartz-locked speed control, direct drive, little strobe lights, special heavy plat-
SAE gives you more pre-amp:

If you're looking at pre-amps, you're looking at three things: performance, flexibility and construction.
You're trying to get the most of all three.
It's as simple as that.

Why look at SAE? It's as simple as this:
- Two-stage phono circuit. (All models.) By dividing amplification into two stages, we are able to utilize passive high-frequency equalization.

This dramatically reduces high-frequency feedback, by 20db in fact, as well as the resulting transient intermodulation distortion, (TIM). The audible effect is a greater definition of sound, increased clarity.
- Tape facilities. (All models.) Take the unique Tape EQ: Now you can modify the recorded sound to suit your personal tastes by switching parametric or tone control circuits between selected input (phono, tape, aux.) and recorder circuits.
- Parametric equalizers. Providing virtually complete control over bandwidth, center frequency and cut or boost, our parametrics provide greater flexibility and a wider variety of effects than any conventional system has ever offered. (2100 and 2900 models.)

"Superchip." We took the integrated circuit out of instrumentation and into audio. Even at full output, our state-of-the-art superchip provides super-low distortion (<0.005%), super-high slew rate (>12V/µ sec) and excellent transient response. (2100 and 2100L models.)

We make our pre-amps exactly the same way we make our amps, tuners, equalizers, everything. By hand. With the finest materials money can buy and the greatest care money can't buy.

But the most important feature in every SAE pre-amp is its sound. It's the only reason we do everything we do. It has greater clarity, finer accuracy, and a more vivid sense of dimensionality.

It had better. It has one other very important feature to live up to: its name. SAE.

2100 parametric pre-amplifier
0.005% THD and IM. $950*

2100L pre-amplifier with LED display.
0.005% THD and IM. $800*

3000 pre-amplifier with 3-band tone control
0.02% THD and IM. $300*

2900 parametric pre-amplifier,
0.01% THD and IM. $500*

*Nationally advertised value, actual retail prices are established by SAE Dealers.
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INTRODUCING
THE NEW FUEL-INJECTED, SIX CYLINDER,
PLUSH, LUSH, CELICA SUPRA.

YOU
GOT IT.

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Standard equipment: 6 cylinder, fuel-injected engine, 5-speed overdrive transmission, power assisted 4-wheel disc brakes, and power windows. Also available with 4-speed overdrive automatic transmission, cruise control, and sunroof.

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CIRCLE NO. 65 ON READER SERVICE CARD
spend lots of money for one, complete with broom and a nifty box, and I love it.

But—and here’s the rub—mounting my lovely new cartridge on my lovely new turntable is something else entirely! The cartridge manufacturer has kindly included an assortment of shims, clips, and absurd little nuts and bolts. The little devil’s even got its own charts! I am not a total klutz—I can usually open a can of soup without getting any of it on me—but this is a job for a watchmaker. Finally I get the little bugger bolted down, and then come the nagging questions: Is it on straight? Did I use the right shim? Are the contact terminals too large or is it that the clips are too small? Did I ruin the whole thing when I forced the former onto the latter? Will that big drop of sweat that fell from my forehead and soaked into the cartridge hurt anything?

You get the idea—the big question is whether we audiophiles are to forever cast adrift in a sea of technology with only our midget screwdrivers for comfort. I wish some audio manufacturer would take an engineer off the project of trying to fit a half-dozen LED’s onto their latest model and put him to work designing an integral cartridge and head shell, or else a head shell that’s genuinely universal. In the meantime, I wish Stereo Review would do an article about mounting these little devils.

Dan Snyder
Fredericktown, Ohio

Technical Director Larry Klein replies: We are in complete sympathy with Mr. Snyder’s complaint. The average audio consumer may have to go through the travail of cartridge mounting every year or so; the Stereo Review Technical Department goes through it many times a month. There are, in fact, several integral cartridge/heads/shells currently on the market that will fit the four-pin bayonet sockets at the ends of several Japanese- and European-made tone arms, but a universal cartridge-mount/pin arrangement is a long way off. There are some encouraging signs, however: cartridges are getting smaller and lighter, and such miniaturization should make it easier to design some sort of universal mount—assuming that the cartridge manufacturers have the will to do so. I promise to bring the question up at the next meeting of the IHF Standards Committee, but I doubt that I’ll be able to report any happy news about this in the very near future.

Ginger Baker

In the February “Letters,” Charles Popple asked whatever happened to Ginger Baker. According to Logan and Woffinden’s The Illustrated Encyclopedia of Rock, Baker gave up his Air Force wings to pursue a growing interest in African music. In 1971 he bought a plot of land in Akeja, Nigeria, on which to build his own recording studio. For a couple of years he performed with Fela Ransome-Kuti and briefly led a Nigerian band, Salt, of years he performed with Fela Ransome-Kuti and briefly led a Nigerian band, Salt, and ...
ample of a "standard." Such songs make their composers a lot of money, of course, and one can hardly blame Mr. Hamlisch for wanting to write some. I didn't say, by the way, that he actually had written any yet—it's too early to tell—only that his ambition to do so makes his film music call attention to itself and stand out in a way that John Williams' does not.

Springsteen Rethought

* When Steve Simels reviewed Bruce Springsteen's "Darkness on the Edge of Town" last August, he said, "Ask me again about this one in six months." So, the stipulated period being up, I'm asking: what do you think of it now, Steve?

DENNIS LOCKARD
Hughesville, Pa.

Mr. Simels replies: On the one hand, I find it overly mannered, impossibly histrionic, unnecessarily stark, and in the case of one cut, Streets of Fire, all but unlistenable. On the other hand, any album that contains Badlands, Candy's Room, Racing in the Street, and Promised Land is certainly not all bad.

Southside Johnny

* After buying Southside Johnny and the Asbury Jukes' latest album, "Hearts of Stone," and hearing them play the Rochester, New York, War Memorial, I have to write and offer my compliments via STEREO REVIEW. Steve Simels said it best in his January interview with Southside Johnny: "They remain...the best working band in America." I haven't seen "the future of rock-and-roll," but I have seen and heard some music of the past mixed wonderfully with the present, and I certainly had a party boogyin', boppin', and rockin' and rollin' with Southside Johnny. (I also really like the way La Bomba moves, and I can't neglect to mention Steve Van Zandt, whose writing, arranging, producing, singing, and guitar playing are all excellent.)

PAUL DECKER
Hilton, N.Y.

Simon Barere

* I was happy to see the December review by Eric Salzman of an album of recordings by the late Simon Barere; about half the titles on it used to be available on a Remington LP from the Fifties. Barere was truly a remarkable pianist, and I hope that someone will reissue his great performance of Liszt's Spanish Rhapsody. By the way, I suspect that the birthdate of 1869 given in the review was a misprint and that Mr. Salzman really meant it to be 1896.

DAVID ADLER
Clark, N.J.

He did indeed, and we regret the error.

Videotaped Opera

* I suffered an unforgivable lapse of mental continuity and erased half of my videotape of the Met's Otello. Is there anybody out there who can dub in the Beta-X2 format and who has that production? I need from Act III, Scene 6 on—Iago has just told Cassio that he had better hide if he doesn't want to be caught by Otello (trumpets are fanfaring) and Otello is about to enter and say, "Come la uccidero?" to Iago.

Is there any organization of [video] opera collectors? I think there might be some market for videotaped operas, and somebody—maybe the Met itself—could enter it cheaply. At least the sound fidelity would be better than my local station provides (it sounds like their compressor is on most the time).

JAMES WATKINSON
531 Warm Springs
Boise, Idaho 83702

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The TDK cassette shell and mechanism are every bit as good as our tape. And when you begin to understand the time and effort we've spent in perfecting them, you'll appreciate that our engineers wouldn't put TDK tape in anything less than the most advanced and reliable cassette available.

The Shell Our precision-molded cassette shells are made by continuously monitored injection molding that creates a mirror-image parallel match, to insure against signal overlap, channel or sensitivity loss from A to B sides. We make these shells from high impact styrene, which resists temperature extremes and sudden stress better than regular styrene or clear plastic.

The Screws Our cassettes use five screws instead of four for warp-free mating of the cassette halves. We carefully torque those screws to achieve computer-controlled stress equilibrium. That way, the shell is impervious to dust, and the halves are parallel to a tolerance of a few microns.

The Liner Sheet Our ingenious and unique bubble liner sheet makes the tape follow a consistent running angle with gentle fingertip-like embossed cushions. It prevents uneven tape winding and minimizes the friction that can lead to tape damage. Also our cassettes will not squeak or squeal during operation.

The Rollers Our Delrin rollers are tapered and flanged, so the tape won't move up and down on its path across the heads. This assures a smooth transport and prevents tape damage.

The Pins In every cassette we make, we use stainless steel roller pins to minimize friction and avert wow and flutter and channel loss. Some other manufacturers "cheat" by using plastic pins in some of their less expensive cassettes. We don't.
The Pressure Pad
Our sophisticated pressure pad maintains tape contact at dead center on the head gap. Our interlocking pin system anchors the pad assembly to the shell and prevents lateral movement of the pad, which could affect sound quality.

The Shield
We use an expensive shield to protect your recordings from stray magnetism that could mar them. Some manufacturers try to "get by" with a thinner, less expensive shield. We don't.

The Window
Our tape checking window is designed to be large enough for you to see all the tape, so you can keep track of your recordings.

The Label
We've even put a lot of thought into the label we put on our cassettes. Ours is made from a special non-blur quality paper. You can write on it with a felt-tip pen, a ballpoint, whatever. Its size, thickness and placement are carefully designed and executed so as not to upset the cassette's azimuth alignment.

The Inspections
When it comes to quality control, TDK goes to extremes. Each cassette is subject to thousands of separate inspections. If it doesn't measure up on every one of these, we discard it. Our zeal may seem extreme, but it is this commitment to quality which allowed us to offer the first full lifetime warranty in the cassette business—more than 10 years ago: In the unlikely event that any TDK cassette ever fails to perform due to a defect in materials or workmanship, simply return it to your local dealer or to TDK for a free replacement. It took guts to pioneer that warranty, but our cassettes have the guts—and the reliability—to back it up.

A Machine for All Your Machines
Now that we've told you how we move our tape, let us remind you about our tape. SA, the first non-chrome high bias cassette, is the reference tape most quality manufacturers use to align their decks before they leave the factory. It's also the number one-selling high bias cassette in America. For critical music recording, it is unsurpassed. AD is the normal bias tape with the "hot high end." It requires no special bias setting, which is why it is the best cassette for use in your car, where highs are hard to come by, as well as at home. Whatever your recording needs, TDK makes a tape that offers the ultimate in sound quality. But it's our super precision shell and mechanism that make sure all that sound gets from our tape to your ears, year after year. TDK Electronics Corp., Garden City, NY 11530

TDK
The machine for your machine.
Discwasher's Latest Audio Accessories

- Discwasher has introduced several new audio accessories, among them a flashlight-mirror assembly called the Hi-Fi Seer Audio Equipment Illuminator that is intended for examining the rear panels of shelf- or rack-mounted components. The battery-powered device illuminates in three directions and has a positive-locking on/off switch. Dimensions are approximately 2½ x 1 x 1 inch. Price: $7. The DiscKeeper is a walnut record rack that uses a compression bar to hold records in a vertical position. The compression bar pulls forward to allow the user to flip through the albums. Wall-mounting hardware is included, and DiscKeepers can also be stacked, installed back-to-back, or rack mounted. Price: $65 each. The Model DC-1 pad cleaner (shown) stores in the handle of Discwasher record-care pads and is used to clean the pile of the pad fabric. The device is included with all Discwasher pads, or it may be purchased separately for 69¢.

Burhoe Announces New Tweeter

- The Burhoe Acoustics “Blue” speaker is a three-way vented system utilizing a 10-inch bass driver and two inverted-dome tweeters of 1½ and 1⅛ inches. The 1½-inch unit has a proprietary “bi-radial” dome profile said to extend frequency response to 26,000 Hz within a tolerance of 2 dB. Both of the tweeters utilize magnetic fluid in their voice-coil gaps. Power-handling capability of the Blue system is 100 watts; minimum recommended amplifier power is 20 watts. Impedance is 8 ohms. Crossover frequencies are 1,000 and 2,000 Hz, with the crossover network introducing slopes of 6 dB per octave. Controls for both tweeters permit a continuous range of adjustment for the 1½-inch unit and 9 dB of adjustment for the 1⅛-inch driver. Frequency response is specified as 30 to 26,000 Hz ±3 dB. Cabinet finish is walnut veneer. Dimensions are 24⅝ x 14⅝ x 10¼ inches. Price: $250.

LT Sound Time Delay Is Both Mechanical And Electronic

- LT Sound’s TAD-4 is a reverberation synthesizer that uses dual delay elements—an electronic charge-coupled device and a mechanical spring-type transducer—to achieve delay times of up to 240 milliseconds. According to LT, the combined use of a spring to simulate multiple short-term reflections and an active device for longer, concert-hall re-creation of live listening conditions. Specifications for the TAD-4 include a delay dynamic range of 80 dB, distortion below 0.9 per cent at 1,000 Hz, a delay range of 20 to 240 milliseconds, and a linear frequency response for the delayed output within 1.5 dB. Bandwidth of the delayed output ranges between 2.5 kHz (for a 240-millisecond delay) and 10 kHz (for a 20- to 67-millisecond delay). The TAD-4 can be used with four-channel systems, since both front and rear channels can be delayed. The front panel has direct, echo, and reverb level controls for both front and rear channels, as well as master controls for delay time, echo repeat, high-frequency rolloff, and reverber equalization. Dimensions are approximately 19 x 2 x 7½ inches. Price: $495. More information and a recorded “soundsheet” with examples of delay effects are available for $1 from: LT Sound, Dept. SR, P.O. Box 1061, Decatur, Ga. 30031.

A Moderate-price Single-band Expander from dbx

- The dbx Model IBX is a single-band linear dynamic-range expander using much the same design approach as the company’s larger 3BX three-band expander. The IBX is capable of range expansion of up to 50 per cent: that is, a 10-dB change in input level will result in up to a 15-dB change in output level, depending on the setting of the unit’s front-panel expansion-ratio control. The front panel also has controls for expansion threshold (the level at which the expansion effect begins to take place), a ten-LED display to show changes in gain, a power switch and pilot lamp, a tape-monitor switch, and a pre/post switch that permits the user to expand source material before or after it is fed to a tape deck. Specifications for the IBX include a transition or threshold-level range of 30 millivolts to 3 volts, a frequency response of 20 to 20,000 Hz ±0.5 dB, total harmonic and intermodulation distortion of 0.15 per cent or less, and a maximum output level of 6 volts rms. Dimensions are 11 x 3½ x 10¼ inches. Price: $245.

Rotel Integrated Amplifier Features LED Power Metering

- Rotel’s RA-2040 integrated amplifier is a 120-watt-per-channel direct-coupled unit with a number of unusual controls and performance features. The amplifier uses a power-output circuit that automatically converts to class-A operation at output levels below 5 watts, with conventional class-AB operation at higher levels. It has three phono switch-po

(Continued on page 20)
The most powerful argument for our new receiver is not just power.

True, it's tempting to be swept up by our power.
150 watts per channel minimum RMS at 8 ohms, from 20Hz to 20kHz, with no more than 0.07% Total Harmonic Distortion, is nothing to sneeze at.

But raw power means nothing. What's important is how that power is delivered. In the case of the STR-V7, brought to you by Sony in a very classy package.

You get a combination of features and controls that are impressive on their own—but almost unheard of in a single machine.

To start with, we've built in a Dolby system, for decoding Dolbyized FM broadcasts.

The advantages of our tuner, though, need no decoding. They include a normal and narrow FM IF bandwidth selector. It makes life simple for people in areas where their signals are crowded together elbow to elbow.

In our preamp section, the V7 comes equipped with a special phono EQ circuitry. Thanks to Sony's high IQ, it allows for direct connection of a low-output, moving-coil cartridge phono source. Without calling for an external step-up transformer or pre-preamp.

When you're gifted with as much power as the V7, you need a way to keep track of it. This receiver keeps tabs with two power-output meters, monitoring the power being fed to the speakers. So overload can't result from oversight.

And all that power comes from our direct coupled DC power amp. And our power is stable, thanks to a high-efficiency, high regulation toroidal-coil transformer.

There's a lot more to the STR-V7 than power. This receiver takes the best that contemporary technology has to offer, and offers it in a single machine.

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

SONY AUDIO

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new products
latest audio equipment and accessories

Crown introduces a matched preamp and medium-power amp

Crown has developed two electronic components—a preamplifier and a 50-watt-per-channel power amplifier—characterized by relatively simple control functions. The preamplifier, called the Straight Line One because it lacks tone controls and processes the signal through a minimum of stages, utilizes a separate phono-gain module intended to be placed near the turntable. The phono module is powered through an umbilical cord from the preamp’s rear panel and provides the first stage of phono amplification before the signal is routed through any substantial length of cable. According to Crown, this arrangement results in improved noise performance and resistance to radio-frequency interference (RFI). Additional anti-RFI circuits are built into the phono module. The front panel of the Straight Line One has volume and balance controls (both of the stepped-attenuator type with detents at 2-dB intervals), two tape-monitor circuits, a four-pushbutton input selector, a power switch, and two LED overload indicators that light to show excessive drive-level conditions at any stage of the preamplifier. Total harmonic distortion is rated at less than 0.0003 per cent and intermodulation distortion at less than 0.0005 per cent. The phono module has an RIAA frequency response accurate to within ±0.5 dB, a signal-to-noise ratio of 94 dB, and an input overload level of 450 millivolts for the conventional phono inputs, and a rated frequency response of 0 to 200 kHz. The tone controls provide ±10 dB of adjustment at 100 and 10,000 Hz. Infrasonic (12-dB-per-octave attenuation below 15 Hz) and ultrasonic (12-dB-per-octave attenuation above 24 kHz) filters can also be switched from the front panel. Dimensions are approximately 19 x 3½ x 7¾ inches. Price: $549. Additional phono modules (usable only with the Straight Line One) are available for $225 each.

The power Line One power amplifier is of class A + AB design, and it is rated at 50 watts per channel with less than 0.0005 per cent total harmonic and less than 0.00005 per cent intermodulation distortion. Like all the current Crown power amplifiers, the Power Line One incorporates an input-output comparator (IOC) circuit designed to monitor the output of the amplifier and to illuminate a LED when either channel has distortion exceeding specifications. In addition to the IOC circuit, this amplifier also has a front-panel peak-reading LED display to permit the listener to observe actual power levels. Addit-

(Continued on page 22)
What do you get when you put together...

1. A tonearm worth $150...
   (with UNIPOISE® patented single pivot point suspension)

2. A turntable worth $200...
   (with GYROPOISE® exclusive patented magnetic suspension)

3. A cartridge worth $150...
   (Professional Calibration Standard with patented STEREOHEDRON® stylus tip)

Stanton's NEW 8005 turntable system!

Stanton's handsome new low profile Turntable has unequalled features:
1. The Gyropoise® platter actually floats on air. This magnetic suspension eliminates vertical friction and almost complete acoustical isolation is insured.
2. Unipoise® tonearm with patented single point suspension reduces lateral and vertical friction to a minimum.
3. Automatic stop and lift-off on some models ... manual operation on others.
4. Each Turntable comes with a top-of-the-line calibrated Stanton cartridge (881S or 881 Triple-E).
5. The Universal Cartridge Adapter Head accommodates all cartridges (a free Adapter Head comes with each turntable).
6. Other features:
   a) Precision ground belt drive
   b) Tracking force and anti-skate mechanism
   c) Viscous damped cueing
   d) Die cast aluminum platter
   e) Hinged dust cover adjustable to any position

For further information write:
Stanton Magnetics, Inc.
Terminal Drive, Plainview, N.Y. 11803

..."The choice of the Professionals""
New Products
latest audio equipment and accessories

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latest audio equipment and accessories

Front-panel features include a headphone jack, switches for power and two pairs of loudspeakers, and a rotary gain control for each channel. Dimensions are 19 x 3 1/2 x 12 1/4 inches. Price: $479. Both the Straight Line One and the Power Line One are rack-mountable units finished in matte black with silver trim. Optional walnut-veneer cabinets to hold either unit singly (Model 3RL, $40) or both together as shown (Model 7RL, $55) are also available.

Circle 126 on reader service card

Self-energizing Hybrid Electrostatic Speakers from BTM

BTM, a West Coast manufacturer, has introduced a series of dynamic-electrostatic hybrid loudspeaker systems they call “ES Translators.” The Translators use a new type of high-frequency electrostatic panel that does not require an external polarizing supply voltage; the high voltage necessary to bias the panels is derived from the audio-input signal. In contrast to the conventional arrangement in electrostatic-array design, in which a single plastic diaphragm is suspended between energized grids, the Translators use two diaphragms suspended on opposite sides of a single, central grid. According to BTM, this “inside-out” configuration, which requires less diaphragm movement for a given output, lowers distortion and also permits the electrostatic panels to operate on a lower voltage and thus be self-energized.

Bass reproduction in the Translators series is handled by conventional dynamic bass drivers mounted in dipole (open-back) enclosures. The crossover region between the bass units and the electrostatic panels is from 200 to 1,200 Hz, and transition from the bass unit to the high-frequency driver is said to be quite gradual. The series includes four models. The Model 320 has two 10-inch bass drivers and an electrostatic radiating area of 666 square inches. The Model 310 uses a single 12-inch bass driver and has a 416-square-inch electrostatic array. The Model 300 is a 10-inch system with a 126-square-inch area, and the Model 290 is an 8-inch system also having a 126-square-inch area. Nominal impedance of all units is 8 ohms, and efficiency is specified as 96 dB. Minimum recommended power is 35 watts for the Models 320, 310, and 300, and 25 watts for the Model 290. Dimensions are 43 3/4 x 21 3/4 x 9 1/2 inches for the 320, 38 x 17 3/4 x 9 1/2 inches for the 310, 24 1/2 x 14 3/4 x 7 1/2 inches for the 290. Prices: 320, $499; 310, $349; 300, $199; 290, $139. For more information write to BTM Manufacturing Co., Dept. SR, 2005 Lincoln Avenue, Pasadena, Calif. 91103.

Circle 127 on reader service card

Fuji Videocassettes
Now Available in All Three Formats

Fuji, a prime supplier of professional TV videotape, has introduced Beta-format videocassettes in four lengths. Thus, Fuji now manufactures videocassettes in all three popular formats: U-Matic, VHS, and Beta. All Fuji videocassettes have plasticized containers, which are said to eliminate the problem of dropouts caused by the paper dust often found with other types of packaging for tape products. Prices for the Beta-format cassettes are: L-500, $16.95; L-370, $14.95; L-250, $12.95; L-125, $10.95. Prices for VHS cassettes are: T-120, $25.50; T-60, $18.35; T-30, $15.50. Prices for U-Matic cassettes are: KCA-60, $36; KCA-30, $28; KCA-20, $26.50; KCA-15, $24.75; KCA-10, $22; KCS-20, $26.50; KCS-10, $22.

Fuji has also announced the completion of pilot runs of pure-metal-particle audio-cassette tape in its Japanese factory. Commercial introduction of the new tapes is expected sometime early this spring, and prices for the various lengths will be announced shortly.

Circle 128 on reader service card

Success is great, but...

The response to our introduction of the new 1BX and 2BX Dynamic Range Expanders has been phenomenal. Too much so, since many of you haven’t been able to find them in stock at your dbx dealer.

We want to take this opportunity to tell you that we’ve enlarged our production facilities to meet your demand for dbx expansion. But even as we produce more, our exhaustive quality assurance procedures take as much time as ever. So, while dbx expanders may be in short supply, please remember that good things are worth waiting for.

The 1BX and 2BX (along with their top-of-the-line partner, the 3BX) will hopefully be back on your dealers’ shelves by the time you read this.

And we hope our expansion will be able to keep up with your demands.

dbx, Incorporated
71 Chapel St.
Newton, MA 02195
(617) 964-3210

UNLOCK YOUR EARS

(Continued on page 24)
Restore the impact of "live" ...easy as 1-2-3.

No matter how accurate your stereo system is, it’s only as good as the records and tapes yet to play on it—and they leave much to be desired. The recording process does some terrible things to live music, and one of the worst is robbing it of dynamic range, the key element which gives music its impact.

Fortunately dbx has developed a whole line of linear dynamic range expanders which can restore lost dynamic range.

**1BX.** The 1BX is the most sophisticated one-band expander on the market. Its RMS level detector incorporates an infrasonic filter to prevent mistracking caused by turntable rumble and record warp.

**2BX.** The 2BX divides the frequency spectrum into two bands and expands each separately. It doesn’t allow the bass to influence the vocals or midrange instruments, and in strongly percussive music, that’s important.

**3BX.** The 3BX is the state-of-the-art, but with the introduction of the 3BX-R Remote Control option, it’s more flexible and more fun than ever. The 3BX divides music into three frequency bands. Low bass will not influence the midrange. And midrange crescendos will not boost low level highs, so operation is virtually inaudible. For complex musical material, the 3BX is the best way to restore dynamic range.

All dbx expanders have design features in common. All utilize true RMS level detection. All feature a program-dependent release time, for natural, life-like sound. All are true stereo expanders that maintain rock-solid stereo imaging. And all dbx linear expanders have a pleasant benefit—up to 20 dB of noise reduction.

The 3BX is still the standard. But now there is a family of dbx expanders designed to bring any system one step closer to "live."

dbx, Incorporated, 71 Chapel Street, Newton, MA 02195 (617) 964-3210.

CIRCLE NO. 12 ON READER SERVICE CARD
You can now own every record or tape that carries a dividend gift or dividend certificate. 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.

**NEW PRODUCTS**
latest audio equipment and accessories

**Neosonic's New Tangential-tracking Record Cleaner**

- Neosonic recently introduced the Lencomatic record cleaner, which is intended for installation on the top inner surface of a record-player dust cover. It has a carbon-fiber and natural-hair brush that tracks records tangentially. A spring-loaded arrangement automatically returns the brush assembly to its rest position each time the dust cover is lifted. The device attaches to a dust cover with adhesive discs, and a template is supplied to assure accurate mounting. A conductive turntable mat said to reduce static charge on the record surface comes with the Lencomatic. Price: $19.95. For further information, write to Neosonic, Dept. SR, 180 Miller Place, Hicksville, N.Y. 11801.

**Improved Vac-o-Rec Record Cleaner**

- Vac-o-Rec has introduced two new record-cleaning machines, the Models 145 and 1100 (shown), that work on the same principle as the company's original Model 100. To use the Vac-o-Rec machines, the record to be cleaned is inserted into a narrow slot; it is then rotated at a relatively high speed by an internal motor while mohair brushes pressing against both surfaces of the disc dislodge dust, which is picked up by a vacuum pump. The entire cleaning process takes less than thirty seconds, and a static-reduction circuit is included to reduce disc-borne static charge. The Model 145 is the company's new basic record-cleaning machine; it is usable with both 7- and 12-inch discs and is finished in matte black plastic. The Model 1100 has a more powerful motor, a removable, washable filter, and a wood-grain plastic finish. Prices: Model 145, $34.95; Model 1100, $44.95.

**Circle 139 on reader service card**

**Electrostatic and Dynamic Speaker Kits from Sonikit**

- Sonikit offers a wide variety of monitor-style loudspeakers, many patterned after British designs, in kit form. The complete kits include all of the components necessary to assemble a finished system: drivers, crossover components, connective wiring, and birch-veneer enclosures that have been designed to be assembled in the home using ordinary hand tools and adhesives supplied with the kit. Sonikit speakers are also available without enclosures in what is referred to as 'semi-kit' form. Models offered range from the B/2 Mini-Monitor, a two-way compact speaker using a 5-inch bass driver and 1-inch soft-dome treble unit ($360 per pair in complete kit form), to the JansZen Z40, a hybrid dynamic-electrostatic combination employing a Bextrene bass driver, a 10-inch passive radiator, and four electrostatic panels, all mounted in a columnar configuration ($800 per system in complete kit form). A wide variety of bookshelf systems, transmission-line designs, and subwoofers are also in the Sonikit line. For more information write: Sonikit, 1173 65th Street, Dept. SR, Oakland, Calif. 94608.
Next best will cost you $5.00

The demand for Micro-Acoustics cartridge clinics is so great, we simply can't keep up.
So we've done the next best thing.
But a word about the best thing first. If you've ever been to a Micro-Acoustics Clinic in your dealer's showroom, you know that it involves the most comprehensive examination of a cartridge ever devised. When you leave, you clearly understand what your cartridge is doing, and, alas, what it is not. You become aware, for example, not only how faithfully your cartridge is tracking the groove, but how it performs in many critical areas such as square wave and transient ability, IM distortion and capacitance effects.
The next best thing is our special test record. It's like none you've ever heard before. The record is specifically designed to test both tracking and transient ability. One side contains a remarkable series of electronic and musical tests, while the other side is pure music, for sheer enjoyment.

Of course, we, and your dealer, will do everything we can to let you know when there's a clinic scheduled in your area. In the meantime, we suggest that this unique record is almost like attending a Micro-Acoustics Clinic — every time you decide to use it.

Just one friendly note of warning. Knowing the results of a diagnosis is sometimes a painful experience. But only when there's nothing you can do about it. Fortunately, in this instance, you can do something. Like listening to one of our Micro-Acoustics direct-coupled cartridges, which are equal to the challenge of any clinic of any kind.

Micro-Acoustics Corporation,
8 Westchester Plaza, Elmsford, NY 10523
Enclosed is $5.00 each for Micro-Acoustics TT-2002 Demonstration Test Records, postpaid

Name
Address
City State Zip

Micro-Acoustics
Because good tracking isn't enough.
New Products
latest audio equipment and accessories

Heppner's New
"Heavyweight"
Car Speaker

- The Heppner Manufacturing Co., an Illinois firm that makes loudspeaker drivers, recently introduced a new line of car speakers headed by the "Tri-Pac." The Tri-Pac—dubbed the "heavyweight" because of its 28-ounce woofer magnet—is a three-way system with a 6- by 9-inch woofer, a 3-inch mid-range driver, and a 1-inch dome tweeter. The latter two drivers are mounted on a metal plate suspended in front of the woofer cone. Efficiency is rated at 104 dB for a 1-watt input (measured at a distance of 0.5 meter) and frequency response as 35 to 20,000 Hz. Dimensions are 9 x 4 1/2 x 6 inches. Price: $50. Circle 132 on reader service card

Three-way Speaker

Three-way Speaker From Celestion Has Passive Radiator

- Celestion, a British manufacturer, has introduced their new top-of-the-line three-way loudspeaker, the Model 662. The 662 has a 12-inch fiber-cone bass driver, a 12-inch passive radiator, a 2-inch plastic-dome mid-range, and a 3/4-inch plastic-dome treble unit, with crossover frequencies of 700 and 4,500 Hz. All four units have cast-metal frames with flush-mounted, machined fronts for rigidity and reduction of stray diffraction effects. The grille assembly of the speaker is also said to have been designed to minimize diffraction. Frequency response of the Model 662 is specified as 38 to 20,000 Hz ±3 dB into a hemispherical room load. Minimum power requirement is 20 watts, and maximum rated input power is 160 watts on musical program material. Sensitivity is 90 dB output (measured at one meter) for a 2.9-watt input, and nominal impedance is 8 ohms. Dimensions are approximately 41 1/4 x 15 3/4 x 11 1/8 inches. Cabinet finish is either American walnut or elm. Price: $749.50. Circle 133 on reader service card

Belt-driven
Automatic Turntable
From Radio Shack

- Radio Shack's Realistic LAB-250 turntable has fully automatic return and shutoff functions. It is a belt-driven unit using a four-pole synchronous motor to maintain constant speed. The wow and flutter figure for this configuration is 0.09 per cent, and rumble is -67 dB (measured using the European DIN-B standard). The 33⅓- and 45-rpm speeds are selectable by a top-panel switch. The tone arm of the LAB-250 is S-shaped and has a stylus-to-pivot length of approximately 8 1/2 inches; the head shell attaches to the arm with a standard four-pin bayonet connector. The tracking-force range is 0 to 3 grams. The entire turntable is acoustically isolated from external vibration by four resilient "feet." The LAB-250 comes complete with a factory-mounted magnetic cartridge. Dimensions are 16⅛ x 6 5/8 x 14 inches, and the base is finished in walnut-grain vinyl. Price: $129.95. Circle 134 on reader service card

NOTICE: All product descriptions and specifications quoted in these columns are based on materials supplied by the manufacturer. 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.
Yamaha goes its separates way.
With unprecedented performance, features and price.

**C-4**
Our new C-4 stereo preamp has the most advanced circuitry imaginable to give you sound so real and true, you'll swear it's live. Distortion in the phono preamp section has been reduced to a miniscule 0.0035% at 2V output. Signal-to-noise ratio has been tamed to the virtually inaudible level of 97dB at 10mV. A special Current Noise Reduction Circuit maintains this high S/N ratio regardless of varying impedances caused by using different cartridges. But you really have to hear the sound of the C-4 to believe such pure musical tonality could pass through a piece of electronics.

The C-4's features put you in total command of its superb sound. Unheard of tone control is yours with the exclusive, continuously variable turnover frequencies for the bass and treble controls. You can select from five ranges for both capacitance and resistance to load your cartridge for optimum performance. The C-4's built-in head amp provides the boost necessary for you to indulge in the transparently beautiful sound of a moving coil cartridge. Without extra expense or no sale.

And these are just a few of the fabulous features that make the sleekly styled C-4 a super-sophisticated device with possibilities limited only by your imagination.

**M-4**
Our passion for pure tonality reaches toward perfection in the M-4 stereo power amp. To deliver the cleanest, most musical sound possible, we built it with DC circuitry in a dual mono amp configuration. The dual mono amp configuration results in dramatically reduced cross-talk for dramatically enhanced listening pleasure.

The M-4's specs are nothing short of spectacular. THD takes a bow at an incredibly low 0.005% at rated output of 120W per channel into 8 ohms, 20Hz, to 20kHz.

Signal-to-noise ratio is, (please hold the applause) an utterly silent 115dB.

Again though, specs can't do the sound of the M-4 justice. This body-styled, superbly functional power amplifier is sol dw in the super state-of-the-art category. That's what both our new separates are all about. Unprecedented performance, features and styling. And the price? Well, you can benefit from what we learned in precedent-setting sound with our legendary cost-no-object B-1 and C-1 separates Without paying the price. Audition our new rack-mountable super separates, the C-4 and M-4 for yourself. It's an ear-opening experience you won't want to miss. For the name of your Yamaha Audio Specialty Dealer, check your Yellow Pages or write us.

From Yamaha, naturally
Audio/Video News

By John Kois

Author Kois about to place a videodisc on the turntable of the Magnavision player. The large center hole in the disc makes for convenient handling.

MAGNAVISON: HOW WELL DOES IT WORK?

First-kid-on-the-block status used to come easily. Two cereal-box tops and a quarter mailed widely to Dante Creek, Michigan, did the trick. No more. To become the first among my peers to own a videodisc player meant negotiating a logistical labyrinth worthy of the Italian postal system.

The Magnavision videodisc player (Model 8000) went on sale in Atlanta, Georgia, on Friday, December 15. Moments after Rich's Department Store's doors opened, the item was officially out-of-stock. As a media event, success was immediate, with coverage ranging from wire-service reports to a spot on that day's Today Show (although Betty Furness has yet to tell us which parts of the videodisc was immediate, with coverage ranging from wire-service reports to a spot on that day's Today Show (although Betty Furness has yet to tell us which parts of the videodisc player are unsafe if swallowed).

From the commercial point of view, the event was something less than capitalism at its most efficient. The consumer has been teased with promises of videodisc players since 1970. This particular unit was first promised in the fall of 1976. When Magnavox finally put the first units on sale last December, only fifty were available, all of them in Atlanta. Nationwide distribution is not scheduled to begin until late this year or early in 1980.

Word had leaked out late in November of Magnavision's imminent sale in Atlanta, but no one seemed to know where in Atlanta, or exactly when. Magnavox would only say "No comment," since they had a New York City press conference scheduled for December 15 (presumably the day the units would go on sale) and didn't want to spoil the surprise. Calls placed to video-hardware buyers in Atlanta's leading department stores were also fruitless, though we did learn that jobs would be endangered if the information were divulged. Days of additional sleuthing led us finally to Rich's on Atlanta's Peachtree Road. The morning of the sale, our man in Atlanta arrived on the scene at 4 a.m., six hours before Rich's opening.

He was tenth in line. A store employee gave him a number to protect his position. While waiting, he was offered up to $500 cash for his place in line; people had flown in from all over the country for a chance at the videodisc player. Unfortunately, for many of them, Rich's turned out to have only twenty-three of the fifty units supposed to be offered. They had started with more, but some staff people apparently snapped up half of them before the machines went on sale to the public.

At 10 a.m. the doors parted. Our man found his way to Rich's video department, picked out and paid for a Magnavision player plus a fistful of prerecorded discs, and—to prevent parking-lot mayhem and the attendant bad publicity—was escorted to his car.

Even set up in an office that boasts about $20,000 worth of audio equipment, a Panasonic large-screen projection TV, half a dozen videodisc decks, and a considerable assortment of technical brio-a-brac, the Magnavision videodisc player easily became the center of attention. Its sleek look and versatility in operation elicited enough "oohs" and "aahs" to make the entire Atlanta adventure worthwhile.

In appearance and features, the new Magnavox unit does not seem to differ from the hard-built prototypes demonstrated several years ago. What has changed are the prices: Magnavox players retail for $695, rather more than the $500 tag promised in 1976, and the software has undergone a similar appreciation, from the promised $2 to $10 per disc to the current $5 to $16. Whether prices will go up further or come down in the future depends on competitive pressures (when other manufacturers launch their own videodisc discs—long enough to accommodate most movies—will be available shortly).

The videodisc picture had excellent color, though compared with an original video tape it had a touch more graininess and a tiny bit more video "noise" than we would have liked. Perhaps we expected too much—and possibly the product will get better. In any case, these imperfections did not lessen our viewing pleasure to any significant degree.

Overall, the Magnavision is a remarkably simple unit to operate. Unlike the field with a new technology, as Sony demonstrated when they bet everyone to market with their Beta-format videocassette recorder only to find it eclipsed within a few years by the late-blooming but more popular VHS format.

Our first (and necessarily tentative) impression of the Magnavox videodisc player, however, is that even in this gadget-saturated age it is an impressive piece of equipment that well represents a technology whose full potential is awesome to contemplate.

The 12-inch videodiscs are optically recorded, and playback is accomplished with a low-power red laser beam. Although the Magnavision unit functions somewhat like a record player (which also retrieves information from a recorded disc), the absence of anything like a stylus assembly "tracking" the disc allows for a wide range of unique features. In addition to its normal play mode, the Magnavision unit also allows for normal play in reverse, forward or reverse search (you can scan an entire 30-minute videodisc in either direction in approximately 30 seconds), forward or reverse still viewing (moving in either direction a single frame at a time), and forward or reverse slow-motion play (with a variable-speed dial allowing everything from almost normal speed to motion so slow you can count between frames). All modes except normal play (forward) mute the soundtrack. Switching from function to function is instantaneous, without any annoying picture breakup in the process. An index switch displays a five-digit frame count on the TV screen; this works in all modes and is particularly valuable for finding a particular frame of the recording.

Two audio channels can be played along with the picture, either combined for mono sound through your TV's speaker or in stereo if jacked into an external audio system. The dual channels allow two distinct tracks of audio information to be recorded simultaneously besides ordinary stereo soundtracks, some bilingual discs are already available.

There are approximately 55,000 frames per half-hour side of each videodisc. Since each frame can be viewed separately, the information storage and retrieval possibilities are immense. For instance, with three hundred pages per book as an average, a single two-sided videodisc could hold and play back, page by page, the entire contents of 366 books.

In use, the videodisc spins at 1,800 rpm. Since a hard-edge disc moving that fast could cut like a buzz saw through almost anything it came in contact with, the disc must be locked into the unit before the player will start and the top lip will not open for disc removal until the motor has braked to a stop. Consequently, the unit has no disc changer, and changing discs is a strictly manual operation—a small annoyance when viewing a multidisc program. According to Magnavox, however, two-hour discs—long enough to accommodate most movies—will be available shortly.

The videodisc picture had excellent color, though compared with an original video tape it had a touch more graininess and a tiny bit more video "noise" than we would have liked. Perhaps we expected too much—and possibly the product will get better. In any case, these imperfections did not lessen our viewing pleasure to any significant degree.

Overall, the Magnavision is a remarkably simple unit to operate, even to the point of being goof-proof. It appears to be well built, though it will take hundreds of hours of play—which it will get!—to determine if its beauty is more than skin deep.
Greatest jazz collection ever issued!

GIANTS OF JAZZ

Louis & Bessie, Benny & Bix, the Hawk, the Duke...flawlessly reproduced in original recordings on your choice of 12" LPs, tape cartridges or cassettes.

"You've got to hear it to believe it!
AUDITION LOUIS ARMSTRONG
for 10 days FREE!


Now, TIME-LIFE RECORDS introduces a spectacular recording project: GIANTS OF JAZZ—featuring such legendary artists as Louis Armstrong, Billie Holiday, Coleman Hawkins, Duke Ellington, Bix Beiderbecke, Benny Goodman, Bessie Smith, plus the great instrumentalists and singers in a collection that virtually nobody could duplicate.

Vintage recordings from many labels

Drawing on vintage material from such labels as Vocalion, Blue Bird, Okeh, Brunswick, Gennett, Victor and Columbia, these albums present the greatest original recordings of those legendary performers—including many that are virtually unobtainable, and some that were never issued.

In brilliantly restored monaural sound

Each of these recordings has been reproduced in the original monaural sound...no electronic gimmickry, no rechanneling. Columbia Records engineers have developed an unparalleled system to restore each of the classic tracks you'll enjoy in GIANTS OF JAZZ.

America's most original music

You'll hear the sweetest, saddest, happiest, most original and important music America ever created. And from Duke Ellington's evocative Caravan to Coleman Hawkins' matchless Body and Soul, Bix Beiderbecke's brilliant Riverboat Shuffle to Billie Holiday's sassy Miss Brown to You, you'll hear jazz the way it really sounded during the Golden Age. Your 10-day free audition will prove it. Mail the attached card—no postage necessary. If card is missing, mail the coupon today.

TIME-LIFE RECORDS
Time and Life Building, Chicago, IL 60611

YES! I would like to audition Louis Armstrong, my introduction to GIANTS OF JAZZ. Please send this three-record album to me along with John Chilton's Who's Who of Jazz, and enter my subscription to GIANTS OF JAZZ. If I decide to keep Louis Armstrong, I will pay $19.95 plus shipping and handling, and the book will be mine to keep at no additional cost. I will then receive future albums (each one containing three 12-inch records) from GIANTS OF JAZZ, shipped an album at a time approximately every other month. Each album will cost $19.95 plus shipping and handling and will come on the same 10-day free-audition 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 Louis Armstrong and the accompanying book, I will return the complete package within 10 days, my subscription for future albums will be canceled and I will be under no further obligation.

[boxes for checking options: two tape cassettes and book instead of records, two eight-track cartridges and book instead of records]
THE
TECHNOLOGICA
JAPANESE IMPOR

The ten little imports you see here offer a combined total of utility and technology you're not going to find on other Japanese imports.

**BEST THING FOR ENGINES SINCE HIGH COMPRESSION.**

The Mitsubishi Clean Air engine is a pure engineering jewel. It comes with a special "jet" valve for more efficient fuel combustion.

**ABOVE-AVERAGE ESTIMATES.**

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*EPA estimates. Use this number for comparisons. Your mileage may vary depending on speed, trip length, and weather. California estimates lower for Champ Custom and Colt Custom Hatchback, Colt two- and four-doors, D-50 and Arrow Sport pickups.

**SLICK NEW TWIN-STICK.**

See that little lever at the left? Use it to select either PERFORMANCE or ECONOMY range. Then shift gears with the lever at the right. Kind of like two four-speeds in one. It's exclusive on our new Champ and Colt Hatchback.

**SAY GOOD-BYE TO THE SHAKES.**

Silent Shaft design (an MCA engine exclusive) gives you two counter-rotating shafts to help dampen the vibrations expected of a normal four-cylinder engine.

**A LITTLE SOPHISTICATION NEVER HURTS.**

Our Challenger and Sapporo GTs offer power discs on all four wheels on the optional 2.6 liter Basic Package models.

**SOME UP-FRONT THINKING ON ROOM AND RIDE.**

Champ and Colt Hatchback are front-wheel-driven. The engine is placed transversely to permit more economic use of interior space. The track is wide to help in the corners. And we offer smooth-riding 13-inch wheels.

**BUILT BY MITSUBISHI. SOLD EXCLUSIVELY BY**
MOST
LY ADVANCED
TS YOU CAN BUY.

MAKING 'EM EASIER
TO DRIVE.
This much-desired automatic
speed control option is also
available when you
select our Colt
wagon, Challenger,
or Sapporo with the optional
2.6-liter engine and
automatic transmission.
Standard driving
equipment also
includes such gems as
adjustable steering
column (a rarity among other
imports) and trip odometer.

NO CHARGE FOR HANDLING.
Independent rear suspension on
Champ and Colt Hatchback
is the kind of technology
you find on Mercedes or
BMW. In addition,
MacPherson-type struts
at front are on the
Champ, Colt Hatchback,
Challenger, and Sapporo.

THE COMPLETE SEAT.
Seats on Challenger and
Sapporo are orthopedic
marvels. They offer
lateral and
adjustable lumbar
support, recliner
features, adjustable headrests
built into seat, and walk-in
passenger seat “memory”
adjuster feature.

LITTLE TRUCKS.
BIG DIFFERENCES.
They’re specially designed for
American-size folks and jobs.
With a half-ton payload. If
you’d like more, see the Sport
model with an interior that
looks like tomorrow’s sports
car. And the biggest engine in its
class with its 2.6-liter four.

"...MORE TRICKS THAN
A SWISS ARMY KNIFE."
That’s what Car and Driver
magazine says of our Champ
and Colt Hatchback.
And why not.
They’re full of
engineering
and people fea-
tures like “Twin-
Stick,” front-wheel drive, and
transverse engine.

YOU HAVEN’T SHOPPED
IMPORTS
UNTIL YOU’VE SEEN US.

DODGE & CHRYSLER/PLYMOUTH DEALERS.
CIRCLE NO. 16 ON READER SERVICE CARD
Class Actions

Q. I thought I understood the operation of amplifiers, but now I'm not sure. For example, one of the high-end manufacturers is making a big thing out of his amp's class-AB operation. Don't nearly all of today's amplifiers operate in class AB?

Charles Foster
Boston, Mass.

A. You are correct—most of today's amplifier output stages are biased to operate somewhere between the class-A and class-B modes, and they are therefore categorized class AB. In a nutshell, class A provides inefficient (hence usually lower-power) operation, but with relatively low distortion. Class B provides good efficiency and higher power, but much higher distortion. The manufacturer who makes a big point of advertising his units as being in class AB has unfortunately chosen a misleading term to describe its operation. As I understand his amplifier, it operates in the class-A mode for low-power signals and converts to class AB for signals requiring high power, thus realizing the theoretical advantages of both modes. It seems to me that the most exact description for the unit would be “class A/AB”—but perhaps such an approach is too complicated to appeal to the talented but usually resolutely nontechnical people who write ads.

Resonant Disc Noises

Q. Record “surface noise” is such a vague term. How can I distinguish between the continuous tracing noises produced when the stylus moves along the record grooves from noises caused by dirt and pressing imperfections? Even with excellent equipment I still hear a kind of resonant dragging or scraping sound that is exacerbated (and modulated) by disc warps. I have been unable to find a discussion of this type of noise. Can you tell me where it comes from?

Norman Goldstein
Oakland, Calif.

A. Record noise can be divided into two categories: there are the Rice-Crispy noises—snap, crackle, and pop—and (to use a more technical description) the broad-spectrum noise heard as a rushing, a hiss, or a swish. The pops and clicks result from dirt, scratches, bubbles in the vinyl, electrostatic discharges, and other causes. The broad-spectrum noise can originate from a noisy master tape or problems during the cutting, mastering, and/or pressing of the disc. Worn records can produce both types of noise.

Oddly enough, Mr. Goldstein's record-noise complaint falls into neither of the above categories. It seems likely that the noise is caused rather by intermittent contact between the body of his phono cartridge and the record surface. I must assume that his record-player installation does not permit edge-on viewing of the record while it is being played; otherwise he would have discovered the source of the problem himself.

In pursuit of a cure, Mr. Goldstein should first check the tracking force of his tone arm to make sure it is not higher than recommended for the cartridge being used. Too high a force will push the stylus back into the cartridge body. An external stylus-force gauge—rather than the one built into the tone arm or turntable—should be used since the internal gauge may have gone off calibration.

Assuming that the stylus force is within the correct range, the next suspect is the stylus assembly itself. Stylus suspensions are subject to fatigue, which reduces their ability to support the cartridge body at the proper distance above the record surface even when the proper tracking force is used. Replacement is the answer here, and I believe that most cartridge companies will supply one at no charge if the cartridge is not too far outside its warranty period.

If the problem persists, the next possibility to investigate is the way the phono cartridge is mounted in the tone-arm head shell and the way the arm is mounted on the record player (assuming it is adjustable). Phono-cartridge manufacturers usually provide a “reference surface” on the top or bottom of their products to serve as a guide to proper installation. When the cartridge is on the record in playing position, this reference surface should be exactly parallel to the disc surface. If there is any slight deviation from parallelism, it should be in the direction of having the cartridge's rear end (where the pins are) higher than its front. Some cartridges come boxed with shims to help achieve that condition.

Last, and least likely, there is the possibil-
Great car stereo sound used to be an all-or-nothing affair. Either you blew a bundle, or you settled for second best.

Now meet the Sanyo Expandables. Car components engineered to let you work your way up from "superb" to "outrageous." In steps that your budget can handle.

*Step 1: "Superb."
Start off your system with one of Sanyo's new AUDIO/SPEC car stereos and a pair of Sanyo speakers. You'll get great specs, great sound, and the superior engineering of the world's largest tape equipment manufacturer.

Some models give you Dolby noise reduction, Sendust Alloy heads (for all tapes including metal particle), and electronic tuning with digital readout of frequency, time, and date. You can also get super-low distortion preamp level outputs—highly recommended for Step 2.

**Step 2: "Awesome."
Whenever you're ready to really feel the music, get hold of an AUDIO/SPEC high fidelity power amplifier. We've got four models, with 25 to 60 watts RMS per channel into 4 ohms. All rated per FTC home hi-fi specs, with full 20-20,000Hz power bandwidth and no more than 0.05% total harmonic distortion! Some have a unique motor-driven fader for balancing front and rear speakers.

The amplifiers accept preamp level or high level (speaker) inputs, so they'll work with just about any radio/tape unit. Awesome!

***Step 3: "Outrageous."
If nothing less than the ultimate will do, plug in a Sanyo AUDIO/SPEC graphic equalizer between your radio/tape player and the power amp. With 7 bands of precise control, you can customize the sound to fit your taste and your car's acoustics. In seconds, you can actually "re-engineer" any recording to bring out any vocal or instrumental range. Hear it, and you'll be hooked!

The Sanyo Expandables are at better auto sound dealers now. Check out the features and the phenomenal sound, and start planning your Expandable system.

Then watch it grow on you.

The Sanyo Expandables: great sound that grows on you.
The Watts Parastat

In 15 seconds your records are clean, dry, and ready to play.

With some systems you pour liquid on your records (and rub it into the grooves), while with others you brush the dirt around (and rub it into the grooves). The Watts Parastat is neither of these.

By placing a plush velvety pad on either side of a soft nylon brush and adding a drop or two of Parastat® fluid, a remarkably efficient system is created.

The brush bristles lift the rubber to the surface. The pads collect and remove it. And the Parastat® fluid supplies just the right degree of humidity to relax dust collecting static without leaving any kind of film or deposit behind.

No other system does so much for your records in so little time.

So when you want the best, ask for the original. The Parastat, by Cecil Watts.

Cecil E. Watts, Inc.

Watts products are distributed exclusively in the U.S. by: Empire Scientific Corp., Garden City, NY 11530

Audio Q. and A. . . .

ity that the cartridge is "microphonic," meaning that its internal elements are loose enough that vibration or shock will cause them to shift position and generate noise.

Speaking of microphonics, some attention has recently been focused on the "problem" of record and platter vibration as a source of distortion. The record's part of the problem comes about because of today's very skinny discs and the way they are supported on some record mats. Obviously, a very lightweight disc placed on a turntable mat that supports it by only its outer rim becomes a diaphragm that will pick up sound vibration. And a phono-cartridge stylus resting on that record will respond to that spurious vibration as though it were musical material in the grooves. You can check out the sensitivity of your record-player setup to this problem by putting a typically thin disc on your turntable and, without the platter revolving, positioning the stylus about 3 inches into the grooved area of the disc. Switch to phono and, while wearing a pair of sealing-type headphones (if they are available), slowly turn up the volume while some friends are making noise or while loudly playing a portable radio close to the record. If little or nothing is heard through the phones then you're not likely to have a problem. Otherwise, you had best replace (or cover) the turntable mat with one that provides more support and/or mechanical damping of the disc. Most inexpensive foam mats will do the job nicely.

Authorized Performances

Q. Most of the records and prerecorded tapes I own have a statement somewhere on the liner that says something to the effect of: "Unauthorized copying, public performance, or broadcast of this recording is prohibited." Do radio stations have to get authorization each time a record is broadcast? A. Radio and television stations, concert halls, and, in fact, all places where music is performed or broadcast are licensed by the organizations that collect and disburse the royalties owed to composers and publishers. The three organizations—ASCAP, BMI, and SESAC—base the licensing fees they charge on rather complex formulas. For example, discos and night clubs are supposed to pay fees based on the size of the establishment, the number of nights they are open, the hours during which music is played, and even the cost of drinks. Radio-station fees are arrived at more simply: they are based on a percentage of the station's gross advertising income. On the other hand, a performance in a concert hall is liable for a fee of roughly a penny per seat. The television networks, by virtue of setting individual arrangements with the licensing organizations, paying a flat—and substantial—fee.

After the operating expenses of the licensing organization are deducted, the money derived from these fees is distributed—half to the composers and half to the publishers. The specific apportioning of the money that comes in from radio stations and clubs is determined by the results of extensive surveys of who has played what, and how many times, made by the licensing organizations. If the whole system sounds terribly complex, that's because it is. Even professionals are sometimes baffled by some aspects of the procedure.

Note that the licensing arrangements described here apply only to composers and publishers. Performers and accompanists have their own equally complicated rules and deals made in conjunction with a whole different set of collecting and auditing agencies. The object of all this is, of course, to get at least some of the money that the public pays for musical entertainment back to those who originate it.

The Expert's Expert

Q. I've been reading and learning from "Audio Q. and A." for years, and I finally have something I'd like an answer to. Who do you go to when you have a question? A. I hope not too many readers mistakenly believe me to be a sort of walking hi-fi memory bank possessing complete information on audio matters, large and small. The know-how I do have is the result of having been involved in audio since the early Fifties and having done everything from showroom selling to servicing and design work. But today the audio field has become so complex and specialized—and at the same time so broad—that no one can be expected to know everything about all the available components and technologies. I'm not at all surprised, therefore, when the chief engineer of a major phono-cartridge company asks me to recommend loudspeakers for their cartridge-audi- tioning setup, or when a speaker manufacturer wants suggestions for a top-quality turntable and cartridge.

The major advantage that I (and those in a similar position) have over the average audiophile—aside from three decades of experience in the field—is my easy access to the real experts in each of the audio areas. By "real experts" I mean those engineers who are involved in the day-to-day struggle to design and produce the products that you find on dealers' shelves. When there's a question from a reader for which I have no ready answer—or when I'm not absolutely sure the response that comes to mind is correct—I'll get an answer (or a confirmation of mine) from one or more of my available experts. (If the answer originates with them, I usually give credit; if they simply confirm my own view, I don't.)

A bit of personal philosophy bearing on the business of "having answers" is very much to the point here. A major part of wisdom, it seems to me, is knowing exactly when you know and when you don't know. And at the point that your knowledge falters, your mouth or typewriter should stop—and your research start. Those few individuals who for reasons of ego or avarice regularly propagate in print their ignorance (or views based on their ignorance) do a terrible disservice both to the hi-fi industry and to the audiophiles they purport to advise. In any case, the moral is that you don't have to know everything in order to avoid mistakes; you only need to know exactly what you don't know.
Many amps can deliver pure sound. The Sansui AU-919 delivers pure music.

Today's audio engineering has reached the point where you can select among a number of affordable high-power amplifiers that have virtually no "total harmonic distortion." That's good. But THD measurements only indicate an amplifier's response to a pure, continuously repeating, steady-state test signal (below, left). They don't tell you how the amp responds to the never-repeating, rapidly-changing transient waveforms of real music (below, right). And only an amplifier designed to reproduce the demanding dynamics of music signals can satisfy the critical audiophile. An amp like the Sansui AU-919.

SINE WAVE               DYNAMIC MUSIC SIGNALS

Because low THD without low TIM is like sound without music, the Sansui AU-919 is designed to respond well to both simple sine-wave test signals and also to handle the jagged, pulsive edges required for realistic reproduction of music—without imparting that harsh, metallic quality known as "transient intermodulation distortion" (TIM).

The Sansui AU-919 sounds better than conventional amps because Sansui developed a unique (patent pending) circuit that is capable of achieving both low THD and low TIM simultaneously.

Our DD/DC (Diamond Differential/DC)* circuitry provides the extremely high drive current necessary to use proper amounts of negative feedback to reduce conventionally-measured THD (no more than 0.008%, 5Hz-20,000Hz into 8 ohms at 100 watts, min. RMS) without compromising our extraordinary 200V/μSec slew rate, ensuring vanishingly-low TIM, as well. The power amplifier frequency response extends from zero Hz to 500,000Hz.

Since ultimate tonal quality depends on more than the power amplifier alone, Sansui also uses its DD/DC* circuitry in the phono equalizer section—where current demands are also particularly high—to prevent TIM. ICL (input capacitorless) FET circuits are used throughout the AU-919, and a "jump switch" is provided that will let you run pure DC from the Aux. input to the output.

Visit your authorized Sansui dealer today, and he'll show you a lot more that the AU-919 has to offer. Like twin-detector protection circuitry and our Penta-Power Supply system. Two-deck monitoring/recording/dubbing facilities. And a high-performance ICL/FET pre-preamp for moving-coil cartridges.

Then listen to the AU-919 with the most demanding music you can find. You'll hear the way the music should sound. Like music. Not just like sound.

*Diamond Differential/DC, Sansui's patent pending totally symmetrical double-ended circuitry with eight transistors, is named for its Diamond-shaped schematic representation.

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Sparkomatic car stereo has taken its directions directly from you, the travelin' man. The result is a redefinition of sound and style for the auto audiophile. A new generation of car stereo loaded with high-performance high fidelity features. And engineered with such extraordinarily efficient reception and sound reproduction capabilities that comparison to high price home components would not be exaggerated.

Sparkomatic's ears of experience have produced perfection in high performance high fidelity. So if you're a travelin' man looking for the ultimate in sound, visit a Sparkomatic dealer to see and hear our full line of 20 styles from basic models to state-of-the-art High Power digital units.
SS 100. If you're a travelin' man who gets down to basics by going under-dash with your car sound, Sparkomatic's continuous play 8-track car stereo installs compactly and easily. Accurate slide controls for volume, tone and balance, program selector and program indicator lights are featured. (An under-dash cassette SS 200, is also available.) The sound of these Sparkomatic under-dash units is outstanding—and that's an understatement.

SR 301. To the travelin' man who says car stereo should look and sound sensational, we say Sparkomatic SR 301 cassette AM/FM stereo (or SR 201 8-track model). They're unmatched in eye and ear appeal even by much higher priced car stereos. And features abound, like balance and fader controls, FM muting, rotary controls for volume, tone and tuning, automatic key-off and push-button eject, locking fast forward and rewind and 10 watts of power. If you're into pure listening pleasure, Sparkomatic talks your language.

SR 330. Any travelin' man with a passion for performance and a lust for good looks will respond to Sparkomatic's auto reverse cassette AM/FM stereo SR 330 (or SR 210 8-track AM/FM stereo). This is all out car stereo sound that sits proudly in your dash like a high performance music machine should. Expect no less than feather touch electronic controls, separate bass, treble, balance and fader adjustability and an array of cassette handling features. Under the skin there's the guts of 12 watts of power. Whatever you like to hear, Sparkomatic's got your number here.

SR 2400. For the travelin' man in touch with the times, High Power car high fidelity should make your adrenalin flow. Sparkomatic's SR 2400 model digital 8-track AM/FM stereo with a precise digital clock is supercharged sound. (Other High Power models also available). A full 45 watts of clear audio power over an incredibly wide dynamic range qualifies these stereo machines as the optimum in auto audio. Highly advanced high fidelity features include feather touch electronic controls for all major functions and sophisticated tape handling capabilities. When you want to turn up the power, Sparkomatic is the name to turn to.

For our free catalogs on Car Stereo and Car High Fidelity Speakers, write: "For The Travelin' Man", Dept. SR, Sparkomatic Corporation, Milford, PA 18337.
I have never seen a formal definition of audio-signal processing, and it is unlikely that the description I am about to offer will meet with universal approval. Nonetheless: the term "signal processing" covers just about anything you might possibly do to an audio signal (when it is in electrical form) short of turning it off (there are, of course, whole families of signal processors that do just that, but for periods so brief that the interruptions are imperceptible). Included among the possibilities are altering the signal's frequency balance and response with tone controls or filters, shifting its phase in various ways, turning selected parts of it up or down in level, and, in the professional sphere of activities, modulating it with an imposed time base, with other signals, or even with itself.

In home audio systems, tone controls and filters are the most familiar signal processors, and they are generally the simplest. As a rule, the treble control boosts or cuts the high frequencies to the user's taste and the bass control does the same for the low frequencies. But beyond that there are important differences. Some tone controls act only at the extremities of the audio-frequency range (usually at 1,000 Hz), whereas others are fixed-frequency controls (for example, low lows, mid lows, the mid-range itself, mid highs, and high highs in the case of a conventional equalizer). Each band will have its own control—usually a slide potentiometer—that can be used to elevate or depress (in level) the group of frequencies assigned to it. In a five-band equalizer, each control affects a range of frequencies about two octaves wide. There are also ten-band equalizers (one octave per control) and some which cut the audio range into even thinner slices. But with these last we're beginning to get into the area of professional studio equipment.

With an equalizer's intrinsic flexibility it is possible to make quite complex alterations in a system's frequency response, creating a response curve with a multitude of peaks, dips, and other contours. Certainly there are many recordings that will profit from some frequency adjustments, but when a disc must have it in order to sound acceptable, it might be better to discard it. For many users, an equalizer serves best for "equalizing out" frequency-response irregularities in the speaker systems and/or the listening room. This is not to say that an equalizer can make a bad speaker or room sound like a good one. But it can help in touching up small faults in an otherwise acceptable system and listening environment. Adjusting an equalizer to do this requires experience and experimentation. For various reasons, some rooms seem to resist the ministrations of an equalizer altogether; any attempt to "fix" one problem creates or uncovers another that is at least as objectionable. Thus, there are really no hard-and-fast procedures you can resort to in making adjustments. (Professional sound men equipped with suitable instruments can usually manage systematic equalizer adjustments, but these presuppose acoustic conditions rarely met with in the typical home.)

The parametric equalizer is now becoming readily available, and it expands the flexibility of the equalization concept considerably. A very simple parametric unit would have three controls. One would determine the height or the depth of the hump or depression introduced into the frequency-response curve. Another would determine just how sharp or broad the hump or depression is to be. And the third would move the hump/depression up and down in frequency so that it could be positioned precisely where wanted. (Conventional multiband equalizers give you very little command over the function of the second control, and as for locating the precise frequency at which the adjustment takes place, you've simply got to hope that one of the multibands' fixed-frequency controls corresponds to it.)

Most of today's parametrics are somewhat more elaborate than the example cited above, giving you multiple sets of these three-control "blocks" so that you can make multiple adjustments as required.

Signal Processing—1
MENTHO: 8 mg. "tar", 0.6 mg. nicotine, FILTER: 9 mg. "tar" 0.7 mg. nicotine, avg. per cigarette. FTC Report MAY '78.


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Original manuscript sketch for the first movement of Gustav Mahler’s Fourth Symphony, Courtesy of The Newberry Library, Chicago.
MICROPHONE SELECTION—2

In the February issue I discussed the microphone types (dynamic, electret, condenser) and directional patterns (omnidirectional, cardiod, and figure-eight) you must choose among when selecting mikes suitable for your individual recording requirements. This month I'll take up three microphone characteristics that relate to the electrical interface between the mike and your tape deck or mixer. These are impedance, balanced vs. unbalanced cable connections, and sensitivity.

All microphone cables have some electrical capacitance, and the longer the cable, the greater the capacitance. Cable capacitance tends to cause treble losses; the higher the frequency, the greater the loss. The frequency at which a given cable capacitance will begin to introduce significant loss is determined by the impedance of the microphone it's connected to. The lower the microphone impedance, the longer a cable you can use between the microphone and mixer or recorder input before appreciable treble losses occur. Thus, while with low-impedance (Lo-Z) mikes rated in the 50- to 250-ohm range you can use cable runs of up to about 200 feet safely, with a high-impedance (Hi-Z) mike rated at 1,000 ohms, a cable run over 15 feet long will produce some high-end response loss.

Typical medium-impedance mikes, in the 500- to 1,000-ohm range, should be okay with cable runs of up to about 35 feet. Just as professionals invariably choose low-impedance microphones, they also invariably select "balanced-line" instead of "unbalanced" operation. The difference is that in a balanced cable there are two signal conductors plus the outer braided shield, whereas an unbalanced cable (like the ordinary shielded cables used with home hi-fi components) has a single inner conductor for one of the two signal leads and uses the outer braided shield itself for shielding against hum and as the other signal conductor. Balanced lines are essentially immune to pickup of a.c. hum from power lines, motors, lighting arrangements, etc., but, with long runs of unbalanced line, hum and buzz can be a problem. Balanced microphone cables are generally terminated either in a three-pin "Cannon-type" plug (pin number 1 is shield, 2 is "signal hot," and 3 is "signal cold") or in a 1/4-inch "stereo" phone plug (the tip is "signal hot," the ring is "signal cold," and the sleeve is for the shield). Unbalanced microphone cables usually use a regular 1/4-inch phone plug, with the center conductor connected to the tip and the shield to the sleeve. Professional microphones are usually supplied without plugs, but they do come with instructions for proper wiring.

Fortunately, many of the higher-price recorders and mixers whose inputs are designed for unbalanced cables with 1/4-inch phone plugs will accept a 1/4-inch stereo plug (balanced-line) mike feed and will automatically ground the "ring" part of the plug along with the sleeve. You then have the true balanced-line configuration and its noise-reducing advantages, but this does permit you to choose a microphone designed for balanced-line operation (high-quality mikes usually are) and plug it in—if your recorder's input impedance is correct for it. If, on the other hand, you want to use Lo-Z balanced-line microphones with a recorder or mixer having a Hi-Z unbalanced input, you must buy an accessory microphone "matching" transformer (generally about $20), which is connected at the deck end of the cable, not at the microphone end. (One reason professional-quality mixers cost so much more than typical audiophile models is that the former invariably include these costly microphone input transformers.)

Finally, we come to the question of picking a microphone whose output level is compatible with the input sensitivity of your recorder. Even a brief look at parts-house catalogs or manufacturers' specification sheets will disclose a bewildering array of negative numbers—all the way from about −35 dB to about −145 dB—for microphone sensitivity (signal output for a given acoustic input, that is), which is sometimes expressed with reference to microbars, sometimes in terms of dynes per square centimeter, and other times in terms of pascals. (While few of us who use microphones have degrees in math or physics, most of those who write microphone specs seem to delight in showing that they do.)

Since your aim is to use your microphones with your recorder rather than demonstrate your prowess with a scientific calculator, do insist, before buying, that you be allowed to return a mike whose output proves incompatible with your recorder. (Note: The overloading of a microphone's input will usually damage it permanently.) A kind of rough and ready check, which can be performed either at home or in a dealer's showroom, that will give you a fair idea of output-level suitability:

1. Set up the microphone in front of a loudspeaker, just as if the latter were an instrument you intended to record. Plug the microphone into your tape deck, making sure that your amplifier's tape switch is in source position so you won't create an unholy howling.

2. Play a piece of music from FM or disc through the speaker at a very loud level—a level that you judge is as loud as the microphone would pick up at a live performance.

3. Slowly increase the recording level to the point where your meter is running into the red area and note the setting of the recording-level control. (If your deck has both a master recording-level control and a mike-level control, set the master control at the level you would normally use for dubbing from FM or discs, then use the mike-level control.)

4. If you find that you've barely turned up the level control for example, less than one quarter of its available rotation, or a ten o'clock position), the microphone you're testing probably has too much output for your recorder and may overload its input stage even before the signal gets to the level control.

5. On the other hand, if you've had to advance the record control very much over its half-way rotation (beyond two o'clock, for example), the mike probably has too little output for your deck. You can double-check this by turning the music off and, wearing headphones, gradually turning up the mike-level control in a quiet room until you find the point where the hiss level suddenly begins to rise rapidly. (This is in addition to the normal room noise the mike is picking up.) From that point upward on the control you're going to have trouble making live recordings with your deck. The output of a microphone when picking up live music levels should drive your meters into the red before you reach this point. As this test suggests, the position of the mike-level control that indicates good mike-to-tape-recorder compatibility should optimally fall somewhere between eleven o'clock and two o'clock.
Installation of the Month

By Gary Stock

In the tradition of the great estate homes of England’s country counties, Israel Hill of Rochester, New York, has built a “music room” devoted totally to the recording and reproduction of music. The room contains a Baldwin Hamilton Studio piano, a Hammond B2 electronic organ, and the fully equipped studio-style music system shown above.

Mr. Hill and his wife Doris designed the cabinetry that houses the system primarily to facilitate home recording activities. Constructed of 5/8-inch high-density particle board covered in a high-pressure woodgrain laminate, the cabinet is in three sections bolted together, the facing on the upper sections swinging open to give access to the components. The apertures for the components are all of the same size; velvet cut to size is used to fill the spaces between the components and the aperture edges, thus giving a smooth appearance to the console front. The entire cabinet is placed 14 inches away from the back wall to permit temporary changes in signal-path connections for special recording or playback applications.

The Hills’ equipment includes (top row, left to right) a Soundcraftsmen RP2201-R graphic equalizer, a Phase Linear 5000 Series II tuner, and a dbx 124 noise-reduction system plus (center row, left to right) a Phase Linear 400 Series II power amplifier, a 4000 Series II preamplifier, and a 6000 Series II analog delay system. These components serve, along with the Altec Model 15 loudspeakers used for monitoring purposes, as the playback components for the system.

For recording and dubbing purposes, the system uses (bottom row, left to right) an Akai CR-83D eight-track cartridge deck, an Akai GXC-710D cassette deck, and (left to right on the desktop surface of the console) a Teac Model 2 stereo mixer with a Teac MB-20 meter bridge, a Teac 3340S four-channel open-reel recorder (capable of sel-sync overdubbing), and a Teac A3300SX-2T two-channel open-reel mastering recorder. A Pioneer PL-570 turntable equipped with a Stanton 881S cartridge (shown at far right) is used for disc playback.

Many of the features of this system are indicative of an increasing level of sophistication in home recording setups. Noise-reduction and signal-processing outboards (such as the dbx unit, analog delay system, and graphic equalizer found in the Hills’ system) are in virtually universal use in pro studios. Significantly, the use of a recording “chain” in which multiple tracks are recorded, mixed into two-channel form, and then dubbed onto a two-channel mastering recorder (as is done in this system with the two Teac recorders and Teac mixer) is a technique, developed in professional studios, that has only recently been brought into the home.

The Hills’ studio is an excellent example of what has come to be known as a “semi-pro” recording system: it lacks some of the extremely exotic features and equipment of a full-blown studio, yet it has capabilities well beyond those of a conventional music system—including, we would suspect, the ability to produce master tapes that would do many a professional recording engineer proud.

Ancillary components in the Hills’ system include Koss headphones, microphones and stands from Audio-Technica, Electro-Voice, and Realistic, tape demagnetizing and cleaning tools, and a sound-pressure-level meter.
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F rom time to time I am reminded that some readers do not understand what is meant by the term "reference" when it is applied to a component or a test condition. For example, in the past I have been taken to task by those who did not understand our test procedure because the "reference" speaker we used for many years in our (now discontinued) simulated "live-vs.-recorded" listening tests was "merely" a modified AR-5. More recently, I mentioned that we are currently using a Design Acoustics D-12 as one of our calibrated references for acoustic measurements, and it wouldn't surprise me if some people complain that it too is not worthy of that "status," either because of its age, quality, or lack of phase coherence.

But a reference is merely something with which other things can be compared—nothing more, nothing less. It most emphatically is not, per se, something whose performance or other characteristics are the "best" or "state of the art." If that were so, no hi-fi reference could enjoy its status for long, since new and improved products (in terms of measurements, if not sound) come along constantly.

For example, in a regulated power supply, the reference voltage that ultimately determines the very stable output voltage of the supply is usually the drop across a special diode through which a constant current is passed. The actual voltage across the diode is relatively unimportant, and one need know it only approximately when designing the supply. What is important is that it remain constant over time and under all expected operating conditions.

A reference can not only be a performance characteristic, it need not even be a good one, nor even one that we could not compare with some reference. We have found that our 2m calibration using our hand-trimmed and modified AR-LST has worked very well with all of the speakers we have had occasion to measure in our current test room since it was built two and a half years ago. Our use of the calibrated Design Acoustics D-12 in our tests of the D-12A reported on in the last issue was inspired by curiosity. Since we already had the D-12 on hand, we wanted to see how it compared with the new speaker, and we also took the opportunity to recheck our previous room calibration (with the AR-LST) against the calibration provided by the omnidirectional D-12. As we said last month, the results using both references were gratifyingly close, and this cross check of our two references seems to us to confirm the validity of our speaker test method.

To sum up: it is important that the significance of a reference in any measurement be understood. No voltmeter, signal generator, or scale would have any value if its readings could not be compared with some reference. Furthermore, repeated tests over the years have shown that they have not significantly changed their characteristics with time. Knowing the actual response curves of these speakers, we measure them in our test room. Naturally, their measured response there is different (with both systems it slopes downward above about 2,000 Hz) because of absorption by the room surfaces and furnishings. We have drawn curves of the differences between the "absolute" calibrated response curves of these speakers (as measured for us by the independent laboratory) and the curves produced in our test room. We then use these "difference" curves to "correct" the response measurements made on other speakers tested in the same room. By this procedure we obtain something quite close to the actual, room-independent total power-output responses of the speakers we are evaluating for test reports.

We have found that our 2m calibration using our hand-trimmed and modified AR-LST has worked very well with all of the speakers we have had occasion to measure in our current test room since it was built two and a half years ago. Our use of the calibrated Design Acoustics D-12 in our tests of the D-12A reported on in the last issue was inspired by curiosity. Since we already had the D-12 on hand, we wanted to see how it compared with the new speaker, and we also took the opportunity to recheck our previous room calibration (with the AR-LST) against the calibration provided by the omnidirectional D-12. As we said last month, the results using both references were gratifyingly close, and this cross check of our two references seems to us to confirm the validity of our speaker test method.

To sum up: it is important that the significance of a reference in any measurement be understood. No voltmeter, signal generator, or scale would have any value if its readings could not be compared with some reference quantity or standard. All that "reference" means is a characteristic that is known and remains constant over time. Nothing else. I am, therefore, sometimes amused at the misuse of
Equipment Test Reports
By Hirsch-Houck Laboratories

HARMAN KARDON’s hk670 is a medium-power AM/FM stereo receiver with direct-coupled amplifiers. It is rated to deliver 60 watts per channel to 8-ohm loads between 20 and 20,000 Hz with no more than 0.06 per cent total harmonic distortion (THD). The distortion at 1,000 Hz and 60 watts is rated at only 0.03 per cent.

The hk670 has been designed according to the wide-band approach espoused by Harman Kardon for many years (long before it became fashionable). It has a rated rise time of 2.5 microseconds and a slew rate of 65 volts per microsecond. The FM-tuner section boasts some equally impressive specifications, including distortion of 0.05 per cent in mono and 0.08 per cent in stereo.

The hk670 has a distinctive appearance, with a large dial area spanning the entire upper part of the front panel. The AM and FM dial scales are brightly lit in yellow-white when the receiver is on (in contrast to the greens, blues, and even reds used on most tuners and receivers). At the top of the red dial pointer is a small green light that glows when an FM station is tuned in. The receiver’s single tuning meter is a triple-function indicator that Harman Kardon calls an “SMQ” (strength, multipath, quieting) meter. Although it reads up-scale like an ordinary signal-strength meter, it also responds to the noise in the received signal. This feature has been included on some previous receivers from this company, and it is claimed to facilitate more accurate tuning than conventional meter systems. Multipath distortion is indicated by a fluctuation of the pointer during program modulation.

Below the dial is a row of eight rectangular pushbuttons with small lights in their centers to indicate when they are engaged. Two of these switch between the two pairs of speaker outputs and another two control the SUBSONIC and HIGH CUT filters. The rest are used to bypass the tone-control circuits, parallel the two channels for mono operation, switch on the FM muting, and convert the 75-microsecond de-emphasis to the 25-microsecond de-emphasis required when using an external Dolby adapter. At the right of the panel, another, similar pushbutton controls the LOUDNESS compensation circuit.

The other controls are across the bottom of the panel. A small pushbutton power switch at the far left has two red pilot lights above it and a stereo-headphone jack below it. The bass, treble, and balance control knobs have small protruding arrows that clearly show where they are set (each is detented at its center). A pair of three-position lever switches controls the tape-recording functions. The TAPE COPY switch interconnects two decks for dubbing from either machine to the other. The TAPE MONITOR switch connects the amplifier to the selected source program or to the playback outputs of either tape deck. A ROTARY FUNCTION switch selects the program source: PHONO, STEREO FM (which is an automatic stereo/mono mode), FM (mono only), AM, or AUX. At the far right of the panel is a large VOLUME knob; above it in the dial area is a similar-SIZE TUNING knob.

The speaker connectors in the rear of the receiver are insulated spring clips. Also in the rear are terminals for a 300-ohm FM antenna and a wire AM antenna, a hinged ferrite-rod AM antenna, and a small control shaft for adjusting the FM interstation-noise muting threshold. One of the two a.c. convenience outlets is switched. There is no provision for electrically separating the power amplifier from the rest of the receiver. In its standard metal case, the hk670 measures 18½ inches wide, 6½ inches high, and 14 inches deep, and it weighs 26 pounds. Price: $569. An optional walnut case is $50 extra, and walnut end caps for the metal case are $12 a pair.

Laboratory Measurements. The hk670 became only slightly warm during the FTC-mandated one-hour preconditioning period. The receiver’s outputs clipped at 74.4 watts per channel into 8 ohms (IHF clipping headroom = 0.94 dB). The output into 4 and 16 ohms at clipping was 112.4 and 43 watts, respectively. The IHF dynamic headroom was 1.05 dB, corresponding to a short-term output of 76.5 watts into 8 ohms. The closeness of the clipping- and dynamic-headroom ratings indicates the use of well regulated power supplies in the hk670.

The harmonic distortion of the hk670 at 1,000 Hz was extraordinarily low at most usable power levels. From less than 0.002 per cent at 0.1 watt, it increased smoothly to 0.003 per cent at 1 watt, 0.01 per cent at 20 watts, and 0.028 per cent at the rated 60 watts. The intermodulation distortion was about 0.028 per cent at power outputs from 1 to 10 watts. It increased at lower and higher outputs, to 0.08 per cent at 0.1 watt and 0.095 per cent at 60 watts.

At rated power, harmonic distortion was under 0.03 per cent through the mid frequencies, rising to 0.04 per cent at 20 Hz and 0.05 per cent at 20,000 Hz. At reduced power, the distortion was consistently lower than at full power, with typical readings between 0.006 and 0.01 per cent over the entire audio band at normal listening levels.

The IHF reference power output of 1 watt was obtained with an input of 50 millivolts (AUX) and 0.85 millivolt (PHONO). The respective A-weighted noise levels, referred to 1 watt, were −80.7 and −77 dB. The phono preamplifier overloaded at a good 240 millivolts at 1,000 Hz; the overload levels at 20 and 20,000 Hz, when converted to equivalent 1,000-Hz values, were about the same. The phono-input impedance was measured as 47,000 ohms in parallel with 125 picofarads. The IHF slew factor was in excess of 25 (our measurement limit).

The bass tone control had a sliding turnover frequency: at half settings the response was (Continued overleaf)
affected only below 100 Hz, but at maximum or minimum control positions the effect began at about 400 Hz. The treble control, on the other hand, began to show its effects between 1,000 and 2,000 Hz, and the shape of its response curve changed as the control was moved from center. At half setting, for example, it produced a "shelf" in the response, affecting all frequencies above 1,000 Hz equally, but at extreme settings the boost or cut was substantial, reaching ±16 dB at 20,000 Hz.

The high-cut filter appeared to have been designed for a 12-dB-per-octave slope (which was never fully achieved in the audio band) and a -3-dB frequency of about 4,000 Hz. The subsonic filter's response was down 3 dB at 20 Hz; we could not measure its slope below that frequency. The loudness compensation boosted both low and high frequencies (the latter only slightly) as the volume control was turned down. The phono equalization was within ±0.5 dB of the RIAA characteristic from 50 to 20,000 Hz and down about 2 dB at 20 Hz. It was not affected significantly when measured through the inductance of a phono cartridge.

The stereo channel separation of the hk670 was very uniform with frequency and completely symmetrical between channels. It was 45 dB through most of the mid-range, falling to 35 dB at 30 Hz and 38 dB at 15,000 Hz. The FM muting threshold was set at 12.8 dB at the factory, but it could be adjusted by a rear-panel control between 11.5 and 46 dB.

The capture ratio was 1.43 dB at a 45-dBf input and 1.5 dB at 65 dBf. AM-rejection measurements at these signal levels were, respectively, 48 and 60 dB. The image rejection was 73 dB. Alternate-channel selectivity was 65.2 dB, and adjacent-channel selectivity was 8.6 dB. The frequency response of the AM tuner section was down 4 dB at 20 Hz and 6 dB at 4,000 Hz.

Comment. Our measurements of the hk670 showed it to be an absolutely first-rate receiver, with audio and FM distortion levels that until recently were found only in the most expensive and esoteric components. Its other performance characteristics were of comparable excellence.

Harman Kardon stresses the sound qualities of its products, and we certainly found no reason to disagree. The hk670 sounded very much like other top-quality receivers and combinations of tuners and amplifiers with which we compared it. We noted that the "Twin Power" aspect featured by H-K consists only of separate rectifiers and filters for the two channels, all operating from a common power transformer. Purists may carp at this; our experience has been that the use of one, two, or three power transformers has little effect on an amplifier's performance, just on its weight, bulk, and cost.

Our overall reaction to the hk670 as a product derives principally from its "feel," from how well it did what is expected of it, and from whatever flaws and omissions we could discover in it. The final verdict was overwhelmingly positive—that is, from an operational standpoint, this is as smooth, easy-handling, and fine-sounding a receiver as we have ever had the opportunity to use.

The controls are positive in their action, and their markings are exceptionally legible. Although the scale of the FM dial is calibrated only at 1-MHz intervals, it is long, linear, and accurate enough that one can estimate frequencies to 0.1 MHz with assurance. It is important, however, that the logging scale below 1 MHz be not confused with the FM scale markings. And although the hk670 has good, flexible tape-recording facilities (and can be set to dub tapes while one is listening... (Continued on page 50)
Above All, Hear It.

Car audio has come of age. And Mitsubishi has applied its respected audio technology and experience to its new line of car audio products. There is no compromise. Reliable. Rugged. Well designed. But the proof is in the listening. That's where they shine. Be it the RX-69 or RX-7 In-Dash AM/FM Auto-Reverse Cassettes or the RS-67 AM/FM 8-track, Mitsubishi is miles ahead in car audio. In addition, three Under-Dash Cassettes, one Under-Dash 8-track, and an ambitious array of quality car hi-fi speakers complete the line. Mitsubishi transcends the ordinary. Ready to extend your limits? Look into the entire line of car audio component separates. Get a taste of Mitsubishi Car Audio...

But, above all, hear it.
tuning to another program), it does not have a separate preamplifier output and power-amplifier input. This can be a definite inconvenience for some users.

The tuning is noncritical (even though one may not achieve the 0.1 per cent or lower distortion we obtained in the laboratory, the actual distortion is certain to be less than that built into the received signal and completely negligible from a listening standpoint). The muting is literally perfect, with not a trace of noise or modulation as one tunes on or off a station, and there is just enough delay in the unmuting to make the program emerge softly from a silent background. The factory-set muting threshold will not keep anyone from hearing any signal of listenable quality (and the same can be said of the stereo threshold, which roughly corresponds to the 50-dB quieting sensitivity). The same smoothness and silence of operation is carried over into the on/off power switching, which provides a delay of a couple of seconds after the receiver is turned on before any sound is heard.

The multipath-distortion meter indication was very effective, in contrast to the many other "multipath indicators" we have seen that seem to respond only when the distortion can be heard easily enough and therefore doesn’t need a meter to indicate it. The meter of the hk670 is stationary only when there is no multipath condition, and it wiggles visibly even when the level of multipath distortion is well below audibility.

Harman Kardon appears to have done almost everything exactly “right” in the design and execution of the hk670. Any criticisms we might care to make would be rather minor. There is no question that the hk670 is a fine receiver and a fine value in its price range.

Circle 134 on reader service card

AMS Model 10
Acoustic Dimension Synthesizer

In the few years that high-quality time-delay accessories have been available for home use, they have been widely recognized for the enhanced sense of realism they can impart to reproduced music. For many people they provide the kind of "you-are-there" ambiance that was promised (but rarely delivered) by quadraphonic reproduction. A time-delay installation shares with a quadraphonic system the need for an additional stereo amplifier (or a single four-channel amplifier) and a second pair of speakers, which, of course, makes it rather expensive. But the owners of such systems consider the money well spent.

One of the qualities that distinguishes a live musical performance from its reproduction in a different environment is the ambiance of the concert hall. Whether a sound source is live or reproduced, it reaches the listeners’ ears by a number of different paths. The first arrival, the direct sound, is used by the brain to localize the source. This is followed by a number of later-arriving sounds, delayed because they have been reflected from room-boundary surfaces and objects within the room. They arrive at the listening position at various times and usually with a lower strength and narrower bandwidth than the direct sound. These late-arriving sounds convey to the brain a sense of the size of the room in which they were originally propagated.

Such a mix of direct and reflected sounds exists in different proportions in every concert hall and recording studio, as well as in every home listening room. In general, rooms of different dimensions and acoustic treatments will have very different ambiance characteristics. Because home listening rooms are usually much smaller than concert halls, the time delays at home are much smaller than those in many original recording locations (sound travels one foot in about one millisecond). No matter how effectively the concert-hall ambiance is recorded (and a skilled recording engineer can often capture it with impressive success), when the reproduced sound comes only from the front the illusion of reality is severely diminished.

The purpose of a time-delay system, as its name suggests, is to delay the stereo signals and then reproduce them through additional speakers located toward the rear of the room. If this is done properly, one can create a remarkably effective sonic illusion of a large concert hall in a normal-size room.

Time delay in home systems is usually achieved electronically, using either analog (the so-called "bucket-brigade" devices) or digital circuitry. Each system has its adherents who claim certain advantages for their choice. But either system, success depends on the correct choice of delay times and the relative amplitudes of the differently delayed signals when they are combined to form the rear-channel program. It is possible, both theoretically and practically, to obtain excellent—or indifferent—results from either system. It is interesting to note that all presently manufactured home time-delay systems sell for very nearly the same price, regardless of whether they use analog or digital circuitry.

The AMS Model 10 Acoustic Dimension Synthesizer is the first product of its type from AMS. Most time-delay units require an external stereo power amplifier and a pair of rear speakers. AMS has built an amplifier (rated at 100 watts per channel into 4 ohms) into the Model 10 and provided a pair of small, high-quality speakers (Model ADS L10) to form a complete package that occupies a minimum of space and offers a high degree of operating versatility.

The AMS Model 10 control unit has a flat black finish and resembles an integrated amplifier (which, of course, it also is). The heat-sink fins are on the left and right sides of the unit, leaving the rear for the signal connections. On the front panel, the most prominent controls are four large knobs: Stage Depth controls the amount of delayed signal mixed into the front-channel outputs, helping to "open up" mono and acoustically dead (Continued on page 54)
In comparative tests, students attending U.C.L.A. judge ESS superior to JBL, Bose, Pioneer, AR, and Cerwin Vega.

Heil, creator of the FET, is a unique principle of sound reproduction licensed exclusively to ESS. By squeezing the air instead of pushing it, the Heil achieves degrees of clarity, linearity and airiness unattainable with conventional drivers:

ESS will be conducting the same comparison test on college campuses across the nation. Watch for the dramatic results from the University of Wisconsin at Madison to be unveiled in coming weeks. Or better yet, visit your local ESS dealer and ask him to let you take the ESS Listening Test personally. See if you, too, can't hear the difference.

Take the ESS Listening Test yourself

Suggested Retail Price

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sound as clear as light

CIRCLE NO. 73 ON READER SERVICE CARD
Power!
That's the Jensen Car Stereo Triax® II.
That's the thrill of being there.

Power is right! 100 watts! Now, all the energy and intensity that went into the original performance comes through the Jensen Triax II 3-way speaker.

This incredible 100 watt capability gives the Triax II an unparalleled clarity of sound throughout the entire spectrum.

What gives the Triax II its great power handling and sound reproduction? For starters, the piezoelectric solid state tweeter with low mass and incredible power handling capabilities. It starts reproducing crystal clear high frequency signals at 6,000 Hz... and keeps going well past the range of human audibility.

The 6" x 9" woofer of the Triax II boasts a new large diameter barium ferrite 20 oz. magnet. Which means better heat dissipation and more efficiency for clearer, truer sound at higher listening levels.

A new high power 1½" voice coil on the Triax II translates into less distortion and the ability to achieve higher sound pressure levels.

The midrange unit of this remarkable speaker produces smoother sound with better transient response, less distortion and higher power handling... thanks to its large 2.5 magnet structure.

And the Triax II is fully compatible with the advanced bi-amplified power sources for outstanding clarity and separation.

So go to the concert. Hear the Jensen Triax II. That's the thrill of being there.

JENSEN
The thrill of being there.

For more information, write Jensen Sound Laboratories, Division of Pemcor, Inc., 4136 N. United Parkway, Schiller Park, Illinois 60176.

® "Triaxial" and "Triax" are registered trademarks identifying the patented 3-way speaker systems of Jensen Sound Laboratories, Division of Pemcor, Inc. (U.S. patent #4,122,315).

CIRCLE NO. 28 ON READER SERVICE CARD
HOW IT WORKS

The ADS Model 10 uses digital time-delay circuitry featuring a proprietary form of "delta modulation." Every four microseconds the analog program is sampled and its instantaneous amplitude is compared to a reference voltage. Depending on whether the signal level is greater or less than the reference voltage, a digital "1" or "0" is generated, and the reference voltage is adjusted so as to follow the changes in signal level, never differing from it by an amount greater than that of one of the corrective steps.

The series of "1" and "0" pulses is passed through a chain of 25,000 digital shift registers. The pulses are moved from one register to the next at a clock rate of 250,000 Hz, so that the most delayed output emerges 100 milliseconds after it enters the delay circuitry. Actually, the output pulses are taken from the shift registers at twelve places along the line, in three groups of four outputs each, enabling each of the three time delays to be set to one of four different lengths by means of a front-panel control.

Each delayed pulse train passes through a digital-to-analog decoder where the inverse of the encoding process takes place and a delayed analog program is re-created. The three delayed signals are mixed in controllable ratios to form a single delayed output signal, which can be channeled back to the inputs to a degree controlled by a front-panel reverberation knob. The combined mixed signals, including the effects of any recirculated signals, are amplified and heard through the rear speakers. Although there is considerably more signal processing than this involved, the basic operation of the ADS Model 10 is much as we have described.

The three-position front level switch works in conjunction with the input level knob to set the level of the delayed sound in the correct relationship to the front-channel levels. The output switch connects either the ambience (delayed) or the direct (undelayed) program to the rear speakers, or shuts them off entirely. The final control is the power switch. The Model 10 has special circuits that prevent turn-on or turn-off transients from reaching the speakers. There is a front-panel headphone jack suitable for driving headphones with impedances of 8 ohms or higher. Plugging in phones mutes all the speaker outputs (including the front speakers), and the headphone-output signal contains a mixture of direct and delayed sound.

The internal amplifiers of the Model 10 are rated at 100 watts per channel into 4-ohm loads from 30 to 30,000 Hz with no more than 0.08 per cent total harmonic distortion. The speakers are two-way acoustic suspension types with a 7-inch woofer and a 1-inch dome tweeter in rosewood-veneer cabinets that can be mounted either on the wall or the floor.

The ADS Model 10 is 153/4 inches wide (19 inches with the optional rack-mounting panel), 12 inches deep, and 31/2 inches high. It weighs 23 1/2 pounds. Each ADS L10 speaker is 9 1/4 inches wide, 15 inches high, and 6 1/2 inches deep and weighs 12 1/2 pounds. Price: $1,000 complete with speakers. The time-delay portion of the ADS Model 10 is now available separately (as the Model 10-01), without the power amplifier or the speakers, for $675.

Laboratory Measurements. As might be imagined, the ADS Model 10 is far more complex electronically than it appears to be on the surface or from the once-over-lightly description we have given of its features. Attempting to verify its voluminous specifications by measurement would be exceedingly time-consuming—and also pointless, because the success or failure of a product such as this depends mostly on subjective reaction to its performance. And, in any case, no one besides an expert in the design of these devices would be able to interpret the test data properly. We therefore limited our bench tests to checking a few of the more obvious characteristics of the ADS Model 10 and depended on extended listening and use tests to appraise its strengths and weaknesses. (Continued on page 56)
Something as insignificant as a speck of dust can mess up a perfectly good recording.

So at Maxell, we’ve developed an ingenious device that keeps dust from collecting on our tape. Our take-up reel.

Instead of gaping holes that let dust in, our specially molded polystyrene design actually forces dust out.

So if your take-up reel is picking up more than it should, pick up ours. You’ll find it comes attached to something even more impressive. Our tape.
We discovered early in our tests that this unit has a much wider frequency response in its delayed channels than most of the other time-delay accessories on the market (most others cut off rapidly above 6,000 to 8,000 Hz, and some do not reach even that high). The high-frequency response of the ADS Model 10 is not affected by the delay settings, and it reached 12,000 Hz or more at the -3-dB point with the contour switch at its widest setting. Although there were response “ripples” at lower frequencies due to interaction of the many delayed components, the overall useful lower frequencies were achieved and some do not reach even that high). The time-delay accessories on the market (most others cut off rapidly above 6,000 to 8,000 Hz, and some do not reach even that high). The reverberation (recycling) action creates a multiplicity of bursts at different levels and times from the single input burst. The distortion (at 1,000 Hz) in the delayed output was 0.14 per cent at a 1-volt level (from the low-level outputs in the rear of the unit), and the unweighted signal-to-noise ratio was 66 db referred to 1 volt, which corresponds quite closely with the manufacturer’s weighted specification taken at full rated output. Our only measurement of the power amplifier was to confirm that it could deliver at least 100 watts per channel to 4-ohm loads (which it did easily). Sound quality was clearly excellent, far more than equal to the task of supplying the delayed-channel output. Although in a properly adjusted system the delayed signals are not, as a rule, audible separately, they are present at a considerable level, which is why the amplifier for the rear speakers should be at least half as powerful as that for the front ones. The inaudibility of the delayed program as such is a psychoacoustic phenomenon—the rear-channel material, although reproduced at a lower level, is very much there!

We also confirmed ADS’ design claim that the delayed outputs of the Model 10 were completely noncoherent. Even with a mono input signal supplied to both channels, the two rear outputs had a random phase relationship to each other. Such noncoherency enhances the realism of stereo reproduction and makes a world of difference with mono programs. This is one of the features that distinguishes the Model 10 from most analog delay devices, which have coherent signals in the two rear outputs.

- **Comment.** We operated the ADS Model 10 in two separate music systems installed in rooms that are acoustically very dissimilar. In each case, it was connected between the preamplifier and power amplifier (one of the systems used a receiver that had the necessary connection facilities).

Thanks to the complete and informative instruction manual, setting up and adjusting the Model 10 was relatively simple. Nevertheless, it is important to run through the controls and functions several times to be sure that their effects are properly understood. The actions of the controls are not necessarily obvious from their labels, and it is unlikely that one could get full use of this system without carefully reading the instructions (which, incidentally, are particularly well done).

We have used, and lived with, time-delay units of both the analog and digital types for a couple of years, an experience that made us very much aware of the most important rule of time-delay enhancement: if the rear speakers can be heard as distinct sound sources, they are too loud! The rear volume level should be set to the point where the signal can just be heard from a normal listening location, and then it should be turned down a little more. (Note that switching it off entirely will inevitably cause the sound to become dull and lifeless, and to collapse toward the front of the room.)

How does the ADS Model 10 differ from other time-delay systems we have used (which includes just about every one on the market)? For one thing, no matter how carelessly its controls are set, it is very difficult to create a grossly unnatural effect. When the full potential of the Model 10 is understood, a totally unobtrusive, natural ambiance can be achieved—and since you’ve experienced it, it’s very difficult to give up.

This is not to say that very similar results cannot be produced with some competing systems. By its very psychoacoustic nature, time-delay enhancement is completely subjective, and no one set of conditions will be “right” for everyone or any amplifier. The ADS Model 10 provides more options in its adjustments than most competing products and thus may appear more formidable at first glance. However, given the automatic “presets” of the device (which are correct for most conditions), no problem will be experienced by even a first-time user. In any case, the settings are noncritical enough that there is no need to be too concerned with their “correctness.” If the total sound effect seems right, enjoy it; it might possibly be improved by further experimentation with the controls, but it will never be degraded.

Our only gripe about the ADS Model 10 concerns the tight placement of the tiny toggle switches and knobs, which can easily be moved inadvertently. We found it necessary to look closely at the panel when making any control adjustments—rather than the reversed location of a knob or switch was just as likely to result in something else’s being changed.

The little ADS L10 speakers that come with the ADS Model 10 have excellent sound quality and can be placed unobtrusively almost anywhere in a room. Experimenting with the rear placement is important part of setting up a successful enhancement system (or, for that matter, any kind of audio system), and we found that in one room the sound was best with the L10 speakers lying on their backs, facing upward. Wherever they were placed, we found their sound to be smooth and therefore well matched to that of most good main speakers.

One of the most appealing features of the ADS system for us was the effectiveness of its “voice-restoration” circuit. We have always found the transition from a time-delayed “real-sounding” musical program to an announcer’s unnaturally echoey voice to be jarring, and as a result we have tended with other systems to use less delay time and reverberation than the music could benefit from. In that regard, the ADS system works almost perfectly; it does not completely eliminate reverberation from speaking voices, but it does reduce such reverberation to a point where it seems consistent with the hall ambiance that is created for the music.

(Continued on page 58)
This new tuner, amplifier and turntable are all by LUX.

We'll leave the speakers up to you.

The tuner and integrated amplifier are from LUX's new Studio Standard Series, our newest and most modestly priced line of separates. Their features and performance, however, are anything but modest.

The T-4 tuner, for example, has LUX's exclusive Accutouch tuning system. The knob physically locks at every station that exceeds the muting threshold—from 5 to 300 µV. LUX's closed-loop lock-loop tuning circuit is precisely referenced to the station's carrier frequency or lowest distortion reception. And the i.f. bandwidth is adjustable—wide (normal) or narrow—to accommodate station density throughout the FM band.

The L-5 integrated amplifier has a DC direct-coupled power amplifier section with frequency response extending from 5 Hz to 100 kHz, +2, -1 dB. Bass and treble tone controls have switchable turnover frequencies, plus total tone defeat. Subsonic filter in addition to low and high-cut filters. And when tape decks are not in use, a special switch totally disconnects them from the amplifier, preventing loading which causes preamp distortion.

The PD-272 is LUX's lowest-priced turntable. Its servo-controlled direct drive brushless DC motor is totally free of the cogging (pulsing) that plagues many other direct-drive motors. And the straight, statically-arcless tonearm has a nested tube construction and internal damping that deal very effectively with resonance. Another feature: the vertical pivots extend through the arm, minimizing lateral play.

Altogether, these three components will deliver a clean, virtually distortion-free signal to your speakers. We'll leave that final decision up to you and your LUX dealer—who has taste as high in speakers as in electronics and turntables.

LUX Audio of America, Ltd.

Luxman T-4 AM/FM stereo tuner. Usable sensitivity, 10.3 dBf (1.8 mV); 50-dB quieting sensitivity, 14.7 dBf (2.8 mV); S/N: 75 dB. Alternate-channel selectivity: 85 dB (narrow), 40 dB (wide). THD (at 1 kHz): 0.08% (wide). (Luxman T-2 AM/FM stereo tuner, similar to T-4, less Accutouch and CLL.)

Luxman L-5 integrated amplifier. 60 watts per channel minimum continuous power into 8 ohms, 20-20,000 Hz, with no more than 0.33% total harmonic or intermodulation distortion. Damping factor: 80 at 1 kHz (3 ohms). Phono signal-to-noise ratio better than 92 dB (MM-1 20 mV input). (Luxman L-3 is similar, but 35 watts per channel, 10-30 kHz, 0.04% THD.)

Luxman PD-272. 12" die-cast aluminum platter with high density mat, 3.96 lbs. Detachable hinged cover, adjustable isolating feet, separate pitch control (±4%), each speed. Rumble: better than 70 dB (MM-1 20 mV input). (Luxman PD-372.)
To summarize, the ADS Model 10 is one of the most versatile (quite possibly the most versatile) of the currently available time-delay accessories. As a result it is not quite as simple to use as some other time-delay units, but once it has been adjusted for a particular installation there should be little need to change any control settings except the delay times and reverberation mix. Considering its overall quality and its fine built-in amplifier and accompanying speakers, the ADS Model 10 is actually very competitively priced. For those who already have a suitable rear-channel stereo amplifier and speakers, the new Model 1001 version that comes without these components should be especially attractive.

Circle 135 on reader service card

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**Gale GS401A Speaker System**

The Gale GS401A three-way loudspeaker system houses two 8-inch acoustic-suspension woofers that cross over at 475 Hz to a 4-inch cone mid-range in a sealed sub-enclosure. The second crossover, at 5,000 Hz, is to a 3/4-inch dome tweeter, also in a separate sealed sub-enclosure. Like all acoustic-suspension systems, the GS401A is relatively inefficient. It is rated to produce a 96-dB sound-pressure level (SPL) at a 1-meter distance when driven by 21 watts input. The system impedance is nominally 4 to 8 ohms. Although the GS401A is designed for use with amplifiers rated to deliver from 40 to 200 watts per channel into 8-ohm loads, Gale cautions that it is not meant to reproduce sustained very-high-level sounds such as those from electronic synthesizers, guitars, or organs. Like almost all speakers designed for home use, the Gale GS401A should not be used at discothèque levels or for studio monitoring at outputs in excess of 95 dB.

The mid-range and high-frequency drivers are separately protected by quick-blowing fuses whose housings are recessed into the rear of the cabinet. The input terminals are binding posts on 3/4-inch centers suitable for use with standard dual banana-plug connectors as well as with stripped wire ends. There are separate level-balance adjustments for the mid- and high-frequency drivers. These are continuous controls with index lines at their "normal" settings. The instruction manual points out, however, that each control is individually calibrated during final test to produce a "flat" overall response when the knob is set to correspond with the index line. As a result, little or no further adjustment may be possible in one direction with one or both of these controls. Gale also states that the speaker's free-field response, as measured in the British G.E.C. Hirst Research Center, is 55 to 20,000 Hz ±3 dB and that the typical response in an average room should be from 35 to 20,000 Hz ±5 dB.

The GS401A has a distinctive appearance, with bright chrome end caps and a black grille cloth covering three of the larger sides. The same system is also available as the GS401C, which has a more conventional-appearing walnut-veneer wood cabinet.) The GS401A is about 23½ inches wide, 13 inches high, and 10½ inches deep. It weighs almost 50 pounds. Although the speaker can be installed either horizontally or vertically (the two woofers are symmetrically placed about the centrally located mid-range and high-frequency driver), Gale recommends horizontal installation at least 20 inches from the floor and suggests experimenting to determine the optimum location in any given room. Price: $525. An optional metal stand, to support the speaker horizontally at the correct height, is available for $75.

**Laboratory Measurements.** We measured the reverberant-field response of the Gale GS401A with the level controls set to their maximum, normal, and minimum positions. On the test units, the normal and maximum settings were so close that the difference they produced in the response curves was negligible. Splicing these curves to the close-miked woofer response, we obtained composite response curves for the maximum/normal settings and the minimum setting.

One of the most obvious features of the GS401A response curve was the flat woofer output. There was almost no bass peak and a total variation of only ±1 dB from 55 to 350 Hz. The output fell off at 12 dB per octave at frequencies below 55 Hz, and it decreased smoothly above 500 Hz, reaching its minimum at about 3,500 Hz and rising linearly from there on. The flattest overall response was obtained with the normal and maximum control settings, which produced an overall variation of only ±3.5 dB from 40 to 20,000 Hz. This agreed quite closely with Gale's specifications, although we measured somewhat better bass response than they claim (our woofer measurement is equivalent to an anechoic response). The minimum settings of the level controls exaggerated the upper mid-range depression in the response curve, and it is difficult to imagine any circumstances that would require their use.

Reverberant-field measurements showed that the dispersion of the GS401A in the forward hemisphere was virtually perfect. There was negligible difference between response curves made on axis and 30 degrees off axis all the way up to 20,000 Hz. The effective dispersion was comparable to what we have measured from some presumably "omnidirectional" speakers.

The bass distortion was measured with drive levels of 1 and 10 watts (based on a 4-ohm impedance). At the lower power, the distortion was almost unmeasurably low at frequencies above 70 Hz (in the range of 0.1 to 0.25 per cent). It increased to about 2 per cent at 40 Hz and 6.3 per cent at 30 Hz. Increasing the drive to 10 watts had only a slight effect in the 60- to 100-Hz range. Below those frequencies it resulted in distortion readings of 2.5 per cent at 50 Hz, 5 per cent at 40 Hz, and 14 per cent at 30 Hz.

The sensitivity of the Gale GS401A was almost exactly as rated. When we drove it with 2.83 volts of random noise in the octave centered at 1,000 Hz, the sound-pressure level measured at 1 meter from the center of the grille was 85 dB. This corresponds (within 0.5 dB) to the rated "efficiency" of the system. The impedance curve reached its minimum of 4 ohms at 20, 4,000, and 15,000 Hz. Its maximum of 14 ohms was measured at 400 Hz, and at most frequencies it was in the vicinity of 8 ohms. This confirms the validity of Gale's "4 to 8 ohm" rating, though we would consider this a 4-ohm system from the standpoint of amplifier loading. (Continued on page 62)
"The skills you learn in the Army Guard do a lot of people a lot of good."

Arthur Ashe, Wimbledon Champion

Communications. Paramedicine. Handling heavy equipment. Or whatever. The skill you need to get the job you want, you can learn in the Army National Guard. And once you've got it, you get to use it in a lot of very important ways. Maybe it's evacuating flood victims with troop transports. Or using a tank to haul eighteen-wheelers out of snow drifts during a blizzard.

That's the way it is in the Guard. You use what you've got in a lot of unexpected ways. Doing anything you can to help people in trouble. People right in your hometown. It's the kind of work that'll keep you on your toes. You don't forget the valuable skills you learn in the Guard. You don't get the chance. Because there's always somebody somewhere who needs you.

See your local Army National Guard recruiter. Or call toll-free 800-638-7600 (except in Hawaii, Alaska, Puerto Rico and the Virgin Islands). In Maryland, call 728-3388.

Help Somebody. Including Yourself.

CIRCLE NO. 41 ON READER SERVICE CARD

ARMY NATIONAL GUARD
The Guard belongs.
In tone-burst tests, the Gale GS401A displayed some surprising properties. For one thing, the tone bursts were virtually perfect at every frequency, with little or no sign of the interference effects that usually make it necessary to find specific frequencies and microphone positions in order to obtain a reasonable-looking output from a multidriver speaker system. Wherever we moved the microphone, from a few inches to a few feet from the speaker, and whatever frequency we used, the bursts had almost ideal shapes, with no ringing, slow start-up, or other faults.

At this point, we began to wonder whether this implied some special degree of phase coherence (although Gale makes no mention of that subject in their literature, and nothing in the appearance of the speaker suggests any unusual physical arrangement of the drivers). We then drove the speaker with a 500-Hz square wave. To our surprise, the acoustic output waveform was recognizable as that of a square wave. We do not know what significance this has, but it is certainly worthy of special mention, if only because this is the first conventional speaker we have measured that has been able to produce a recognizable square wave in a "live"-room measurement. Incidentally, several so-called "phase-coherent" systems that we have tested have failed completely in this test.

**Comment.** The tests should suggest to anyone who had not heard the Gale GS401A that it is at the very least an exceptionally good loudspeaker system.

The GS401A has a smoothness and lack of unpleasant coloration that set it apart from most other speakers. One does not have to "get used to" its sound (at least, we did not). From the first moment it was obvious that this was not "just another speaker." It has no boom, no stridency, and no other colorations that we could hear. Its only possible flaw (in our view) is a slightly depressed upper midrange that never causes the sound to move forward in the listening room. It all seems to be happening "up front," just behind the plane of the speakers, with none of the projection that often occurs with speakers having an accented mid-range response.

We also felt on first hearing that the sound might be on the soft, or heavy, side. However, when the program contained highs, they came through with crystalline clarity. This speaker treats the high-frequency end of the spectrum the way a good acoustic-suspension speaker treats the low bass—if the program contains nothing at those frequencies, then nothing comes out of the speaker. This accuracy can be disturbing to people who are used to coloration in speaker sound (and think something is missing when they don't hear it), but to our ears it is a major "plus factor" for the GS401A.

We listened to the Gale GS401A systems by themselves and in comparison with some other very fine speakers. Sometimes the systems sounded so much alike that one could not make a reasonable choice between them, but when there was a difference it was generally in favor of the Gales. Without any obvious gimmicks or new design criteria, Gale has created an exceptionally accurate and listenable speaker. Furthermore, it looked as good to our eyes as it sounded to our ears!

**Phase Linear Model 700 Series Two Power Amplifier**

Phase Linear's Model 700 power amplifier was the first amplifier for home use that could deliver more than 350 clean watts per channel to 8-ohm speakers. Since then (almost seven years), a few rivals (very few) have appeared—always at much higher prices—but the Model 700 was carried in the Phase Linear line until quite recently. In the last year or two, most of the Phase Linear line has been restyled and somewhat re-engineered, and in its new form the old "700" is now called the Model 700 Series Two. From the front, the amplifier bears little resemblance to the earlier version. The panel has slightly rounded corners and is fitted with handles that simplify lifting its 45-pound off-center weight (like the original 700, the Series Two has its power transformer at the left rear side of the amplifier).

The meters that monitored the output levels of the two channels (and which were much too slow to follow program peaks) have been replaced by a pair of horizontal LED displays with logarithmic scales that cover a range of more than 40 dB. Each is calibrated from 0.035 to 350 watts (and beyond that to +3 dB, or about 700 watts). A front-panel pushbutton switch increases the display sensitivity by 20 dB to cover from a fraction of a milliwatt to 3.5 watts. The LED circuit has a very fast response and a slow decay so that a continual visual display of peak program power is provided.

(Continued on page 64)
If the bass isn't as clean as you'd like...

The problem may be your tonearm. Not your amplifier or speakers.

If you've been wondering why your high-powered amplifier and great speaker system don't deliver deep bass as cleanly as you'd like—especially at high listening levels—the problem may well be the effects of resonance on the stylus.

Ideally, the stylus should move only in response to the contours of the record groove. But in reality, the stylus tip also responds to various resonances: its own (with the stylus shank) and the combined resonance of the tonearm/cartridge system.

These subsonic frequencies, though inaudible in themselves, can have very audible effects. Especially with warped records. They can drain amplifier power and cause excessive movements of the low frequency driver. They can cause the tonearm to vibrate and even to momentarily leave the groove. All of which results in audible distortion.

Competent tonearm designers know all this and do their best with materials, masses and compliances to establish the inevitable resonances at the least harmful frequencies (usually between 8 and 10 Hz) and with the lowest possible amplitudes.

Dual's tonearm designers have taken a significant step beyond this.

The unique counterbalances of our direct-drive models (604, 621 and 721) and our belt-drive multiple-play model (1246) contain two mechanical anti-resonance filters.

The startling effectiveness of these filters in lowering the resonant amplitude of three cartridges having different compliances can be seen in the graph. Whether the improvement in the bass is subtle or obvious to you depends on the other components and your listening environment.

We've prepared a technical paper on this subject which we'll send to you if you write us directly. You may discover that you don't have to replace your amplifier or speakers after all.
amplifier. The power rating has been increased very slightly, to 360 watts into 8-ohm loads from 20 to 20,000 Hz, and the distortion rating has been reduced to 0.09 per cent.

In addition to the power-display range switch and the power switch, the only front-panel controls are for level adjustment. Most of the rear of the amplifier is taken up by the huge power transformer and the heat-sink fins. There are also the rather closely grouped binding-post speaker outputs, phono-jack inputs, the normal/direct input switch, a switched a.c. socket for powering an accessory fan, and five fuse holders (four for the output circuit and one for the a.c. line).

Accessory wooden side panels (in oak or walnut) and a brushed-aluminum top cover are available for the Model 700 Series Two, as well as a rack-mounting panel and a cooling-fan assembly that is suggested for heavy-duty service. The Phase Linear Model 700 Series Two is 19 inches wide, 7 inches high, and 10 inches deep (12½ inches deep with the fan installed). It weighs 45 pounds. Price: $880. Wooden sides/cover, $40. Fan, $24.

- Laboratory Measurements. When we tested the original Phase Linear Model 700 about seven years ago, the FTC ruling on amplifier power ratings had not been issued. The ruling resulted in the "beefing up" of many high-power amplifiers, Phase Linear's included, to withstand the severe heating conditions imposed by the "preconditioning" operation at one-third rated power for one hour.

The Model 700 Series Two specifically requires the cooling fan accessory for this type of testing. Even with it, the thermal-protection circuit cycled on and off regularly, with a duty cycle of five minutes on and 1½ minutes off when we drove both channels to one-third power into 8 ohms. To accumulate the required one hour of operation, we had to run the amplifier for 1 hour and 20 minutes.

At the end of that time, the amplifier was very hot. Nevertheless, it seemed to suffer no ill effects from this treatment. The outputs clipped at 473 watts per channel (IHF-clipping headroom = 1.18 dB) and the IHF dynamic headroom rating of 1.48 dB corresponded to a short-term output of 506 watts per channel into 8 ohms at the clipping point. We could not measure the amplifier with 4-ohm loads, since the 10-amp line fuse blew before we reached the clipping point. The minimum recommended amplifier load is 4 ohms; this should be quite safe for music program material, but not for continuous sine-wave test signals unless adequate cooling is provided. An input of 79 millivolts was required to drive the amplifier to the IHF reference power output of 1 watt, and its 0-dB weighted output noise was 77 dB below 1 watt.

The distortion characteristics were very much like those of the early Model 700 we had tested. At rated power or less, the distortion was typically between 0.002 and 0.01 per cent from 20 to 2,000 Hz, and it increased smoothly with frequency to 0.05 per cent at 10,000 Hz and about 0.13 per cent at 20,000 Hz (this fails to match the specified 0.09 per cent by 0.04 per cent, but it is not a significant discrepancy). We were concerned that the very high operating temperature of the amplifier during the tests might have affected its performance, so we repeated the high-frequency distortion measurements when it cooled. We also tested a second amplifier in the same manner. The results were essentially similar. Although there are a number of possible explanations for the 0.04 per cent difference between the measurement made by Phase Linear and that made by Hirsch-Houck Labs, there is absolutely nothing different between them from a user's standpoint. This is an extremely low-distortion amplifier, with less than 0.01 per cent distortion under almost any conceivable operating conditions.

The increasing distortion at high frequencies is indicative of the limited power bandwidth of the output transistors. We measured the IHF slew factor as 2, which is an additional confirmation of this condition. The frequency response at low power levels was flat within ±0.5 db from 20 to 20,000 Hz, falling to -3 dB between 5 and 10 Hz and at 50,000 Hz.

The harmonic distortion at 1,000 Hz was typically between 0.006 and 0.009 per cent from 0.1 to 450 watts output, just before clipping occurred. The intermodulation distortion was in the same range, 0.005 to 0.01 per cent from 1 watt to 300 watts, rising to 0.02 per cent at 450 watts and 150 milliwatts.

Phase Linear has taken pains to eliminate switching transients from the output of the Model 700 Series Two, since any substantial clicks or thumps from such a powerful amplifier could be fatal to one's speakers. They have done well, although the instruction manual mentions a small "thump" a few seconds after the amplifier is switched off. It proved to be barely audible and would be no threat to any speaker used with this amplifier.

The LED power display is a great improvement over the meters used in the earlier model. It gives a clear indication of power level at ordinary listening volumes, as well as when the amplifier is being driven to its limits. It is, however, merely an indicator and not an accurate power meter. At an indicated 0 dB (360 watts), which caused the overload lights to flash, the actual output was 231 watts into 8 ohms. Similarly, at an indicated 175 watts (-3 dB), the actual output was 128 watts. At lower power levels the error was in the opposite direction, so that at an indicated output of 35 watts the true power was 38 watts, and at 3.5 watts it was really 7.2 watts. Finally, at the lowest reading of 0.035 watt, the power output was 0.04 watt. There was a very slight discrepancy in the operation of the lights that the actual errors could be considerably different from (better or worse than) those mentioned, although we tried to be as accurate as possible in our measurement.

- Comment. Our initial highly favorable impressions of the early Phase Linear Model 700 were further reinforced by our experience with the Series Two, which in most respects seems to be the same as its predecessor. It is a real brute of an amplifier, yet without unnecessary weight or bulk. It is clearly at its best driving inefficient home speaker systems, preferably 8-ohm types. In such service, we cannot imagine ever running out of power!

We drove AR-LST (4-ohm) systems with the Series Two, and needless to say it loafed along, never becoming more than moderately warm at any reasonable listening levels. Nevertheless, if it is driven to much higher than average levels (say, 10 to 100 watts) for extended periods, it can become very hot. The accessory fan is an obvious solution, although (Continued on page 66)
THE JVC RECEIVER.
Every bit as revolutionary as they look, and then some.

In our case, looks are never deceiving. Because all our new DC integrated stereo receivers combine unprecedented, revolutionary styling with unique electronic design features that reflect JVC’s more than 50 years’ experience in audio development and innovation.

DC Power Amplifier Design
All four new JVC receivers feature DC amplifier circuitry. They offer virtually distortion-free performance (0.03% THD) throughout the entire audible spectrum. As a result, the sound you hear is clearer, cleaner and crisper. In addition, your speakers are protected with the Triple Power Protection circuit and you can monitor output wattage with dual power meters. Choose from 120, 85, 60 and 35 watts/channel.*

SEA all the way
All four receivers offer JVC’s exclusive built-in SEA five-zone graphic equalizer for more complete control of the music spectrum than conventional tone controls. You can attenuate or accentuate any of five separate musical bands, and as an added feature, we’ve incorporated a special button so that the SEA circuit can be switched to your tape deck.

Pushbutton Source Selectors
A horizontal panel of pushbuttons provides total control over all functions. And brilliantly illuminated LEDs instantly indicate the program source. Professional-type slider controls set volume and balance. Combine all these exclusive features with high sensitivity and tuning precision, thumb control tuning wheel and accurate dual-metering and you’ll see just how revolutionary the new JVC DC integrated stereo receivers are. Play one at your JVC dealer soon. JVC High Fidelity Division, US JVC Corp., 58-75 Queens Mdtown Expressway, Maspeth, NY 11378. In Canada: JVC Electronics of Canada, Ltd., Ont.
we found it slightly too noisy for our liking. We also tried to use the amplifier with its optional wooden side panels and cover, but our experience left us with some doubts about the practical value of that combination, handsome though it is. First of all, it is quite difficult to make the speaker output connections to the amplifier when the side panels are in place. The top cover, which is slotted over the heat-sink fins, blocks the openings over the power transistors—the hottest part of the entire amplifier. We could not operate the amplifier when it was so enclosed without an excessive temperature rise (eventually triggering the thermal protective circuit).

Installing the fan solved that problem, but it introduced the matter of its noise, which we found objectionable. Presumably the only reason to use the side panels and cover is to make the amplifier more attractive when it is in the open and visible to listeners; so placed, however, the fan noise might be unacceptable to many people. On the other hand, if the amplifier is located out of sight, the fan noise might not be a problem—but then neither would there be any need for the decorative accessories!

Leaving aside questions of cosmetics, we found the sonic performance of the Phase Linear Model 700 Series Two to be absolutely first-rate. Having no hang-ups about slew-induced distortion (which we do not believe to be a significant factor in home music reproduction), we were not bothered by the unit's high-frequency power limitations. We fed hundreds of clean watts into speakers that could handle that power, and we enjoyed experiencing the clean sound-pressure levels that approximated those of live music. To do that, one needs a great deal of amplifier power, assuming speakers of "normal" efficiency, and the Phase Linear Model 700 Series Two is one of the most attractive and least expensive ways to achieve that result. Considering the inflation over the last seven years, the cost of the Series Two in real terms is certainly no more than that of its predecessor, making it still something of a bargain among super-power amplifiers.

Circle 137 on reader service card

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**Revox B790 Record Player**

*The Revox B790 record player, coming from a company principally associated with superb tape recorders for the consumer and semiprofessional markets, is really a very logical extension of that manufacturer's product line. Precision mechanical workmanship is a requirement for both tape recorders and record players, and the Revox name has become almost synonymous with craftsmanship in consumer products.*

Revox electronic components (amplifiers and tuners) consistently exhibit innovative and unconventional engineering and design, and the new B790 record player follows in that tradition. It is completely integrated, with a two-speed quartz-controlled direct-drive motor, a unique servo-controlled radial tone arm, and an Ortofon VMS20E cartridge. The integrated design of the B790 insures that every part will function compatibly with the others, and it has also made it possible for this highly sophisticated and internally complex record player to be essentially foolproof.

The motor of the B790 is similar to those used for the capstan drives in some Revox tape recorders. Normally, it is phase-locked to a signal derived from a 3.27-MHz quartz-crystal oscillator. The speed is constantly displayed (as 33.33 or 45.00 rpm) on a four-digit LED readout. There is also a vernier speed adjustment that is activated when the control button is touched. It replaces the crystal-controlled reference signal with a variable-frequency signal controlled by a small thumbwheel next to the digital readout. This arrangement provides a nominal \( \pm 7 \) per cent adjustment of either basic speed. In all cases, the actual speed is shown on the readout with a resolution and accuracy of 0.01 rpm.

The tone arm and cartridge are completely concealed from view by a rectangular metal cover. When the record player is off, the arm structure is parallel to the right side of the base (the cartridge end facing the user), thus leaving the platter surface clear for loading or removing records. The B790 is turned on by pressing the power switch at the right side of the control panel, which extends across the full front of the record player outside the area protected by the hinged plastic dust cover (so that all controls are accessible while a record is being played). After a record is placed on the rubber mat, the entire arm structure rotates 90 degrees clockwise to its playing position. The cartridge (raised above the record surface) is now located over the lead-in groove of a 12-inch disc, and the turntable platter starts turning at 33 1/2 rpm (if 45 rpm is desired, the “45” button is touched momentarily). In a couple of seconds the readout stabilizes and shows that the selected speed has been achieved.

The tone arm and cartridge of the Revox B790 are not only concealed from view, they are never touched by the user. They are controlled by a group of three pushbuttons at the right of the panel. Arrows above the buttons show their functions. Two are used to move the arm assembly across the record surface. They must be held down throughout the entire traverse cycle. Releasing a button causes the arm to stop instantly. (The cartridge is always lifted from the record before any arm motion occurs, even if a button is pressed while a record is being played.) To play a record, the center button is touched, gently lowering the cartridge to the record. A second touch lifts it, with absolutely no shift in lateral position. For very small lateral arm-position shifts, a light tap on one of the outer buttons will move it left or right approximately one groove width.

The cartridge can be seen from the front while the arm is in the playing position; for ease in cueing, a light in the arm base illuminates the record surface whenever the cartridge is raised. At the end of a record, the cartridge is lifted and swiftly returned to its rest position just outside the edge of the platter, and the motor shuts off. To remove the record, the entire arm housing is first pivoted back to its original rest position.

The cartridge platform is driven by a servomotor through a cord similar to a dial cord. The platform is free to move slightly in the lateral plane, and an optical sensor responds
to any departure from tangency by sending an error signal to the servomotor that drives the arm. This system keeps lateral tracking error to less than 0.5 degree. Any cartridge movement that exceeds the normal tracking rate across a record (such as occurs when the stylus of a record's side is worn or the record is playing and swung out of its normal position without damaging the stylus or the record) is measured by an acoustically controlled servomechanism that lifts the cartridge from the record instantly and returns it to its rest position before stopping the turntable. The action is so fast that the arm housing can be grasped while a record is playing and swung out of its normal position without damaging the stylus or the record—or even making a sound through the speakers! The instant the arm is moved, the lift-and-return action is initiated.

The stylus comes in contact with a soft brush extending from the motorboard every time the B790's arm housing is moved between its rest and play positions, which helps keep it free of dust and lint accumulations. The cartridge's electrical output is muted at all times except when it is tracking a record, so that there is never an unwanted sound from the operation of the arm mechanism or while cleaning the stylus. When the turntable shuts off, electronic braking stops the platter in 30 seconds. The cartridge-carrying part of the arm is very short, placing the stylus about 1.5 inches from the vertical pivot and reducing the effective arm mass to an absolute minimum. This gives the pickup an exceptional ability to track warped or eccentric records, although the short length risks vertical-wobble effects with severely warped records. The vertical tracking force is factory-set at 1.5 grams. Although other cartridges can be substituted for the VMS20E (there are a few dimensional restrictions), such a change is quite complex and should be made only by an authorized Revox service facility. The removable stylus assembly of the VMS20E, however, can be replaced easily by the user.

Physically, the Revox B790 is both unconventional-looking and handsome. It is finished in dark gray with black control buttons. The tinted-plastic dust cover is shaped so that the cartridge is rated to track 70 microns at 3a-cm/sec, 1,000-Hz tones of one of our institute records, with no signs of visible waveform distortion, let alone clipping. The German HiFi Institute record was playable at its 70-micron level with no audible distortion; there was a trace of mistracking at the 80-micron level (the cartridge is rated to track 70 microns at 1.5 grams force). Our collection of warped records proved to be no problem for the B790. It played all of them with ease. Not only did the cartridge have little or no tendency to bounce off the record on a warp, it also never shifted laterally. This was especially noticeable when we repeatedly raised and lowered the cartridge; it unfailingly replaced the same groove.

The entire record-playing section of the B790 (the turntable and arm on their mounting assembly) was floated from the base on soft springs. This gives the record player exceptional immunity to external shock and vibration effects. Since the control panel is on the main section of the base, its operation cannot jar the pickup.

Comment. Many of the radial-arm record players we have used in the past seemed very promising but somehow failed to establish themselves in the marketplace. In some cases we could see potentially troublesome areas even when nothing objectionable showed up in our tests. Some of these machines were so complex or required such critical setup adjustments that their usefulness as consumer products was open to question. In our search for possible design flaws in the B790, we came across only one candidate: the instruction manual (which is very complete) warns that the stylus could contact one of the ribs of the turntable mat if it were lowered with no record on the platter. So do not operate the B790 without a record on the platter, and keep the uninhibited away from its controls! Aside from this minor matter, we were completely satisfied with the B790 during an extended period of use. It is undeniably handsome, surprisingly compact, and (so far as we could see from examining its tone-arm servomechanism) about as uncomplicated and unfussy as a machine of its type can be. By the standards of a few years ago it is expensive, but by present-day criteria it does not seem to be priced at all out of line for a superior record player. The only objection we can imagine being leveled at it concerns its inability to accept different cartridges readily. Those people who are irrevocably committed to some other type of cartridge, for whatever reason, will probably not be interested in the B790. But other audiophiles could hardly ask for a finer all-around record player than the Revox B790. It is one of the most sophisticated and thoughtfully human-engineered pieces of record-playing machinery that we have seen. A nice job in every way!

Circle 158 on reader service card

There is a new reference standard in phonograph cartridges. The name is Nagatron. And the difference is clear.

Samarium-cobalt magnets, crystalline aligned diamonds and an array of cantilever constructions are but a few of the latest advances employed in Nagatron cartridges to deliver the cleanest transients and tonal clarity available from your record grooves.

On the record, it's the best you can do for your records.

NAGATRONICS CO.
2309 Grand Avenue, Belmont, CA
to the end, its Canadian stands out from the crowd.

makes it such a popular?

Super lightness. Superb

that's what you've been

for, set your course

Calvert Canadian.

The unique spirit of Canada:

We bottled it.
HISTORY IS BUNK (ALMOST)

The Musical Companion, edited by A. L. Bacharach and J. R. Pearce, is a venerable (first published in 1934), well-known, and entertaining British book whose first American edition came out just last year (Harcourt Brace Jovanovich, 1978, $14.95). Despite its prim title and its conventional arrangement and presentation of material, The Musical Companion is really a treasure house of highhanded opinions, prejudices, snobbies, personal enthusiasms, and all those other things that make a book entertaining. It is also, even in its “American” edition, very British indeed. I offer here no review of the book, merely a fond mention. It has gotten me riled enough on a number of topics to cite it as an excellent source of perturbation (as well as Nonsense!)

Music always gets the short end of the stick in such matters, perhaps because it is difficult to say anything intelligent about it unless you know something about it (and even then, maybe not), whereas with architecture you can always murmur something about the scale, and with painting something about the colors. People are forever telling us (like Blom) that Gothic music is indigestible unless one first looks at Gothic cathedrals, or that the proper precondition to listening to Impressionist music is studying Impressionist paintings (which is not only nonsense but wrong). No one has ever told me, however, that I could not possibly understand the ceiling paintings of Battista Tiepolo without first listening to Vivaldi, or that the Baroque architecture of Fischer von Erlach is incomprehensible without the music of Bach to support it. Why not?

I suppose because music is abstract, and therefore difficult, and painting and architecture are concrete (pardon), and therefore easy, and you don’t use something difficult to explain something easy. But, theoretically at least, if Thomas Rowlandson or Tobias Smollett (!) are any “explanation” of Domenico Scarlatti at all, then Vivaldi is certainly an “explanation” of Tiepolo. They even worked in the same city at the same time.

Certainly, one can make a mental connection between the music of Vivaldi and the painting of Tiepolo (particularly since they were contemporaries), and, I suppose, someone can make a connection of a sort between the drawings of Rowlandson and the sonatas of Scarlatti (their lives overlapped by a single year), but who do you match up with Rembrandt? Heinrich Schütz? Jean-Baptiste Lully? Arcangelo Corelli? Hardy. The music just doesn’t sound the way the pictures look. No, the invariable answer to that question is Beethoven or Brahms. But Rembrandt was a Baroque painter and died in 1669. Beethoven was a Classical composer and was born in 1770. Brahms was a Romantic composer and was born in 1833. Clearly, there is some connection here that transcends the artistic or historical style. There are many who will say that the music does sound the way the pictures look.

I am pushing things to make a point. The point is not that architecture, painting, and literature have nothing to tell us about music (nor that music has nothing to tell us about the other arts), but that the connections are far less clear-cut, far more subjective and tenuous than they might at first seem. The way to appreciate Purcell is not to know Baroque architecture, but to be sufficiently familiar with Purcell’s musical language to be able to hear how beautiful it is. Clearly, the way to achieve that end is to listen to a lot of Purcell—and to the music of his contemporaries, predecessors, and successors for comparison. Drawing parallels with other arts, contemporary or not, is secondary.

Of course there are some parallels, for the aesthetic ideas of the Baroque modified the style of all the arts, many of them in pointedly similar ways. But the intellectual understanding of such aesthetic ideas and their ramifications does not lead to emotional appreciation. You have to like the stuff first. You have to feel sensually that something is beautiful before any understanding of why, how, and in what way it is beautiful can become anything more than an academic exercise. “Since feeling is first,” wrote the poet E. E. Cummings. It is.

And so I will continue to base my delight in music on my perception of the music itself. I have listened to enough Baroque music that I do not find its language foreign to my own time frame at all. And when I develop a musical hatred, I will cultivate it as a taste I do not like, and not attribute it to my lack of knowledge of the paintings of Repin or of Muscovite architecture. If it is to be overcome it should be through musical means. Then I can add to it all the additional pleasure that comes from knowing the art-historical matrix. If all this stamps me as an amateur rather than a scholar, so be it. I’d rather love art than classify it any day.
The Pop Beat

By Paulette Weiss

THE LIZARD KING LIVES

The first, and only, time I saw Jim Morrison in concert was in the very early Seventies. Back then, there was no doubt in my mind that he was God—not the God of the Bible, but most certainly the God of Rock-'n'-Roll. From his explosive entrance—a leap to center stage from the backstage shadows—to his equally abrupt departure underscored by Ray Manzarek’s sinister, throbbing organ accompaniment, Morrison’s performance fit his “Lizard King” image perfectly. Since then, time and maturity have changed my perspective on the man, but not my respect for him as both an extraordinary performer and a true original.

His band, the Doors—Morrison on vocals, Manzarek on keyboards, Robbie Krieger on guitar, John Densmore on drums—was one of the most popular American rock bands of the late Sixties, and one of the most influential. Morrison touched a whole generation of contemporary performers, perhaps Patti Smith most deeply. During his life he was much loved and much hated: loved by his fans, who hysterically crashed through police barricades to reach him, and hated by many of their parents, who formed decency leagues to protest his use of obscene language, both verbal and body.

In his great days, Morrison on stage was unpredictable and unforgettable. Wearing the tight leather pants that helped earn him the “Lizard King” epithet, he would fall to the floor as if shot, or he would cap a theatrical moment of silence within a song with a heart-stopping scream. As alcohol and drugs came to rule his performances toward the end of his career, his antics grew more embarrassing and got him arrested on charges ranging from lewdness to inciting to riot. (He died of what was generally accepted as cardiac arrest in 1971.) But in his prime, his theatrics were the focal point of the Doors’ music.

Even had he lived and continued to perform, the passions Morrison aroused would almost certainly have cooled. What he originated in the Sixties has become commonplace in the sophisticated Seventies. But memories of his past accomplishments have remained strong with a large segment of the modern rock audience, and this is proved by the enormous interest in “An American Prayer” (Elektra 5E-502), a posthumously produced album made up of tapes of Morrison reading his poems, lyrics, and stories with back-up music provided by the three surviving members of the band. The album went onto the pop charts immediately when it was released last December, though it was never a heavy contender for the Top Ten.

“It won’t zoom up to Number One,” Ray Manzarek said shortly after its release, “but I think it will have a long life. Five, ten years from now it will still be just as valid as it is today.”

But is “American Prayer” valid today? Can new music by the Doors tacked onto a monologue recorded more than eight years ago do justice to Morrison? Even if it were artistically successful, why release a rock-based disc with literary ambitions at a time when literacy itself seems to be dying, when young rock fans often can’t (and often aren’t required to) read, let alone deal with the complexities of poetry?

The truth is that “American Prayer” sounds more than a bit old-fashioned, faintly reminiscent of beat poetry read in the dark coffee houses of the Fifties. Yet it is a strangely moving, strikingly cohesive, and
above all, entertaining album for reasons that go beyond mere nostalgia. Interspersed with Morrison's voice and the new music are snippets of tapes made at his concerts (including crowd noises) and two previously recorded songs. The editing throughout is simply superb. Particularly effective is a chilling segment featuring a telephone conversation in which Morrison confesses to having murdered someone, his words punctuated by lines from the ominous Riders on the Storm originally recorded for the 1971 album "L.A. Woman" (Elektra 75011).

"We were quite aware that kids don't read, and we wanted to make this album a soundtrack to a movie, a movie the listener makes up in his own mind," Manzarek continued.

"This was a bitch to cut. [From inception to completion the project took three years.] We had compiled maybe five hours of Jim talking, Jim reading poetry, Jim's in-between raps at concerts. It was like doing a jigsaw puzzle with no guiding picture on the cover. It's amazing how well some of it works. It's partly because of a communal consciousness within the band.

"A perfect example of this happened a long time ago when we were recording When the Music's Over, which is a long, improvisational theater piece. There we were with studio time booked, and Jim was gone on one of his midnight creeps. There were certain parts of the song that were set and certain parts where we'd totally follow Jim. So when we put the instrumental tracks down, we tried to approximate what we thought Jim might do. He finally came by to do the vocal overdub, and we sat there with every finger and toe crossed. He did it in two takes. He put his brain on automatic and followed what we had done perfectly. It was almost miraculous."

A sense of the affectionate admiration Morrison's colleagues had for him permeates the new album, making it an especially warm tribute. "John and Robbie and I were like the Shaman's band," Manzarek said. "Whenever the Shaman would go into his trance, the rest of the tribe would sit around and play rattles and drums, keeping the rhythm going. That's what we did in Light My Fire, kept that rhythm going over and over." And that's what they did in the new album. That rhythm runs throughout "American Prayer," picked out Indian-fashion with rattles and drums, and the ritual nature of the whole disc is emphasized by an introduction in which Morrison shouts, "The ceremony is about to begin." Despite the album's construction as an integrated whole, certain passages, such as Ghost Song and Roadhouse Blues, have been excerpted and played on rock stations, and they hold up well on their own.

The Doors originated their brand of entertaining in 1966. Back then is simply hard to hear a rock organ like Ray's, and no one had screamed of death, failed love, sex, and terror as Jim did. But what was truly disturbing then has been reduced almost to parody in the Seventies by such performers as Alice Cooper and Kiss.

"What a strange, boring, money-grubbing, sensationalistic time this is," Manzarek explained. "Sensationalistic in a pathetic way!" His observation underlines the value of this voice from the past. "An American Prayer" is a fitting memorial to the man who helped shape, for better or for worse, the music known as rock.

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APRIL 1979

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Which is More Accurate?
An advance look at a large part of the 1979 hi-fi product lineup

By Peter Mitchell

Aiwa's stereo tuner S-F22, preamplifier S-C22, and direct-coupled amplifier S-F22 are examples of Japan's new "minicomponent" trend (note the little rack handles). See page 77 for details.
The Audio Market

To the major Japanese hi-fi manufacturers, audio is a business, not a hobby. This is not the trivial truism it may seem. Many American and British hi-fi companies, especially those specializing in "esoteric" audioophile products, were started and are still controlled by engineers and hobbyists who, believing that they had found a way to make more highly refined products, formed companies to manufacture them. In such companies the introduction of new products usually awaits an opportunity to incorporate a significant technical advance. But a number of the major Japanese manufacturers are into hi-fi the way General Motors is into cars. The major Japanese audio manufacturers have impressive research and development centers creating potentially interesting product ideas, but they also invest a great deal of money and manpower in market analysis to determine what will sell. And new-product decisions are shaped at least as much by market analysis as by advancing technology.

During a factory visit, Technics presented to visiting U.S. observers an explicit review of their vision of the hi-fi market—a view that dovetails neatly with the views expressed by other major manufacturers and illuminates the selection of new products shown at the fair. As they see it, the best opportunities for growth of the hi-fi business are in three areas:

- **The marriage of audio with video.** With the domestic Japanese market this specifically involves marketing audio components for the reception and decoding of stereo television sound right now. This is expected to evolve ultimately into the concept of the complete component home-entertainment theater: video discs and tapes, as well as broadcasts, all with wide-range stereo sound reproduced via stereo components and the picture viewed on large-screen projection TV. Meanwhile, the tie-in between audio and video is expected to yield both marketing and technical advantages. For instance, in the U.S. about 98 percent of homes have TV sets, while only a comparatively small number have component audio systems; if the introduction of stereo TV sound were to persuade even a third of the TV-set owners to purchase audio components to reproduce TV sound better, that would represent an enormous jump in audio-component sales. The important technical tie-in between audio and video, of course, is based on the fact that the technology of video disc and tape systems is easily adaptable to the requirements of digital audio.

- **An expanded environment for stereo sound.** The complexity of conventional stereo components limits their mass appeal, and in most homes the size of stereo gear limits its use to just one room—and even there it may fit in rather awkwardly. Therefore stereo components can be increased in appeal simply by making them somewhat simpler (easier for non-hobbyists to use) and smaller (easier to fit into a variety of living environments). Most of the Japanese manufacturers are introducing diminutive "mini" speakers and "mini" components intended to bring high-quality stereo sound to bedrooms, kitchen and bathroom areas, vacation condos, vans, mobile homes, and even to upper-class living rooms where bulkier equipment would clash with the decor. Major Japanese manufacturers are also expanding into the professional audio field to market equipment for "community" sound systems: disco systems, live-performance sound reinforcement, church audio systems, clubs. And further marketing opportunities are envisioned for audio applications in medicine, for sensorial education of infants, for new classes of portable equipment—and, of course, for increasing both the quality and diversity of automotive stereo components.

- **The era of super-fi.** So far this view of hi-fi's future has been a matter of expanding the market without necessarily improving the achievable quality of sound reproduction. The concluding category is centered on digital technology: digital recording and playback, digital signal processing, and the use of digital control circuitry such as microprocessors to achieve greater operating convenience as well as significantly better sound quality.

I attended both shows as part of a group tour organized by Dempa Publications, a Tokyo-based publisher of several Japanese and English-language trade magazines and newspapers. The tour included several visits to audio factories in Tokyo, Yokohama, and Osaka. By a stroke of luck the end of this trip coincided with the start of the Taiwan Electronics Show in Taipei, providing a chance for a look at the burgeoning electronics industry of the Republic of China, which some Japanese industry leaders view as a potential threat to Japan's present world-wide dominance of the consumer electronics business.

The Audio Fair provides an advance look at a large part of the 1979 hi-fi product line-up, since many of the products which were introduced in the Far East in October will make their first appearance in the U.S. at dealer trade shows during the spring and summer (especially the Consumer Electronics Show in Chicago, early in June). But the show, the factory visits, and discussions with manufacturers also provided a larger perspective, from the point of view of the major Japanese manufacturers, on the trends that will dominate the hi-fi market, both here and in the Far East, during the next several years.

With this perspective on the market as seen by the major Japanese manufacturers, we can now look more knowledgeably at the specific products and trends revealed at the Audio Fair.

Video

Since Expo '70, Japan's NHK-TV has been conducting periodic experimental bilingual television broadcasts with two separate sound channels. On September 28, 1978, Japan became the first nation officially to authorize routine TV broadcasting with two-channel sound; at the broadcast station's discretion the second channel may be used either for a second language or for stereophony. So, for the domestic Japanese market, the most important news at the Audio Fair was the proliferation of stereo TV-sound tuners from nearly every major manufacturer. But these won't make it to the U.S. for at least two or three years, since our FCC is not expected to approve a method for stereo TV-sound broadcasting before 1981 or 1982 (Pioneer has nonetheless already introduced a monophonic version of its TV-sound tuner here, and other manufacturers may do so as well).

Incidentally, the groundwork for wide-band stereo TV sound has already been laid in this country: the Public Broadcasting Service is using a satellite for network relays, and since January 1978 AT&T has been employing a duplexing system to piggyback network audio with the video rather than carrying it separately via low-fidelity telephone lines. Thus, full-bandwidth low-distortion sound is now available from network TV, and the only barrier to stereo TV sound is the development and FCC authorization of a scheme to send it from your local TV station to your receiving antenna and unscramble it in your home. The Japanese have adopted a multiplexing scheme similar to that employed in conventional stereo FM broadcasting. While in Tokyo I enjoyed an excellent series of live symphonic and chamber-music TV broadcasts in prime time on NHK-TV, plus a portion of a baseball game with crowd noise in stereo. Numerous bilingual (usually Japanese/English) broad-
casts are also available. (For that sort of program you listen to channel A or B.)

Of course, if you are receiving stereo TV sound broadcasts, you will want your videocassette recorder to tape both channels of sound with the picture. Videocassette recorders presently available in the U.S. are mono machines, but Toshiba and Sanyo showed Beta-format videocassette recorders; in the Pioneer exhibit was a display of a VCR’s with stereo sound recording, and others are reportedly in the works. As is the case with audio cassettes, the new videocassettes will have compatible sound tracks playable on either mono or stereo machines; in the Toshiba stereo VCR, for instance, the audio head is in the same place as in earlier Beta-format recorders: the standard 1-millimeter audio track is replaced by two tracks, each 0.35 millimeter wide, with a guard band between them to maintain channel separation.

Logically, the next step is the total component video system. In addition to TV audio tuners, Technics, Pioneer, and Sanyo introduced separate video tuners intended to feed pictures to a simple “monitor”—a TV set devoid of tuning controls, r.f. stages, audio circuits, and other parts that would be redundant. Sanyo, Sharp, Panasonic, and others showed large-screen projection TV systems, all employing separate projection tubes for red, blue, and green in order to achieve maximum brightness and resolution rather than the less costly (and less effective) one-tube approach. Another novelty which attracted a lot of attention (even though it is not quite new, having been shown in Europe a couple of years ago) was the “picture in a picture”: a small black-and-white picture nestled in the corner of a full-size color TV screen. The secondary picture can be used to monitor programming on a second channel or can be fed from a closed-circuit camera to show activity in your children’s playroom, your front hall, etc. Video cameras, both black-and-white and color, were present in great profusion. The color-camera displays were impressive in demonstrating the color fidelity of the systems; one manufacturer set up a comparison between an aquarium tank filled with tropical fish and a live replay of the scene using his camera and color monitor, while another used brightly attired trampoline acrobats for the same purpose.

Despite the popularity of videocassette systems, Pioneer believes its best bet for market leadership lies in the videodisc. The Pioneer exhibit was dominated by a display of the Discosvision system manufactured for MCA by Pioneer; the color-TV picture was impressively free of the grain that most vid-}


tape adapter/encoders to develop their own compatible standard. All of the various prototype VCR adapters already employ the same digital sampling rate (44.056 kHz), and all use some form of thirteenth-bit pulse-code-modulation (PCM) encoding, so with a little cooperative effort a common encoding format could be adopted. Digital-disc systems, however, may not be readily united into a common format; the digital-disc players that have been publicly demonstrated differ not only in their encoding formats but also in the physical characteristics of the discs and hence the playback mechanisms used to reproduce them. And comparable differences naturally exist in the physical characteristics of the various videocassette systems as well.

Tape

Not surprisingly, the most-promoted innovation in recording at the fair was pure-metal tape: 3M, TDK, and Fuji were displaying pure-metal tapes said to be similar in performance and in bias requirements. Prototype cassette machines designed to employ the tape were shown by Toshiba, Sansui, Luxman, Sanyo, JVC, Yamaha, and possibly some others I might have missed. The Yamaha X-21 prototype was also the only cassette machine in evidence that could employ a 31⁄2 ips tape speed, but Yamaha’s representatives made it clear that this exhibit was intended only to show what can be done to elevate the performance of the cassette medium by combining metal tape and doubled tape speed; they have no plans to offer the machine for sale. When I asked executives of JVC and other leading recorder manufacturers about plans to market two-speed cassette machines as B.I.C. has done,
they agreed that the Philips license under which they make cassette recorders permits only the standard 1/4 ips. So they intend to focus on ways to upgrade performance at that speed.

One of these ways involves new noise-reduction systems. The interest sparked by direct-to-disc, digital, and pure-metal-tape recording systems has made it clear that there is a market for recorders having greater signal-to-noise ratios than the 65 dB or so that is common to Dolbyized cassette decks and non-Dolby high-speed open-reel machines.

In the U.S., dbx has found a ready market for its wide-range compander systems, and at least five recorder manufacturers—Toshiba, Sanyo, N.A.D., Nakamichi, and JVC—have different (and incompatible) compander systems, either for inclusion within their new cassette models or for sale as outboard accessories. Toshiba’s ADRES (Automatic Dynamic Range Expansion System), available both as an outboard unit and built into the top-of-the-line Toshiba cassette models, employs a 1.5:1 compression-expansion ratio, with equalization intended to eliminate any audible noise modulation (“breathing”). Sanyo’s NR500 is a 2:1 compander. And Nakamichi has become the first licensee of the “High-Com” compander system designed for metal-particle tape and direct-to-disc, digital, and pure-metal-tape recording systems. The interest sparked by such machines that caught my eye: the massive $4,500 Teac F-1 with its non-Dolby high-speed open-reel machines.

The top machine in the JVC group (KD-AR, S750) also features an impressive tape calibration system—a microprocessor which automatically records various test frequencies and fine-tunes the recorder’s bias, equalization, and levels to match the tape. (A Hitachi cassette deck with a similar automatic tape-matching processor was unveiled in Europe several months ago.)

Microprocessors used as automatic program locators were also in evidence in new recorders from Sony and Technics; by keeping track of the intervals of silence between selections, they display the selection number on the front panel and can be directed to cue and play selections in any desired order. The most visible trend in the new generation of cassette decks, however, is the continuing disappearance of moving-needle meters. A few could still be found, but most new cassette models at every price level were sporting luminescent peak-reading level readouts—red LED “ladders,” blue-green fluorescent bar graphs, or multicolor liquid-crystal displays. Another evident trend is the provision of remote control, via either a long cable or a wireless transmitter.

Yamaha introduced two attention-getting cassette decks. The K-2 bids for “best buy” status in its class: at a list price of about $400 it offers three-head recording using co-housed record and playback heads, double Dolby circuits for simultaneous recording and playback monitoring, and a sound-on-sound/echo control that mixes the delayed playback signal with the input to add echoes or reverberation to sound, among other features. The $550 K-1 has a special head made with a vacuum process and a control that fine-tunes the highest frequencies of the recording equalization.

Interest in the Elcaset continues to decline; only one new Elcaset deck was in evidence at the Audio Fair, an efficient-looking portable from Sony. Among new open-reel tape-deck entries, only one 7-inch-reel machine drew attention: the Technics RS-777, featuring a superb isolated-loop tape transport for very low levels of flutter and modulation noise. But large semiprofessional tape decks with 10½-inch reels continue to be popular with Japanese audiophiles, judging from the number of decks on display at the show and in retail stores in Tokyo and Osaka. Among such machines that caught my eye: the massive $4,500 Teac F-1 with its...
with a radial-tracking tone arm and remote control. And the Marantz entry was a two-armed affair with not a speck of wood in its construction, the platter and base consisting of alternating layers of brass and plate glass. Sansui has developed a tone arm whose construction, the platter and base consisting of alternating layers of brass and plate glass.

The most conspicuous new-product category is the "mini" (or "micro") component; nearly every major manufacturer introduced a family of them. (For more information on these, see Larry Klein's comments on the facing page.) Among full-size components, rack mounting, either as an option or standard, has become almost universal, and the standard colors continue to be white/silver and black (some manufacturers offer distortion) at power levels up to three watts or so, moving into class B only for those times when an amplifier is called on to deliver larger amounts of power. Sony is one of several Japanese manufacturers offering an amplifier which can be switched by the user to either class-A or so-called class B with high power available. (Actually, no high-fidelity amplifier operates in pure class B, since doing so would generate large amounts of crossover distortion every time the waveform switched from positive to negative.) Among audiophile-class super-amplifiers, Technics offers a "class A+" and JVC introduced a "class Super-A" design; both involve the use of a dynamically varying bias on the output transistors, combining the efficiency of class-B operation with the freedom from crossover switching that class A yields. Pioneer introduced a floating-bias amp of its own design, calling it a "non-switching" amplifier to avoid the semantic arguments over the "true" definition of what constitutes class-A operation; a Pioneer representative claimed that their floating-bias circuit costs very little more to manufacture than a conventional quasi-class-B circuit. The Pioneer exhibited a comparative oscilloscope display of the residual distortion waveforms of a conventional quasi-class-B amplifier (the Pioneer 8500/II), a pure class-A unit (Pioneer's Series Twenty Model M-22), and the new non-switching amplifier, illustrating that the new circuit was as free of crossover distortion (and, indeed, other forms of distortion) as the pure class-A design, but without the latter's costly inefficiency.

Speakers

At a show, listening to unfamiliar recordings in acoustically abnormal environments, it is difficult to judge the quality of loudspeakers, so I can report only that most of the loudspeakers demonstrated at the Audio Fair seemed basically similar in design to earlier products by the same companies, and in most cases no claims of radically improved performance were being made. The only genuinely impressive demonstration was in the Onkyo room, where the new Onkyo SL-1 subwoofer system was generating awesomely deep, clean, and powerful bass fundamentals. The $800 SL-1 contains its own built-in 75-watt PWM (pulse-width-modulation) amplifier driving an 8-inch acoustic-suspension woofer mounted in a subcabinet sealed within the SL-1. The acoustic pressure produced within the SL-1's main cabinet by the 8-inch cone provides the driving force for the flat, freely suspended 15-inch diaphragm; since the system is sealed, the operation is analogous to that of a hydraulic booster. Pressure generated by the small driver is applied pneumatically to the large 15-inch diaphragm, which therefore is driven over its entire surface, minimizing cone-breakup problems. The motion of the 15-inch flat diaphragm is then imparted to the air in the listening room.

Several flat-panel loudspeaker systems captured my attention at the fair. Starting with the more-or-less conventional approach, Stax showed two new full-range electrostatic designs whose smooth sound befitted their
**THE NEW MINI COMPONENTS**

Sanyo’s minicomponents: top to bottom, cassette deck, digital tuner, and amplifier.

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**THIS MONTH’S COVER**

Easily hefting an example of his work, the diminutive but powerful Mr. Transistor holds aloft a Toshiba F15 tuner (1) while a Gale GS401A speaker (9) supports a Toshiba C15 preamplifier (2), a Toshiba M15 power amplifier (3), a Randix Audiologic LX407 tuner (4) with matched LX40A integrated amplifier, a Technics ST-G1 tuner (5), a Technics SU-C01 preamplifier (6), and a Technics SE-C01 power amplifier (8).

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*You'll see it both ways, but "mini" (as in "minia¬ture") is to be preferred to the more common "micro" (as in "microscopic") for obvious reasons.*

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**ONE of the unexpected bonuses of a recent trip to Japan (courtesy TDK) was my first opportunity to wander about on my own in the Akihabara "radio-row" district in Tokyo for the better part of a day. In Akihabara there are perhaps three hundred stores, shops, and stalls engaged in wheeling and dealing in electronic hardware. In one flea-market area I found everything from half-assembled, factory-surplus brand-name tape-deck chassis to color-patterned resistor-capacitor displays that looked good enough to eat. Other stores on side streets specialized in wire, knobs, chassis, and other electronic items. And, of course, there are the strictly audio stores that far exceed, in their profusion of products and depth of stock, anything I've seen anywhere else in the world. At first glance some of these enterprises seem to have on display every model by every Japanese manufacturer—and dozens by U.S. manufacturers as well.

The audio shops are therefore a kind of hi-fi show—but with a big difference. You can be sure that anything that is on display there is long past the prototype stage and that it represents at least a moderate investment in engineering and assembly-line tooling. The blue-sky, hand-made components commonly on display at Japanese audio fairs (intended in many cases only to demonstrate a manufacturer's capability) won't be seen in audio stores. Nor will those components that represent a manufacturer's testing of the marketplace, nor those that do not lend themselves easily to mass production.

Since the new components on the audio dealers' shelves represent the here-and-now of the Japanese homeland audio business, they usually provide somewhat more substantial clues to the equipment about to be seen in the U.S. than an audio fair would. Take, for instance, the new (and slightly confusing) Japanese interest in so-called "minicomponents." Virtually every major manufacturer has produced a full line of these components, including preamplifiers, power amplifiers, integrated amplifiers, tuners, and cassette decks. At the time of my mid-November visit, most manufacturers seemed to have no more than a half-dozen or so different minicomponents in their lines, but if the "mini" category is successful in Japan—it's still too early to tell—then more (and somewhat different) products are inevitable.

There is a certain aesthetic charm to the minicomponents that I find hard to resist. The urge to turn their knobs and push their buttons is not unlike the urge to pet a puppy. But what of the performance aspect? The power ratings of the miniamps seem to peak at about 60 watts per channel or so, with a few above and many below that rating. The minitors, in general, employ the latest technology, with digital displays, quartz-controlled frequency synthesis, digital memories, and so forth. The minipreamps range from those with conventional switching and flexibility to a few models with digital control circuits. The cassette decks are more or less full-feature, front-loading units with a tendency to incorporate electronic or microprocessor transport controls rather than mechanical ones. All in all, a good-looking, technically up-to-date (and, I suspect, fine-performing) group of components.

One intriguing aspect of this new development is the fact that minicomponent electronics have already inspired a significant increase in the population of minispeakers. This has a surface logicality from the standpoints of aesthetic consistency and space saving, but in the technical sense it is slightly nutty. Everything else being equal in performance, the smaller the speaker system, the more power is needed to drive it. A minispeaker system with a reasonable bass response might require an amplifier with a power output of 50 watts per channel to realize its full potential. The same performance could be obtained from a somewhat larger speaker system being driven by a 20- or 30-watt amplifier. In addition, the power-handling capability of a minispeaker is almost always more limited than that of a larger model—it not only won't play as loud for a given input signal, but it can't play as loud (with any signal) as a larger speaker. (This does not mean that the new Japanese minispeakers are necessarily inferior to those already here under a variety of brand names; my comments are directed to the minispeaker category in general.) Aside from these 'efficiency' and power-handling considerations, the sound produced by some of the minispeakers now available can be nothing less than startlingly good when driven by an adequately powered amplifier.

In respect to all components except power amplifiers, I see no reason why a mini should be any more expensive than a component of conventional size. The mini should provide a cost saving on chassis metalwork and shipping, of course, but I've been told that these savings may be negated because the small units are somewhat more difficult to assemble and use more expensive miniaturized parts. In the light of many visits I've made to electronic assembly plants here and abroad, I tend to doubt both propositions. It is conceivable, however, that the miniamps have an extra expense involved in their high-frequency switching-type miniaturized power supplies.

I await the arrival of more minicomponents on these shores with interest. A few have already been introduced (see this month's cover), but they represent a drop from a very large Japanese bucket. Potential importers of the units are probably all bothered by the same unanswered question: is it possible to successfully go against the "bigger is better" bias that characterizes so much of American life?  

—Larry Klein
headphone amplifiers to assist in playing the recordings back; and antistatic record-care preparations with delightfully euphonic brand names. Orsonic showed the Atlas SG-1 Side Force Checker ($70) which measures the residual error in your tone arm's skating-force compensation while a record is actually being played.

Luxman, Sanyo, and JVC introduced a new product category likely to prove very popular: the "equanalyzer," a graphic equalizer and octave-band real-time spectrum analyzer combined in the same chassis. The analyzer, displaying on banks of LED's the energy level in each octave of the musical spectrum, is a convenient and versatile device for assessing the response of tape recorders, speakers, and the acoustics of the room, while the equalizer provides the corrections which may be needed to arrive at uniform response. The spectrum analyzer is also an instructive tool, of course, as it reveals the sometimes-surprising distribution of energy in musical sounds.

Now that we've seen what is Over There, the big question is, when will it all get Over Here? The answer, if past experience is any guide, may well be never for many of the products shown. For reasons best known to themselves, Japanese manufacturers have in the past tended to keep their most esoteric products at home, devoting their export energies to those components that might be expected to find quick high-volume sales abroad. Just recently, selected pieces of Japanese esoterica began to make quiet appearances in the most exclusive U.S. audio salons, but there is much more where they came from that has yet to be seen.

As for the more traditional Japanese export products—receivers, integrated amplifiers, box speakers, and all the rest—we can confidently expect them to begin arriving on these shores almost as fast as boats and planes can bring them. Many will no doubt turn up at the Las Vegas Consumer Electronics Show, imminent as this is being written. Others may wait for Chicago's CES in June. But whatever the timetable, they are definitely in our future.

**Accessories**

A great many accessory products are available to Japanese audiophiles, few of which have been exported to the U.S. so far. Among these are a vast array of digital timers of varying degrees of complexity (and price) for activating tape recorders and other parts of a stereo system at designated times; remote-control units for tape recorders, some using infrared transmitter/receiver systems; tone-arm head shells of assorted materials which are said to affect or correct the coloration of the sound in subtle ways; dummy heads for binaural recordings, plus...
6 records have never been lowered, lifted, programmed and played like this before. Even remotely.

You touch a few buttons. A record lowers gently on to the platter. The tonearm lifts, glides silently over the record. Past the first track, the second track, the third track, and lowers to play the fourth track. The music you wanted to hear first.

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CIRCLE NO. 7 ON READER SERVICE CARD
PARANOIA can be a lot of fun, especially if it turns out to be justified (or as A. J. Weberman, the guy who used to poke around in Bob Dylan’s garbage, observed, “Just because you don’t think they’re out to get you doesn’t mean they’re not”). That, it seems to me, is why the children of the Sixties, who responded to their parents’ paranoia (There’s a Commie Under Every Bed) by growing one of their own (There’s a C.I.A. Agent in Every Woodpile), have become so blase about the sensational revelations of the Seventies—from Watergate to Chile to the Bullet from the Grassy Knoll—that they shrug off each fresh outrage with a bored yawn and a dip in a hot tub. After all, what could possibly be more paranoid than to consider that red-baiting Senator Joe McCarthy was not only a morphine addict (!) but got the stuff personally from Harry J. Anslinger (!!), the Federal Narcotics Bureau chief responsible for the whole “Assassin of Youth” PR campaign? I may have a limited imagination, but I can’t see how even the most lurid hallucinatory vision could top that one for paranoid surrealism.

Not only is paranoia fun, but in its lesser manifestations it’s also an eminently useful commodity, producing some great comedy of both the intentional and unintentional varieties. Jacki Mason, for example, once remarked that he didn’t like to go to football games because when the players hustled he was positive they were talking about him; Woody Allen has practical-based his entire career on the idea that the Universe is rigged; and New Yorkers in particular have gotten much yucks out of a variety of paranoid graffiti artists, from the anonymous wacko who spray-paints warnings about leprosy in Times Square to the great William H. Depperman, the ex-Yippie who plasters the subways with hand-lettered posters linking the Rockefellers and Hong Kong film mogul Run Run Shaw as prime movers behind both the Kennedy assassinations and the death of kung-fu star Bruce Lee.

In other words, not only is paranoia my generation’s own brand of slapstick, it’s our birthright. We’re paranoid, by God, and proud of it. But what has any of this got to do with Frank Zappa, whom I interviewed (for want of a better word) recently? Quite a bit, probably; the politics of paranoia go a long way, I think, toward explaining both his work over the last fifteen years and the special relationship he has with his extraordinarily loyal audience. Zappa is both a child of the times, obsessed with technology and with the elimination of the distinctions between pop and serious culture, and a fascinating throwback to the nineteenth-century stereotype of the eccentric genius. In fact, if there is anyone, upon sober reflection, he reminds me of, it’s not his beloved Edgard Varese, or even a charmer weirdo like Erik Satie, but rather the ever unpopular Max Reger, who was brilliant, iron-willed, and convinced that he was beset from all sides by enemies and fools. Like Reger, Zappa is capable of being pointedly amusing and abrasive (his favorite word for other people’s work is “swill”), but he seems constitutionally incapable of redirecting the mockery back toward himself; he gets off lots of good lines, to be sure, but never at the expense of Frank Zappa.

The following excerpts from our conversation, alternately witty, scathing, scatological, and thoughtful, should give you an idea of what I mean. I should add, by the way, that although we did not get along particularly well—at one point he called me a pinhead and I’m sure he meant it—I still respect the man as much as I respect anyone in pop music. After all, he plays a mean guitar.

**On just having hosted Saturday Night Live:**

“IT’s a very difficult thing to do; they never make it easy on anyone who hosts the show. All the direction and attention goes to the sketches. They’re not called skits—they become incensed if you call them skits—and it’s all designed to accommodate the people who are regulars on the show, so anybody who goes on there to host is at a severe disadvantage. Because they never tell you what camera is on, and you’re not supposed to memorize your script because they’re rewriting right up to air time. And so you’re looking at the cue cards, and unless you’re used to acting live on TV, you haven’t got a prayer, you’ll be looking at the wrong camera. It was really hard.

“And the other thing that happened was—and I didn’t find out about it until the day after the show—that the first day I went there for the meetings with them they didn’t like me and wanted to get rid of me. But no one said anything
to my face while I was working on the thing. So they had written dialogue for me to say that I wouldn't normally say; they wouldn't let me write any of my own stuff.

"I think I'd be a fantastic television personality. I think I'd be a real good interviewer if I had a talk show, or a variety show. I'd be really good at it. But just to get up there and be the dumbbell in A Night on Freak Mountain . . . . I mean, sure, I'll do that for a laugh, but I'm not gonna build a life on it."

On starting his own label, distributed by Phonogram:

"There's a certain amount of advantage to it because then I don't have to take any responsibility by identification for the other normal stuff they release. If they do something that's in bad taste in my eyes, then I don't have to be identified with it.

"One of the reasons for going with Phonogram is that they have a huge catalog of contemporary music and it needs to be repackaged. I've already had discussions with them; if they'll let me take all that stuff and release it on my label, I think I could help make the stuff sell.

"Last year, when I first had the discussion with the president of the company, he thought it would probably be a good idea, but after making so much money on 'Saturday Night Fever' it sort of slipped his mind. When I brought it up again after the deal was actually signed, he said, 'Did I say that? Well, if I said it we should probably do it.' There's really not much interest there.

"It's from all their European

branches, and old Mercury stuff; there's some Penderecki, some Roger Sessions, all that kind of stuff. And I think that the audience that buys my records would probably give it a whirl. Whether they'd like it or not is another question, but they'd give it a try if it was brought to their attention in the proper way. What I was gonna suggest was packaging the stuff in covers that look a little more intriguing to that particular market. Maybe racking the stuff in a special section of the store, so that maybe twelve selections that were gon-
nerds who have only one thing in mind: how to make themselves look good.

"They could [sic] care less for the people who make the music, or do the actual work of touring. And there's always this attempt to make it look like, 'Oh well, this is all shit really, and since I'm dealing with a really pure art form, then fuck all these guys who play rock-and-roll. Like, I'm an intellectual, and of course you're an intellectual too; you read. You're not just sitting in a hockey rink listening to rock-and-roll, you're a reading person. So we'll just

On the English music press and rock criticism generally:

"If I were to be a bigoted individual, I would probably select the English as the target of my bigotry. The English press happen to be the most loathsome group of people I've ever had to deal with in show business. It's not just trendiness; they're so fucking two-faced and snotty. The concept behind what they write, the motivations for writing, and the whole attitude they have toward the people they write about—I really could live without it. They make me sick.

"People who write about me don't know anything about me. And to make matters worse, they don't know anything about writing either; people should be licensed to operate a typewriter. And so the image of me that goes out is all through the eyes of these

communicate with each other and bypass all this musical swill that's going on because the printed word is Where It's At.'

"This kind of subliminal attitude that permeates all of rock journalism is one of the things that makes me sick. Because these guys aren't even competent to do it; the people that write that stuff aren't competent to pull that gag off. When was the last time you read anything in any of those [rock] publications that dealt with the music? It's all peripheral.

"I am a multidimensional person. I have a great respect and admiration for r-&-b, and dumbbell music, and electronic music, and symphonic music, and all that stuff. It appeals to me. I like to function in all those media. I feel comfortable in each and every one of them, and I'm just going to go ahead and write the music to suit me, and it is what it is. If it's Louie Louie one day, and something else the next, what's the difference? It's there for me to enjoy it, and after I enjoy it, if there's anybody else that happens to like it, that's a bonus." (Continued overleaf)
FRANK ZAPPA

“I did two things that were definitely a no-no then. One, making fun of the Beatles... two, I made fun of hippies.”

- On charges of thinly veiled condescension toward his public, especially in his early albums:

“Nothing that I’ve ever done is planned to be misinterpreted. And I always know before I do anything, including this interview, that it’s subject to misinterpretation, erroneous transcription, and editorial tweezage. The final ultimate blow is when the guy reads it and doesn’t know what the fuck I’m talking about.

“Now let’s take it point by point. ‘Freak Out’ [his 1966 debut effort with the Mothers of Invention] was never an instruction manual for anyone to go out and behave in a weird way. If you take all the lyrics on the album and see what they say, as opposed to what the liner notes say, then you find that you don’t have anything to talk about. Because what you’re referring to as the contents of the album is really a reference to a definition of the term ‘Freak Out’ as included on the jacket cover.

“Now in terms of the third album [‘We’re Only in It for the Money,’ with the infamous ‘Sgt. Pepper’ cover parody] biting the hand that feeds, and ‘oh! the ingratitude’—here’s the way it goes. Anybody who turns into a hippie for these instruments, and we will continue to be misinterpreted. And I always knew before I did anything, in my stuff, and I go around delivering scores to orchestras. I’m available.

“But let me give an idea of what that entails. They attempted to commission me in L.A. one time like this: ‘If you will buy two concert grand pianos and donate them to UCLA, then we will commission you to write some music for these instruments, and we will descend to play it.’ Real crass, when you stop and think how much two concert grands cost, and how they figure ‘Well, we’ll give it two rehearsals and get this shit out of the way, and get the pianos and run with it.’ That pisses me right off.

“And always, if I present a score to somebody, they always want to know if there’s a possibility that the group is available to make an appearance at the concert, y’ know, just to put a little extra grease on it and sell a few more tickets. And then, still, all they talk about is two or three rehearsals. Like when we did 200 Motels with the L.A. Philharmonic, 14,000 people came to that concert, which was the largest audience they had that year. They were all very impressed. Well, I had to pay the copying bills. Which were ten thousand dollars. Why should I have to pay for it? I really write good.

“I’m in a peculiar position because a composer who wasn’t working in the world of rock-and-roll who might not have access to the kinds of facilities that I do would never be approached by these business people. Like I doubt that they’d go up to Elliott Carter and say ‘If you will buy...’ They don’t do that.”

- On his future:

“Generally, I will continue to operate in the areas that I operate in, except that some of them may become more important. I can’t see myself in a garage; I can see myself in a basement.

“I’m elder, that’s for sure, but I’m not much of a statesman. I just do my work.”
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CIRCLE NO. 48 ON READER SERVICE CARD
to celebrate its Record of the Year Awards for 1978 at New York's St. Regis Hotel on January 8. There were twelve awards and twenty-four honorable mentions (see February 1979 issue) to fuel the festivities, in addition to the magazine's Award of Merit (for outstanding contributions to the quality of American musical life) to operatic superstar Beverly Sills, who is seen (1) accepting the framed certificate from Joel Grey (currently starring on Broadway in the musical Grand Tour) as Stereo Review's publisher Edgar Hopper looks on. (2) Publisher Hopper presents Miss Sills with the original cover art for the February issue, the work of celebrated caricaturist Al Hirschfeld. (3) Miss Sills with (unmistakably) her mother, Mrs. Morris Silverman; (4) with (left) John Mazzolai, president of Lincoln Center for the Performing Arts, and (center) William Livingston, Stereo Review's Executive Editor; (5) with singer (the Inimitable) Hildegarde; (6) with Ethel Merman, First Lady of the American Musical Theater.

At (9), the indefatigable Merm charms James Roy, concert-music administrator with Broadcast Music Inc. (10) Julius Rudel chats with Paul Myers, Columbia Records Group's vice president of A&R. (11) Sponsor Davis, head of A&R for Island Records, gets the word from Dee Anthony, manager of superstar (Peters, Hampton and Allen, for example). (12) Publisher Hopper with Paulette Weiss, Stereo Review's Popular Music Editor, music biz attorney Richard Roemer, and Location Records' disco star Zelma. (13) Left to right, Ken Page, Mark Fergusson, Charlaine Woodard, and Amelia McQueen, all on their best behavior and all (except Mark, who is Charlaine's cousin) stars of the smash Broadway hit (and Stereo Review award winner) Ain't Misbehavin'.
The easiest way to make sense of the rise and fall and rise and fall and rise of the Bee Gees is to go back to 1967 when they arrived on the scene—in England and America—and think about hair. Hair was one of the most important things around in 1967. There was a cultural revolution going on, and the length of your hair answered the cliché question “Which side are you on?” before it was asked.

In the past, “longhair” was a semi-derisive term used to put down classical musicians and intellectuals in general—oddballs, according to the thinking of the shorthairs, who were by and large anti-intellectual and pro-throw-away-product, musical product includ-

ed. But suddenly, in 1967, it became fashionable for rock musicians not only to become long-haired but to try to produce something that might last longer than a month and to seek praise for it from those former outcasts, the intellectuals. The rock musicians who made this sort of thing fashionable were the Beatles. They were forever to haunt the Bee Gees.

Thinking about hair, you begin to realize that the Bee Gees hadn’t changed to fit the times quite as much as the times have changed to fit them: the thing that’s different about them now, and is paying off (!), is that the Gibb brothers finally realize short-haired rock is what they’re good at and ought to perfect. The Gibbs have, in fact, been fairly straight (spiritually short-haired) all along, strictly a pop band, and by 1960, when Barry was fourteen, the trio had a thirty-minute television show in Brisbane. Even then, the Gibbs were writing their own songs, and even now they will tell you they consider themselves first of all songwriters. Over the next six years they recorded several singles; they had thirteen flops and one hit, Spicks and Specks, which broke, legend has it, just when they were on the boat bound for England.

Just how malleable the youngsters were then shows in their first album, the 1967 Atco “Bee Gees’ 1st,” which is largely a reflection of various AM and FM radio influences. Nonetheless, its three best songs—New York Mining Disaster 1941, To Love Somebody, and I Can’t See Nobody—represented three facets of a genuine individuality, three song types the Gibb would return to again and again. Mining Disaster was a vignette, a cryptic slice of life, as was Massachusetts in the second album (“Horizontal”), I’ve Gotta Get a Message to You in the third album (“Idea”), and Come Home Johnny Bride (among others) in the fourth (“Life in a Tin Can”). Barry wrote To Love Somebody for Otis Redding, and it tried hard (as most of Barry’s writing today does) to show soul and rhythm-and-blues influences. And I Can’t See Nobody was the first good example of what England called “the crying songs,” in which Robin’s throbbing vibrato is usually prominent. So the first album not only suggested two or three possible futures for the Bee Gees, but it also suggested that their talent was short-haired—pop all the way.

But there were the Beatles. A lot of people thought it was the Beatles singing Mining Disaster at first. This similarity—in harmonic sound and spirit and in affinity for melody—raised high expectations for the Bee Gees, and they were not equipped to live up to some of them. One of the characteristics the Beatles and Bob Dylan had given long-haired rock was an emphasis on words. Despite their assertion, “Words are all I have to take your heart away,” the Bee Gees did not have—and still do not have—much of a way with words. When they made the songs impersonal, as in the vignettes, they could do a passable-to-good lyric (although the one for Massachusetts is basically inane-and-disjointed), but when they got personal they seemed to know how to do only one thing, wallow in self-pity. Back in Australia, they’d done one called I Don’t Know Why I Bother with Myself. They had found that the world was round and of course it rained every day, and that was about the size of it. What they really had were melodies, good, old-time, straight, lush ones. What they needed was what they’ve both got now, an audience that’s not into words.

Under the shadow of the Beatles, Pink Floyd, the Who, and other long-hairs, the Bee Gees’ own musical personality blurred progressively through “Horizontal” (a good crying album), “Idea,” and the original two-record Atco version of “Odessa” (now out again, on RSO, in one-disc form). They became increasingly vague about what it was they were trying to do. And then they split up. The end of the Bee Gees’ Phase One came with Robin’s solo album, “Robin’s Reign.” Barry and Maurice, still calling themselves the Bee Gees, countered with “Cucumber Castle.” Each was about as bad as “Odessa.” And then Barry and Maurice split up. Their solo albums are still in cans somewhere.

Phase Two started when they all got back together to make (on speed, they now say) the beautifully melodic and lyrically innocuous hit single Lonely Days and then the album “Two Years On.” Then they did the melodious and innocuous hit How Can You Mend a Broken Heart and the albums “Trafalgar” and “To Whom It May Concern” (which contained the melodic and innocuous Run to Me, which should have
Robin, Barry, and Maurice Gibb; they decided to join the air force (photos RSO Records).
I figure there are about a dozen ways to use falsetto that have never been tried before... I'm going to find every last one of them.

been a single). During this phase, 1971-1972, their work was extremely spotty; these were their worst albums. The emphasis in those days was on albums that stood up reasonably well as thirty-five or forty minutes of music, but the Bee Gees—even more than in Phase One—were still making the old, straight kind of album with a hit song and a lot of padding. They were, as usual, out of step with the times, only more so.

PHASE Three started when Robert Stigwood, their long-time manager, formed his own record label, RSO, and the Gibb brothers did something to reform their attitudes. They got into step with where the times had just been, but the thing was they did it with a new energy. The first result wasn't commercial, nor was the second, but "Life in a Tin Can" and "Mr. Natural" were among the most important mistakes they ever made.

"Tin Can" was—too late—an album album. By 1973 pop taste had started to swing back again toward the short-cropped three-minute song, but this one had mostly long ones (it was, however—finally—a fairly decent stab at long-haired rock). The lyrics weren't deep, but they weren't bubblegum either, and there were no throwaways, no atrocities like The Earnest of Being George or most of the stuff in "To Whom It May Concern." Commercially, it was a dud, but it was a pattern breaker: it marked the first time a sampling of Bee Gees non-hits had been listenable. In Phases One and Two, the public was always right about their songs; their hits were worth listening to and their non-hits were, by and large, junk.

If "Tin Can" was a cul-de-sac, aside from the focus of energy it managed, "Mr. Natural" was a transitional album. Arif Mardin, who had worked with such soul acts as Aretha Franklin and the Rascals, came in to produce it and no doubt shoved the boys toward the r- & b sound they were soon to embrace with gusto. Down the Road had a disco beat, and Throw a Penny, Heavy

BEE GEES ON DISC

A complete discography of the Bee Gees' work would be ponderous and of dubious value, since everything older than "Main Course" (with the exception of the reissue of half of the original "Odessa") is out of print. However, I do recommend scouting out a couple of the older albums, "Horizontal" (for its crying songs) and "Idea" (for its vignetted songs and futile attempts at long-haired rock); I've found both in secondhand stores. Less likely to turn up, but recommended, is "Life in a Tin Can" (RSO SO-870)—an example of the road not taken. "Mr. Natural" is also off the market (surely it will be reissued), but I'm pretty sure it, too, can be found at secondhand stores.

If you don't want to spend that much, and want new recordings only, "Bee Gees Gold, Volume I" is a good sampling of the "old" Bee Gees' work, especially seeing as how their hits were their best songs. The "Here At Last... Live" album (RSO RS-2-390) is, of course, a sampler of their stuff old and new. —N.C.
movie and with John Travolta (who's making a good living at living in the Fifties and the Seventies at the same time) and Yvonne Elliman and the other personalities involved, so it (and the Gibbs) cashed in accordingly.

With "Fever," "Children," "Main Course," and the 1977 "Here at Last... Bee Gees... Live" all on the market at the same time, not to mention Barry's songs for Samantha Sang and little brother Andy Gibb (both of whom seem to aspire mainly to sound just like Barry), plus the bastard version of "Odessa" (God knows why, with "Mr. Natural" off the market), the Grease connection, the Sgt. Pepper connection, the hit single Too Much Heaven (donated to UNICEF), and a few other odds and ends, the Bee Gees spent 1978 and threaten to spend 1979 selling records at the clip of one million a week.

Nobody has ever seen anything like it. Success succeeds so well that you won't hear many people point out that, hits or not. Jive Talkin', You Should Be Dancin', Boogie Child, and their ilk are nothing but puff, nothing but jive. As in Phases One and Two, the Bee Gees seem willing to blur their personalities so that is what it takes to get the strokes a trouper craves. (It is not all blur, of course: Nights on Broadway is quintessential Bee Gees with an updated beat.) In any case, they are getting so many strokes right now they can shrug off the stigma of being in Sgt. Pepper, widely celebrated as one of the worst movies ever made. They can probably shrug off even the irony of being haunt-ed by the (nonexistent) Beatles again. This was the first non-Gibb material they ever messed with, and look what happened. But the album sold even if the movie didn't—and even though the album was, at its best, limp, dim, and irrelevant.

Changing times are the biggest threat to the Bee Gees' lofty status. The kind of style that culminated in the Saturday Night Fever music (which Barry wrote, speaking of being in step with the times, before he read the script) more than likely won't last. Neither will the now-popular zest for uptown Saturday night decadence with recycled Fifties trappings (Barry also wrote the title song for the Grease movie without knowing how the story went), nor the high tolerance for trivia and disco, which came in and will leave together. Right now the Bee Gees are making catchy trivia, the perfect music to take with a grain of salt. But building new falsettos twelve ways may prove to be a little too trivial.

Even if times stay the same, the Bee Gees are going to find out how much harder it is to manage success than to manage failure (as Oscar Wilde said, the only thing worse than not getting what you want is getting what you want). How does one top Stayin' Alive? The Bee Gees are in the position of having to stay on top of the present, wherever it turns. But many of their new fans are nine to eleven years old, fickle little critters who would swoon back to Shaun Cassidy or Andy Gibb (or their replacements) at the drop of a record jacket.

And, of course, if hair becomes important again, the times will teach the Bee Gees how Neil Sedaka felt in 1967. But that wouldn't necessarily wipe them out. We must keep in mind that since the Bee Gees are not committed to disco and grease music, they are not dependent on it. They are committed only to being trouper. They can adjust away from disco and grease just as they adjusted to them. They can still write melodies and, even amidst a falsetto mania, they can still harmonize. And they can always count on some demand for short-haired rock on AM radio, which is now their domain.

They will never rival Jackson Browne or Randy Newman as lyricists, and they'll probably never come any closer to making good long-haired music than I Started a Joke or parts of "Life in a Tin Can." Some of their tunes will stay around for quite a while because the melodies are so fetching, but with the possible exception of Stayin' Alive and barring some new surge of crying-song creativity, I think those will be mostly their older tunes. I don't predict another cultural revo-lution, but given the action-reaction scheme of things, I wouldn't exactly be surprised by one. And there, at least commercially, the Bee Gees have a big thing going for them: juggernauts are famous for their inertia. It takes a while to get them stopped.

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**IDEA.** Let There Be Love; Kitty Can; In the Summer of His Years; Indian Gin and Whisky Dry; Down to Earth; I've Gotta Get a Message to You; Idea; When the Swallows Fly; I Have Decided to Join the Air Force; I Started the Joke; Kilburn Towers; Swan Song. Atco SD-33-253.

**MR. NATURAL.** Charade; Throw a Penny; Down the Road; Voices; Give a Hand; Take a Hand; Dogs; Mr. Natural; Lost in Your Love; I Can't Let You Go; Heavy Breathing; Had a Lot of Love Last Night. RSO RS-1-3006.

**CHILDREN OF THE WORLD.** You Should be Dancing; You Stepped into My Life; Love So Right; Lovers; Can't Keep a Good Man Down; Boogie Child; Love Me; Subway; The Way It Was; Children of the World. RSO RS-1-3003.

**BEE GEES GOLD, VOL. 1.** How Can You Mend a Broken Heart; Holiday; To Love Somebody; Massachusetts; Words; Lonely Days; Run to Me; I've Gotta Get a Message to You; My World; I Can't See Nobody; I Started the Joke; New York Mining Disaster 1941. RSO RS-1-3006.

**SATURDAY NIGHT FEVER.** The Bee Gees; Yvonne Elliman, Tavares, and other musicians. Stayin' Alive; How Deep Is Your Love; Night Fever; More Than a Woman; Jive Talkin'; You Should Be Dancing; If I Can't Have You. RSO RS-2-4001.
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**Of Verdi’s Exciting Battaglia di Legnano**

Verdi's *La Battaglia di Legnano* was written in 1848, when Italy was ablaze with revolutionary fervor and the composer was totally committed to the cause of Italian unity. Salvatore Cammarano, the librettist of his *Alzira* (and librettist-to-be of *Luisa Miller* and *Il Trovatore*), supplied the ardent verses that, coupled with Verdi’s throbbing melodies, assured the opera's enthusiastic reception at the Rome premiere on January 27, 1849. Though the plot depicted events in the late twelfth century, focusing on the defeat of the German invader Frederick Barbarossa at Legnano in 1176, the contemporary relevance was clear enough for the censors to ban Verdi’s opera from Italian stages until the country’s unification in 1861.

While not on the level of *Nabucco* (1842) and *Macbeth* (1847), *La Battaglia di Legnano* ranks fairly high among the early Verdi operas. Cammarano’s libretto is admirably concise; if patriotic sentiment seems to dominate all other emotion to an excessive degree, we must consider the intensely turbulent year of the opera’s origin (Julian Budden’s annotations provide a detailed historical background). Verdi’s score offers interesting pre-echoes of *Rigoletto*, *La Traviata*, *Il Trovatore*, and even of *Don Carlo* in an ominous conspiratorial scene. Since personal relationships here play a role secondary to patriotic fervor, it is not surprising that Verdi’s inspiration reaches its peak in the martial and choral episodes (the overture, by the way, is very effective and deserves to be better known).

It is rather ironic that this opera, so full of anti-German sentiments, was recorded in Vienna, a fact curiously concealed by the album credits, which identify the ORF Symphony Orchestra and Chorus without disclosing that they are from the Österreichische Rundfunk. Under the leadership of Lamberto Gardelli, that eminent Verdi-an, the orchestra plays extremely well; the burning excitement of Verdi’s music is communicated without undue em-
phasis being placed on its raw, brassy vigor. As a result, a subtler, more "mature" Verdi emerges than would be the case were there a less knowing conductor at the helm. The chorus delivers its stirring music with a rich tone and altogether commendable, if not entirely precise, enunciation.

In the role of Arrigo, a super-patriot who is falsely accused of betraying a friend's trust (like Riccardo in A Masked Ball), Jose Carreras does not always sound comfortable at high dynamic levels, but he is unstinting in his generous tone and ardent style. The role of the friend, Rolando, is admirably sung by Matteo Manuguerra. Katia Ricciarelli does remarkably well in the role of Lida; it is not very well delineated dramatically, but it is extremely taxing vocally, with much exposed singing in a high tessitura. The cast is rounded out by a cardboard villain, Emperor Barbarossa himself, and some Italian patriots. Nicola Ghisulev's wooly tone cannot project an imperial image with the required strength, but the other singers range from adequate to quite good.

This is the opera's first stereo recording, and the venerable Cetra/Everest mono set can now be retired without regret. Another laudable achievement by Philips in pursuit of its goal of recording the complete Verdi.

Rosen and Morris: A Joyous Realization Of the Qualities of The Beethoven Fourth

CHARLES ROSEN tends to be regarded by a large segment of the public as an intellectual musician, the sort of pianist who plays Schoenberg, Elliott Carter, and the late Beethoven sonatas, who writes philosophical books on music, takes part in musicological congresses, and of course annotates his own recordings. While there is ample evidence to convict him on all these counts, there is none to support any inference of a drily clinical or dispassionate approach to music-making on his part, and his new recording of Beethoven's Fourth Concerto, with Wyn Morris conducting the Symphonica of London, is a triumph, not of mere gestures, either: the balance of elegance and warmth of heart, of serenity and humor, throughout the performance represents no interpretive overlay, one feels, but simply a joyous realization of the qualities that characterize the work. The playing itself is very smooth but in no wise glittery, rich in detail but without a trace of the self-consciousness that might disturb the fine, spontaneous-sounding momentum. Wyn Morris' handling of the orchestral part is as freshly thought out and convincing as his recent Eroica (Peters International PLE-020), and, perhaps more to the point, the enlivening give-and-take made possible by the deep mutuality of approach on the part of both soloist and conductor gives off an aura of delighted fulfillment which the listener can hardly help sharing. Much about this performance, I think, might carry listeners old enough to remember back to the time when all recording was "direct-to-disc" and performances were not assembled by the tape editor—when (at least it seemed so at the time) the few musicians privileged to record such a masterwork seemed to know all its secrets.

If my enthusiasm for the Rosen/Morris collaboration seems rather undetailed, it is simply because it is the kind of performance that is not to be explained or described by citation of particular elements, but which as a whole cannot fail to leave the deepest—and happiest—impression. What can be specified is that Rosen plays the first of Beethoven's cadenzas for the first movement and sounds as if he
were improvising it himself in a transport of inspired oneness with the spirit of the work; that the orchestra sounds every bit as involved; and that the sound is quite good. I can't think of any concerto recording that has given me more pleasure in the last few years, and I'm sure there is none among the current versions of this work that I would place above this new one.

—Richard Freed


Moravec and Neumann: The Richest of All Performances of the Schumann Concerto

SCHUMANN'S A Minor Piano Concerto is not only one of the great masterpieces of the repertoire but one of the great touchstones as well. One can tell a lot about a pianist from his performance of it. It is not an easy piece for pianists to ignore, and most of the major ones have had a shot at recording it at one time or another, producing a quantity of high-level renditions that is matched by few other works. However, it is not the quantity and quality of the many recordings that are impressive, but the great variety of the interpretations. Poetic, intellectual, classical, romantic, inward, extroverted, and all-out virtuoso approaches all have something to bring to the music which, purely as an arrangement of notes, "works" so well as to leave ample room for interpretive latitude.

Such an introduction seems necessary because the latest recording of the Schumann concerto—by Ivan Moravec with the Czech Philharmonic conducted by Václav Neumann on the Supraphon label—is a rendition like none I have ever heard before. How to describe it? Well, one might say it seems to have more notes in it than any other performance. Now, obviously, the artists play the same score that everybody else does, but one is made to hear more of it—counterpoint, inner voices, bass accents, accompanimental figurations—so that the whole work seems immeasurably richer in musical material. As a result, the time scale of the music seems to lengthen and one gets pulled more and more into it. There is here, particularly on Moravec's part, ample fire, ample virtuosity, ample poetry, ample lyricism, and much beautiful sound, but the major characteristic of the performance is richness: nothing is thrown away, nothing is submerged, every detail is given its individual weight and nuance and integrated into the fabric.

Moravec does not make it all sound easy. The very approach sets up a tension at the beginning of the concerto—the tension inherent in any attempt to do something tremendously difficult and do it perfectly—which is not resolved until the very end of the concerto. The triumph at the end—because one has felt the tension throughout, manipulated in different ways through the opening, the slow movement, and the finale—is overwhelming. It is, on the one hand, a lesson in what the Romantic solo concerto is all about and, on the other hand, a representation of the work as chamber music on the grandest possible scale.

The Franck Symphonic Variations too, offered here to fill out the second side, is not your usual light-handed, lighthearted French performance, but one that probes every expressive nuance. If the interpretation has a flaw it is that it exposes the work's inherent propensity merely to stop rather than to end. Doubtless there are better orchestras in the world today than the Czech Philharmonic, and better and more renowned conductors than Neumann, but it is hard to see how their contributions here could be improved upon. What Moravec offers is what I have come, over the years, finally to recognize as a typical Moravec performance, what makes him, for me, one of the greatest pianists in the world today. The Czech recording engineers have done nobly (a little overbalance in favor of the piano is evident at moments in the first movement), and playback in SQ four-channel adds a bit more depth. Only the necessity of breaking the Schumann concerto between the second and third movements produces any real drawback to this issue, but I do not see, checking the timings, how the mu-
sician could have been arranged otherwise. The Schumann concerto is not a work to be known through a single recording, no matter how good, but this record is basic in any library.

—James Goodfriend


The Grateful Dead: Bringing It All Back to the Solar Plexus

“WELL,” I thought, picking up “Shakedown Street,” the new Grateful Dead album, “here comes a cool head trip.” The Dead, as everyone knows, have refined and refined and aimed higher and higher until it would seem they couldn’t hit the solar plexus with a blunderbuss. But what’s this? A cover drawing—not a painting or lithograph or anything elegant, but a nitty-gritty drawing of Shakedown Street (which looks something like the Haight after the hippies moved out and the sickies moved in) by Gilbert Shelton, whose dogs look even meaner than LeRoy Brown. And what’s this legend on the back? “Produced by Lowell George.” Hmmmm.

And, by George, sure enough, it turns out that the Dead are trying to get back to where they once were, playing actual rock-and-roll. George has given the recording an extremely crisp sound—a rim shot becomes almost a threat at times. He starts the boys off with the familiar-neglected Good Lovin’, gets Bob Weir to throw himself into singing as he hasn’t done in years, and even has Jerry Garcia sounding engrossed in a belly-level shot.

It’s still refined, of course, and oh-so-disciplined, and it’s still eclectic, with Donna Godchaux’s vocals providing a delicate dimension that has to be accommodated. But it’s also pretty good rock-and-roll, its title song suggesting that the good stuff (and maybe the “good” audience) is still there if you look for it (Shakedown Street “used to be the heart of town,” it says. “Don’t tell me this town ain’t got no heart/You just got to look around”). At other pivotal points in the album are songs at once sort of new and sort of familiar, such staples in the world of rock as Fire on the Mountain, reminiscent of, but different from, a couple of tunes by the same name; I Need a Miracle, in which the thing becomes how Weir propels it; Stagger Lee, as rewritten by Garcia and lyricist Robert Hunter; or All New Mingewood Blues, whose tune isn’t rewritten much on paper but is redefined somewhat in the tight, uniquely Dead way it’s played.

Oh, the thing’s a little dry in spots, as every Dead album since “Workingman’s Dead” has been, but anyone who thinks he’s got the band safely dismissed as a bunch of intellectual noodlers is going to be pleasantly surprised. And it doesn’t sound like nostalgia for the late Sixties, either. Shakedown Street, by both Shelton and the Dead, comes off as a late-Seventies street. It sounds like the Dead are saying not that this is what they did but that this is what they do. It’s the closest to spontaneity they’ve come in a long time.

—Noel Coppage

GRATEFUL DEAD: Shakedown Street. Grateful Dead (vocals and instrumentals). Good Lovin’; France; Shakedown Street; Serengetti; Fire on the Mountain; I Need a Miracle; From the Heart of Me; Stagger Lee; All New Mingewood Blues; If I Had the World to Give. ARISTA AB 4198 $7.98, @ AT8 4198 $7.98, @ ATC 4198 $7.98.

Peabo Bryson: A New Talent to Give Established Performers A Run for Their Money

E V E R Y now and then a new artist seems to just bubble up out of the vinyl caldron unheralded, with nothing for a calling card but his talent. Peabo Bryson, a young man with multiple gifts and an odd first name, is such an artist, and “Reaching for the Sky,” his debut album for Capitol, got the enthusiastic reception it deserved from both critics and public.

His second album is “Crosswinds,” carefully understated in its physical presentation—two simple, straightforward photographs of the singer, open-shirted in a casual white suit, together with a listing of the songs—in order to focus attention on the music. Bryson’s tenor voice is powerful, seamlessly smooth, and marvelously fluent, perhaps the best to make itself heard on the soul scene in years, and the material—Bryson’s own—is beautifully designed to show it off.

He has an active imagination that can lend distinction even to the inevitable disco track, plus a deep-grounded musicality that enables him to ride a melody like an expert surfer does a breaking wave.

The Grateful Dead get back to rock-and-roll
Helen Merrill: Rather Like Finding A Ten-carat Diamond In the Reissue Bin

SINGER Helen Merrill's "Something Special," first released several years ago, has now happily been reissued on the MMO Group's Inner City label. If you run across it while rummaging through the browser racks at your local record store or flipping through a lucky friend's collection, grab it and run to the nearest turntable. It is an extraordinary album by an extraordinarily gifted singer who takes so completely fresh and original a view of her material that she may make the casual listener accustomed to run-of-the-mill music-making just slightly uncomfortable—the way you might feel, incredulous and slightly guilty—on finding a ten-carat diamond ring in a trash bin.

Collaborating in a program with such jazz impeccables as Thad Jones, Jim Hall, Ron Carter, Peter Laroca, Arnie Wise, and Dick Katz on such gems of the standard repertoire as Deep in a Dream, Here's That Rainy Day, You're My Thrill, and What Is This Thing Called Love?, Helen Merrill discovers and illumines one entirely unexpected new facet after another. For instance, her second chorus on What Is This Thing Called Love?, in which she provides a kind of vocal devil's trill against the cornet of Thad Jones, and the way she bends and cajoles the lyric of You're My Thrill into some kind of dark rapture from the underground of sexual longing, and her long, lazy vocal line in It Don't Mean a Thing—all are the essence of superior jazz music-making. She's disarmingly relaxed, yet in perfect control; innocent in her approach, yet wise in her delivery. Most important, she is the kind of musician whose art is not limited to the over-trained sensibilities of an adoring cult.

"Something Special" may not be the best new record of the month; it is, however, something much more: one of those timeless, priceless, classic recordings that will be reappearing again and again through the years in one label incarnation after another. But why wait? Why not get it right now? I mean, is there anything wrong with instant gratification?

—Peter Reilly

PEABO BRYSON: the best voice on the soul scene? 

HELEN MERRILL: innocent approach, wise delivery

Helen Merrill: Rather Like Finding A Ten-carat Diamond In the Reissue Bin

PEABO BRYSON: Crosswinds. Peabo Bryson (vocals and keyboards); vocal and instrumental accompaniment. Crosswinds; I'm So Into You; Smile; She's Woman; Spread Your Wings; Love Is Watching You; Point of View; Don't Touch Me. CAPITOL ST-11875 $6.98, © 8XT-11875 $7.98, © 4XT-11875 $7.98.

HELEN MERRILL: Something Special. Helen Merrill (vocals); Thad Jones (cornet); Jim Hall (guitar); Ron Carter (bass); Dick Katz (piano); Pete Laroca, Arnie Wise (drums). It Don't Mean a Thing; You're My Thrill; Here's That Rainy Day; Baltimore Oriole; Don't Explain; What Is This Thing Called Love?; The Winter of My Discontent; Day Dream; Deep in a Dream. INNER CITY IC 1060 $7.98.
THE JOE BROOKS GROUP. Joe Brooks, Jerry Keller, Ron Dante, others (vocals); Joe Brooks, Kenny Ascher (keyboards); other musicians. I Will Shine On; Woman; California; When It's Over; Slidin'; Rag Doll; and five others. ATLANTIC SD 19206 $7.98, ® TP 19206 $7.97, ® CS 19206 $7.97.

Performance: Emotional
Recording: Smooth

The songs on this new album seem to be a series of sketches to accompany Joe Brooks' hit composition, You Light Up My Life. By the time he and his group get to that song, at the end of side one, its impact has been drained by the themes and variations upon it that have gone before. Side two is more of the same. Whether or not these songs were written before or after You Light Up My Life isn't really the point. The point is that Brooks has found something full -voiced, rhapsodic climax. Brooks himself (in his one lead vocal, Rag Doll, which also happens to be the only song here that he didn't write) and the seven other singers who alternately take the lead all exhibit a vocal style that is tremulous, whispery, and breathly emotional enough to enter in the Melina Mercouri/Liza Minnelli/Dustin Hoff- man Glad To Be Sad Sweepstakes, where the prize is a good cry and dinner for one at the Heartbreak Hotel coffee shoppe.

PEABO BRYSON: Crosswinds (see Best of the Month, page 94).

GLEN CAMPBELL: Basic. Glen Campbell (vocals, guitar); instrumental accompaniment. I See Love; Let's All Sing a Song About It; Can You Fool; Stranger in the Mirror; and seven others. CAPITOL SW -11722 $7.98, ® 8XX-11722 $7.98, ® 4XX-11722 $7.98.

Performance: Very good
Recording: Excellent

Glen Campbell seems to have gone "Basic" in more than one way—he's given up the shellac he used to use as a hair spray, and his hair actually looks as if it might move in both photos of him here. This thoroughly satisfying album is a plunge into the songs of Michael Smotherman rounded out with a go at the bagpipes in an instrumental titled, with Celtic mystery, Graithadh Mè Tha. If you've heard one bagpipe player, you've heard 'em all as far as I'm concerned, so I can't venture any opinion on how well Campbell plays the pipes. But his guitar work throughout is as musicianly and fine as it ever was, and his vocals still have that phlegmatic sincerity that finally got him to Phoenix and to the top all those years ago. He probably has a chart hit finally got him to Phoenix and to the top all those years ago. He probably has a chart hit here in Can You Fool, a juicy little scenario about a fool and the Cruel Woman He Can't Forget. Smotherman's lyrics often have a literary lilt to them, and Campbell shows an uncustomed abandon in such things as Stranger in the Mirror and his really passion ate (for him, anyway) rendering of I See Love. Easily one of the better Glen Campbell albums of recent years.

JESSI COLTER: That's the Way a Cowboy Rocks and Rolls. Jessi Colter (vocals, piano); instrumental accompaniment. Black Haired Boy; I Was Kinda Crazy; Hold Back the Tears; and seven others. CAPITOL ST -11863 $7.98, ® AFK1-3054 $7.98, ® AFS1-3054 $7.98.

Performance: Good
Recording: Very good

Don't be put off by the dumb title; unless you can't stand Jessi Colter's voice at all, you're going to like this. It's pretty much a rock album, with tunes by the likes of J. J. Cale and Neil Young and instrumentation based on the whatever's-right theory. The tunes are mostly quite good, and even when they're not, strictly speaking, good, they have quirkiness or a touch of the outrageous or something else to recommend them. One of these last is My Cowboy's Last Ride, written by Jessi and Wynon's chum Johnny Cash, in which what she aims to do is plug the sundial. Then there's the deft melody thievery pulled off in Black Haired Boy (good poets steal, T. S. Eliot said). And there are two or three just plain pretty ones, not exactly rock and not exactly country or anything else. One of those is the title song and another is Neil Young's Hold Back the Tears. I spend so much time on the songs here because I don't recall another album for which Colter has selected songs instead of writing them. As a singer, she's still a lot more of a stylist than an interpreter, but this album is put together with such know how that it overcomes that.

CRAZY HORSE: Crazy Moon. Crazy Horse (vocals and instrumentalis); Neil Young (guitar); other musicians. She's Hot; Going Down Again; Lost and Lonely Feelin'; Dancin' Lady; End of the Line; New Orleans; and five others. RCA AFL1-3054 $7.98, ® AFS1-3054 $7.98, ® AFK1-3054 $7.98.

Performance: Medium-warm
Recording: Average

Neil Young's old back-up band, or what's left of it—Ralph Molina and Billy Talbot, plus newcomers Frank Sampedro—is here re-grouped with Young as a sideman playing lead guitar on five tunes. That's about the main attraction of this one, too, since the tunes range from ragged to average rockers and the singing and playing, aside from Young's own distinctive style, are of adequate bar-band quality only. The printed lyrics have guitar-chord notations above them, an interesting feature, but in spot checking them I found that at least a couple of tunes aren't played in the key indicated, for whatever that's worth. For whatever this is worth, I agree that Crazy Horse is another
for a band to let it die, and it may keep them alive. But they sure could use some health. So much of the writing here is obviously and self-consciously Young-influenced, yet so patently inferior to Young's own run-of-the-mill songwriting, that it makes you want to shake somebody by the shoulders. Crazy Horse would make somebody a nice back-up band.

N.C.

NEIL DIAMOND: You Don't Bring Me Flowers. Neil Diamond (vocals); vocal and instrumental accompaniment. Diamond Girls; Forever in Blue Jeans; Remember Me; Memphis Flyer; Say Maybe; and five others. COLUMBIA FC 35625 $8.98, FCA 35625 $8.98, FCT 35625 $8.98.

Performance: Oleomargarine
Recording: Gorgeous

Neil Diamond has acquired a vast audience over the years from his recordings and sold-out stints in Las Vegas, and he will probably enlarge it even more if his million-plus deal for the film remake of The Jazz Singer finally comes through. In the meantime, this album is another chrome-plated, classily commercial excursion that ought to keep his fans happy. But the only time I seem to hear a real person emerge here is in the title-track duet with the formidable Barbra Streisand. The rest, particularly Forever in Blue Jeans and the weighty Mothers and Daughters, Fathers and Sons, is more of the same slick "sensitivity," garish sentimentality, and preening showmanship that I've come to associate with any Diamond performance. Everything he does falls on my ear as cynically fabricated and calculated for effect. The production by Bob Gaudio provides state-of-the-art MOR sound that surrounds Diamond gorgeously, if that's what you like.

P.R.

EMERSON, LAKE & PALMER: Love Beach. Emerson, Lake & Palmer (vocals and instrumentals). All I Want Is You; Love Beach; Taste of My Love; The Gambler; For You; Canario; and four others. ATLANTIC SD 19211 $7.98, TP 19211 $7.97, CS 19211 $7.97.

Performance: Baroque chiffle
Recording: Good

This would appear to be, at least in part, ELP's response to Pop. Pop. Most of the songs here, particularly Greg Lake's songs on side one, are short, vaguely melodic, and reason-ably unornamented. But when you get down to it, really, ELP has always been the most openly commercial and silliest of the big-gun "progressive" bands (remember Nutrocker?). If you doubt me, check out their new surf-music romp through Rodrigo's Fantasia para un Gentilhombre, which is hardly any more serious than Emerson's demolition of Leonard Bernstein's America with the Nice back in 1968.

Actually, "Love Beach," with its muddle-headed romanticism (All I Want Is You) and accessibly spruced-up (Taste of the Gambler) is more likely a reaction to the Top-40 Technoflash of groups like Styx and Kansas, who have been reaping big bucks of late by mating ELP's performance style with melodies worthy of chewing-gum commercials. As such, I have no doubt that this album will be the Unholy Three's largest seller ever, since it is fully as banal as anything churned out by their imitators. What's more, it comes complete with a full-color ad for all sorts of related parapherna-lia. That's right—you, too, can own a pair of Emerson, Lake & Palmer jogging shorts. Who said these guys have no class? S.S.

RECORDING OF SPECIAL MERIT
STEVE FORBERT: Alive on Arrival. Steve Forbert (vocals, guitar, harmonica); Steve Burgh (guitar); Barry Lazarowitz (drums); Hugh McDonald (bass); other musicians. Goin' Down to Laurel; Steve Forbert's Midsummer Night's Toast; Thinkin'; What Kinda Guy?; and six others. NEMPEROR 35538 $7.98, IZA 35538 $7.98, JZT 35538 $7.98.

Performance: Interesting
Recording: Nice

Now here's something unexpected: the first New Wave folkie. Although Steve Forbert made his reputation by opening for some New York punk heavies and living to tell the tale, in both visual and musical style he's an almost total throwback to the early-Sixties West Village stereotype of the romantic kid with a gui-tar; he's got the same cherubic vulnerability that Dylan had, in particular, had in the old days. Secondhand or not, Forbert's good, and although his debut album betrays some youthful ineptness, it's ambitious enough to keep you interested. The voice itself is arresting, with a whiskey-soaked rasp that for some odd reason reminds me of Rod Stewart minus the macho bluster, and he's assembled a nice little band here that sounds both vaguely country and a bit like Dylan's "Blonde on Blonde" outfit. The songs tend to be more self-absorbed than is good for them; the kid knows he's a contender and he isn't above letting us know that he knows. But most of the time he has enough charm to get away with it, and he is a mere twenty-three, after all, so he can probably be excused. Besides, you have to root for him if only because he's probably the one musician to have played CBGB's whose knowledge of Woody Guthrie extends beyond having seen David Carradine in Bound for Glory. Someone to watch. S.S.

(Continued overleaf)
PETER ALLEN's new "I Could Have Been a Sailor" is a profoundly unprocessed album about the pleasures, sad and sweet, of being alive. Like his last (breakthrough) album, "It Is Time for Peter Allen," it is permeated with a refreshingly open-eyed zest for a world in which it is not permitted to drown the capricious larcenies of the heart in the sour wine of self-pity.

That Peter Allen has been around, and then some, is as plain as the furrows in his brow. But it's equally plain from his performances that he hasn't retreated into Ironic Detachment to excuse himself from further experience. Instead, as his work in this and his previous album demonstrates, he has chosen to open up a deep channel of sympathetic communication between himself and his listeners. Many of the tracks here have the intimacy of a dialogue between close friends; when Allen sings, you know he's singing to you whether or not you've experienced the situation he's singing about.

Practically everyone, I would imagine, can find himself or herself in a song such as I Could Have Been a Sailor. The could-have-been daydreams begin as early as adolescence and continue as late as second childhood, and Allen's gentle, wistful account of his own regrets casts a spell as effective as that of any well-told children's story. That he is able to be both the adult telling the story and the child listening to it within the same song is one of the reasons his work is so compelling. This compassionate duality of understanding runs through many of his songs: in Don't Leave Me Now, where he is both the cynical one-night-stander and the prisoner of his lonely need; in We've Come to an Understanding, about an "open" marriage in which two overly hip people see their relationship as a series of questions—"Can we make it?/Can we take it?/If you can't/Can we fake it?"; and in his already famous Don't Cry Out Loud (presented here in its first studio recording), which is as touching as watching a child struggling to hold back tears.

Not all of Allen's subjects are so universal. Two Boys, for instance, concerns two brothers ("One of them excelled at ball/The other never played at all") and a sad little tale that has less to do with homosexuality than it does with a family's failure at communication, and Angels with Dirty Faces suggests the anarchic sexuality of a rock group's week-end house party. But always there is that hook of interest, that involvement in the emotional life of others, that Allen is able to fine-tune into listener sympathy.

No fine tuning is necessary, however, for the adenalin-filled, pulse-swelling abandonment of Allen's Don't Wish Too Hard ("You might get it . . ."). He sang it on his last album in a live performance, but here it's been expanded, revised, and reorchestrated into what is probably the best disco track you're going to hear for at least several months. If you don't think you're a combination of Travolta and Baryshnikov about eight bars into it, you've probably got terminal Charley horse.

To be sure, not everything here is going to knock you down. Paris at 21, for example, is a lightly sketched pastel about being homesick for places you've never been—in this case Paris in 1921 at the age of twenty-one. And If You Were Wondering, though murmurously reassuring and distinctively performed, is a little less than riveting—perhaps because of the high-powered company it keeps.

The production, split between Marvin Hamlish and Mike Post, is so good, so professional, so perfectly tailored to Allen's style that No fine tuning is necessary, however, for the adenalin-filled, pulse-swelling abandonment of Allen's Don't Wish Too Hard ("You might get it . . ."). He sang it on his last album in a live performance, but here it's been expanded, revised, and reorchestrated into what is probably the best disco track you're going to hear for at least several months. If you don't think you're a combination of Travolta and Baryshnikov about eight bars into it, you've probably got terminal Charley horse.

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The production, split between Marvin Hamlish and Mike Post, is so good, so professional, so perfectly tailored to Allen's style that it's almost invisible. Not once could I think of any other way any of these songs possibly could sound. And that, as all the world knows, is the unique sign of genuine vocal artistry—when the singer owns the song.

—Peter Reilly

PETER ALLEN: I Could Have Been a Sailor. Peter Allen (vocals, piano); orchestra. I Could Have Been a Sailor; Don't Wish Too Hard; Two Boys; Angels with Dirty Faces; Don't Cry Out Loud; If You Were Wondering; Don't Leave Me Now; I'd Rather Leave While I'm in Love; We've Come to an Understanding; Paris at 21. A&M SP 4739 $7.98, © A&M 4739 $7.98.

Performance: Intense chi-chi

Recording: Inescapable

It's nice to have the J. Geils Band back the way they used to be—a combo playing Saturday-night boogie blues so hot the customers knock over their chairs as they jump up to dance. The Geils group tried to go the cosmic route with their past few albums and nearly blew their career. Fortunately, they came to their senses in time. A band whose talent is for singing corned-beef hash should stay out of the caviar business. J. Geils has wised up, and their lash here is thick, steamy, and tasty. One Last Kiss is the hit single, but I like I Could Hurt You and Just Can't Stop Me even better. Welcome back, boys.

JAPAN: Obscure Alternatives. Japan (vocals and instrumentals). I Feel So Low: Automatic Gun; Rhodesia: Love Is Infectious; Deviation; and three others. ARIOLA SW 50047 $7.98, © 8XW-50047 $7.98, © 4XW-50047 $7.98.

Performance: So-so

Recording: Good

The cover art on this makes the group Japan, which comes from England, look like punk rockers from Beverly Hills (where Ariola America Records is based). This geographical confusion hardly matters, anyway, since their music seems to come from outer space. "Obscure Alternatives" is certainly not very cohesive, with vocals and some lyrics that seem punkish and primitive backed by "experimental"—in the laboratory sense— instru-

ments. Much of it is virtually tuneless, but every now and then it turns synthesizer-lyrical on you. Whatever it is at any moment, it's certainly not very exciting. Japan—this group, that is—seems to have invented nothing new, and the old elements they fuse together sound like old elements fused together.


Performance: Intense chi-chi

Recording: Inescapable

Jean-Michel Jarre is a synthesizer whiz, and his Equinoxe proves it. The J. Geils Band tried to go the cosmic route with their past few albums and nearly blew their career. Fortunately, they came to their senses in time. A band whose talent is for singing corned-beef hash should stay out of the caviar business. J. Geils has wised up, and their lash here is thick, steamy, and tasty. One Last Kiss is the hit single, but I like I Could Hurt You and Just Can't Stop Me even better. Welcome back, boys.

JAPAN: Obscure Alternatives. Japan (vocals and instrumentals). I Feel So Low: Automatic Gun; Rhodesia: Love Is Infectious; Deviation; and three others. ARIOLA SW 50047 $7.98, © 8XW-50047 $7.98, © 4XW-50047 $7.98.

Performance: So-so

Recording: Good

The cover art on this makes the group Japan, which comes from England, look like punk rockers from Beverly Hills (where Ariola America Records is based). This geographical confusion hardly matters, anyway, since their music seems to come from outer space. "Obscure Alternatives" is certainly not very cohesive, with vocals and some lyrics that seem punkish and primitive backed by "experimental"—in the laboratory sense— instruments. Much of it is virtually tuneless, but every now and then it turns synthesizer-lyrical on you. Whatever it is at any moment, it's certainly not very exciting. Japan—this group, that is—seems to have invented nothing new, and the old elements they fuse together sound like old elements fused together.


Performance: Intense chi-chi

Recording: Inescapable

It's nice to have the J. Geils Band back the way they used to be—a combo playing Saturday-night boogie blues so hot the customers knock over their chairs as they jump up to dance. The Geils group tried to go the cosmic route with their past few albums and nearly blew their career. Fortunately, they came to their senses in time. A band whose talent is for singing corned-beef hash should stay out of the caviar business. J. Geils has wised up, and their lash here is thick, steamy, and tasty. One Last Kiss is the hit single, but I like I Could Hurt You and Just Can't Stop Me even better. Welcome back, boys.

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Performance: Intense chi-chi

Recording: Inescapable

Jean-Michel Jarre is a synthesizer whiz, and his Equinoxe proves it.
Bookshelf speakers, even the biggest and best of them are (let's face it) designed for bookshelves.

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The AR90 is a four-way floor standing system which incorporates most of the refinements we introduced recently in the fantastic AR9.

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The Acoustic Blanket—which AR invented—and introduced on the "9," plus a vertical array of mid- and high-range drivers, contribute to smooth response and sharpened stereo imagery. And there's a lot more.

It all adds up to the first exotic floor-standing speaker that will fit comfortably into most rooms and isn't priced too exotically either. As of now you can hear one.

If you love music we think you'll be just as enthusiastic about it as we are.
Lett's talk about Chipmunks. No, not the real kind; frankly, I wouldn't know a real one from a squirrel, unless the little vermin actually looked like Disney's Chip and Dale. I mean the recording-star Chipmunks. "Who?" ask our younger readers. Well, it's like this, kids.

In the late Fifties (you remember them from *Happy Days*, of course) a gent named David Seville did a novelty Christmas single in which he sparred verbally with three of the tiny rodents (named Alvin, Simon, and Theodore) who were, in actuality, overdubbed and speeded-up permutations of his own voice. The disc sold by the millions, spawned several successful follow-ups (featuring jazzy instrumental B-sides with titles like *Almost Good* and *Mediocre*), and created an industry.

For a while there, it seemed the public just couldn't get enough of the furry trio's close harmony, so reminiscent of the Four Freshmen on belladonna. Eventually, they even got their own TV show. But Seville died a few years back, and they did a quick fade. Today their memory is kept alive only by the most crazed partisans of pop cultural arcana, the kind of wackos who would kill for a 16-inch print of *My Mother, the Car*, write fanzine articles on Bob Denver, and form punk bands.

I wouldn't bother you with this bit of history, to tell the truth, except that I've got "Spirits Having Flown," the new Bee Gees album, before me, and it's dawned on me at last: the brothers Gibb are unquestionably the Chipmunks' spiritual heirs. The parallels, in fact, are almost too obvious. They too sound utterly inhuman, sing in close high harmony, and sell records by the millions. They're on TV a lot (their own show must be in the cards at this point), have already faded away once, and undoubtedly will again. Their records, including this one, are amusing and utterly dispensable. Hell, they even look like Chipmunks (especially Robin).

I feel constrained to point out, at this juncture, that this isn't the usual rocker's diatribe about the dreaded Disco Menace. I like lots of disco records. Donna Summers' *I Feel Love* is great pop, the Stones' *Miss You* is a great Chicago blues, Alicia Bridges' "I Love the Night Life" is a classic r-b &-b performance by any standard, and even the Bee Gees' stuff from *Saturday Night Fever* was inspired and atmospheric city music. True, there are very real dangers and limitations inherent in both the genre and the lifestyle it espouses, but to reject "Spirits Having Flown" out of hand simply because of that Beat is to miss the point. Face it: Ian Dury's *Wake Up and Make Love to Me* is disco, and he's got certifiable New Wave credentials. So disco is certainly not the issue.

The Bee Gees falsetto is, however, and this is where we get back into Chipmunk territory. There is nothing implicitly wrong with pop falsettos; but contrast Maurice, Barry, and Robin's variety with the two most influential falsettos of the Sixties, Smokey Robinson and Brian Wilson. Smokey was so soulful he could reduce grown men to tears, and Brian could break your heart while he was rhapsodizing over a skateboard. Has even the most wild-eyed lackey of Robert Stigwood ever become almost ludicrous.

The Bee Gees' *Spirits Having Flown* is, after all, simply a formula follow-up, albeit an inspired one, and to criticize the lads for not really having anything to say is unfair; they're not writing for an audience that wants them to say anything. But their staggering level of success with a music that is at heart so antihuman, both conceptually and simply in its sound, is one of the more depressing phenomena of the Seventies. After all, these guys aren't one-shots (on which level they would have been tolerable, even enjoyable)—they're a monolith.

Which is to say that any right-thinking individual who spits this album at his or her local record store should ignore it in favor of "The Chipmunks' Greatest Hits," a copy of which is certain to be lurking in the bargain bin. Remember—there's nothing like the real thing.

—*Steve Sinels*
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is one of those darkly shadowed, "intense glare" jobs that make the subject look as if he would scare hell out of Muhammad Ali himself if they met on an ill-lit street.

I guess the photo's supposed to be a clue that we should all serious-up for what's on the album. Well, there are seven synthesizers, several sequencers, a couple of computers, and something called a Vocoder E.M.S., which is used to produce what sounded to me dismaying like a Mighty Wurlitzer having a nervous breakdown. I found the whole recital just too twitchy to be entertaining. The only and something called a Vocoder E.M.S., album. Well, there are seven synthesizers, that we should all serious-up for what's on the next time.

RECORDING OF SPECIAL MERIT

BOB MARLEY AND THE WAILERS: Babylon by Bus. Bob Marley and the Wailers (vocals and instrumentals). Positive Vibration; Punky Reggae Party; Exodus; Stir It Up; Concrete Jungle; Kinky Reggae; Lively Up Yourself; and seven others. ISLAND ISLD 11 two discs $12.98, ® J8A 11 $12.98, ® J5A 11 $12.98.

Performance: Powerful
Recording: Very good

Though I've never been a member of Bob Marley's cult following, this album, with its rich variety of songs, might well convert me into a fellow traveler at least, if not a stalwart. These four sides, recorded on tours of Europe, the United States, and Canada, capture the thrust and vigor of Marley's live performances along with the expected audience response. The album is better than some of his others at giving a sense of the personal fire he projects, and it seems to contain only peak moments culled from many performances, with all duds and dullness deleted.

The main appeal for nonbelievers like me is Marley's obvious integration of blues, soul, and rock elements into his particular brand of reggae. Perhaps this dilutes his native Caribbean music in the view of purists, but it endows it with an exceptionally broad base and uncommon conceptual breadth. And the splendid manner in which the I-Threes chant away in the background drives it all home. The music's power transcends categories.

Mr. Marley, you have got yourself a new fan.

P.G.

PATTERSON MORAZ. Patrick Moraz (keyboards, vocals); vocal and instrumental accompaniment. Jungles of the World; Temples of Joy; The Conflict; Primitive Visitation; and three others. CHARISMA CA-1-2201 $7.98, ® CT-1-2201 $7.98.

Performance: Ridiculous
Recording: Overloaded

Patrick Moraz is now keyboardist for the reincarnated Moody Blues, who may or may not be making a real comeback. It is appropriate for Moraz to join them, since he specializes in the presumptuous audio goo and the pompous, naïve, abstract moralizing that originally made the Moodies successful.

This album, cut before Moraz joined the Moodies, features him on every conceivable keyboard instrument and its synthesizer mutant, with the rhythm supplied by Djalma Correia playing a variety of "ethnic Brazilian"

(Continued on page 108)

Don't make a decision on speakers until you've heard all sides.

There are literally hundreds of high fidelity speakers to choose from. But before you make a purchase decision, you should listen to our speakers, And the reasoning behind them.

We pioneered the concept of omni-directional sound radiation. That means that we arrange multiple drivers so that they radiate sound in virtually all directions.

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Naturally, we think that the easiest way to appreciate the difference is to listen to our speakers for yourself. However, we'd like to warn you that our speakers are designed to impart as little coloration as possible. So don't expect "bigger than life" sounds with artificially sweetened highs or especially enhanced lows. Our speakers are designed to reproduce just what's been recorded. Nothing more and nothing less. We think that makes them nicer to live with in the long run.

So before you choose any speaker, listen to ours. And we think we'll win you over to our sides.

DESIGN ACOUSTICS
Speakers with an all-around better sound.
We introduced Quartz-Locked tuning and set a new standard for precise, FM tuning. Driftless. Difficult as it is to improve on Quartz-Locked tuning, Onkyo did it by simplifying and beautifying the system with Light Emitting Diodes (LEDs).

Touch the tuning knob. Onkyo's exclusive ACCUTACT senses that touch, unlocking the system. A row of five, green LEDs indicates signal strength. The stronger the signal, the more LEDs light.

Flashing green LED arrows show whether you're to the left or right of the frequency you want. Tune until the red "locked" lights. Release the tuning knob and the Quartz-Locked system takes over and automatically tunes in the best reception.

Clean, logically placed, computer-type controls provide the refinements for utmost audio enjoyment, including Dolby* De-emphasis. A Recording Level switch simplifies adjustment of off-air taping to avoid overloading and distortion of tape recordings. Other controls include Output Level, Muting, Stereo Noise Filter, AM/FM Selector and Sensor Switch.

Overall performance is superb with FM Frequency Response at 30-15,000Hz, +0.5, -1.5dB. Phase Locked Loop FM Multiplex provides low distortion, 0.25% (FM Stereo) and high separation, 40dB at 1kHz.

S/N ratio is equally generous at 68dB (Stereo).

Quartz-Locked tuning is best, but Servo-Locked tuning is a similar, lower cost alternative in Onkyo's T-4040 tuner with similar features. You get the same LED convenience with slight modifications.

Performance is also terrific with Harmonic Distortion at 0.3% (FM Stereo); Separation of 40dB at 1kHz; S/N at 66dB (Stereo), and FM Frequency Response of 30-15,000Hz, +0.5, -1.5dB.

The only way to beat Onkyo performance, convenience and dependability is with more Onkyo, who constantly keeps...a step ahead of state-of-the-art.

Hear Onkyo at work and see the quality line of their products par excellence at your local dealer.

* Dolby is a registered trademark of Dolby Laboratories, Inc.
D"oes Alice Cooper take anything seriously? You bet your Budweiser. He's a little like another famous drinking man of this century, Jud Fry of Oklahoma!, as described by Curley: "He loved everythin' and everybody, only ... he never let on. And nobody ever knew it." Alice Cooper is serious, for example, about his new album, "From the Inside," only he's trying not to let on.

Put aside for a moment the fancy jacket with its fold-out doors and cuckoo's-nest pictures (I understand Warner Brothers may drop it anyway, it's so expensive); to dwell too much on that is to play "let's pretend" with Alice Cooper. Just look at the lyrics. Listen to the vocals. Unlike all that stuff about blowing up the high school—or, for that matter, about going bonkers—the language here is not a put-on, and though Cooper never peddled himself as a singer (and, indeed, isn't much of one), he does muster a certain intensity. It is an album a person in his psycho (the expression) right mind could take seriously.

The tone of the lyrics probably has something to do with the fact that Cooper brought Bernie Taupin in to help write all the lyrics, in addition to various other songwriters to help with various songs. This looks odd at first, since the songs supposedly are so personal. The album holds so tight to its theme (about being committed to a mental institution) that it seems it should be, and does sound like, a one-man effort. But then you realize the songs aren't exactly personal, for it isn't exactly Alice Cooper's story.

Cooper started out as a punked-up American answer to Glitter Rock. Like David Bowie before him (and, in another more humorous and therefore healthier vein, like Martin Mull), Cooper did not purport to present music as an end in itself but as a part of theater. He gave not musical performances but stage shows designed to shock (live snakes, decapitated dolls, and all the rest). This meant he did not have A Talent to fall back on, as a musician does, but only his own intelligence. Maybe that's part of why he drank so much.

At any rate, having been raised with the Norman Lear idea of the entertainment value of candor, Alice turned his drinking into another piece of the act (ha-ha), a shift characteristic of heavy drinkers from W. C. Fields to Dean Martin. At the same time, there was something about the way the Sixties generation grew up that caused young Americans to join Alice in bending elbows in record numbers. We quickly reached new highs in alcoholism among kids in their teens and twenties. The alcohol culture had made a comeback, and a couple of flashes of macabre humor in the grooves, so that (theoretically anyway) he comes out looking hip whether you take him seriously or not.

But, again, look at the lyrics and listen to the vocals. Regardless of whether he ought to have been taken seriously in the past or whether he will be in the future (a whole 'nother subject; you know how boring reformed drunks can be), at least a part of him did honestly try to get something said here. To have said it directly about booze might temporarily have seemed better propaganda (or preaching, or what have you), but it probably would have yielded an inferior record. Even though he has stylized the subject of insanity in the past with show-biz high-jinks, the evidence is that he did, this time, deal seriously with that. Alice Cooper is sharp enough to know that even greater shocks are needed now in show business. I gather this from seeing him on television. The TV camera is a great instrument for telling us who's actually got wit and who's merely reading someone else's wit on cue cards, and it seems obvious to me Cooper has wit. And he did hedge his bet with the cover and a couple of flashes of macabre humor in the grooves, so that (theoretically anyway) he comes out looking hip whether you take him seriously or not.

ALICE COOPER: From the Inside. Alice Cooper (vocals); Dick Wagner (guitar); Ken Passarelli (bass); Rick Shlosser (drums); David Foster (keyboards); other musicians. From the Inside; With Love From Beverly Hills; The Quiet Room; Nurse Rozetta; Millie and Billie; Serious; How You Gonna See Me Now; For Veronica's Sake; Jackknife Johnny; Inmates (We're All Crazy). WARNER BROS. BSK 3263 $7.98, © M8 3263 $7.98, © M5 3263 $7.98.
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But considering the prices of other decks with similar performance and far less features, the Fisher CR5150 at $650* has to be one of the greatest values in high fidelity today. No matter how you look at it.

Available at better audio stores or the audio departments of fine department stores.

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ing into a subtler, smarter singer right under our noses. I know of no other singer who can...

The Neville Brothers: the charm and lilt of a New Orleans attitude toward pop

A voice of the common man touched with a little extra wildness. David Allan Coe's image is largely an expansion of Paycheck's, which is one reason why Paycheck was so effective with Coe's Take This Job and Shove It. On Armed and Crazy Paycheck tells the IRS he's mad as hell. He tells them to "take the 1040 form and put it where the sun don't shine." Of course, anyone who'd record a song called Thanks to the Cathouse (I'm in the Doghouse with You) doesn't figure to be angry all the time, and vacillating from anger to humor is what Paycheck does best. He's a little lost on a straight love song, or anything else that's too slow, so this album is uneven. If you need someone to articulate that you're mad as hell or a little wild at heart, it'll be useful. But as an album among albums, it's strictly for Paycheck fans.

Performance: Diffuse
Recording: Satisfactory

Uncertainty has dogged the path of the Pointer Sisters in recent years. After a momentous blast-off that elevated them to the highest ranks of camp, they have drifted about in search of a musical direction. This album is proof that they haven't yet found one. Though there are interesting indications of stylistic versatility to be found here, ranging from straight-ahead rock to countrified selections with a dash of funk here and there, a distinctive sound does not emerge. Furthermore, they have abandoned what used to be their forte: fast-paced, jazzed-up vocal gymnastics with bursts of brilliance. They've also moved away from their roots in blues, r- & b, and jazz to favor good but unsuitable material by such writers as Stephen Stills, Bruce Springsteen, Kenny Loggins, and Jim Messina. Allen Toussaint's Happiness stands out as being more appropriate for the Pointer Sisters' voices and musical style. They seem to be moving closer to midstream with this record, and while that approach might gain them some new fans, the sounds here ring a bit untrue to my ears.

Well, I never saw the Velvet Underground (actually, I did see the version fronted by Doug Yule, which doesn't count), but they tell me it was pretty fabulous, and on the basis of the two live Velvets LP's, both of which are minor classics, I'd be inclined to agree. I have seen Lou Reed live, however, and that's another kettle of fish. Of course, Reed has been Lou Reed since the first solo tour, when he was backed by a pubescent Long Island garage band that made faces behind his back? Or when, circa "Sally Can't Dance," he was backed by a pubescent Long Island garage band that made faces behind his back? Or when he hired the best mainstream heavy-metal band in the world and then proceeded to sleepwalk his way through the vocals? In short, Reed's career as a live performer has been about as ridiculous as most of his solo albums.

Then last year he cut the crap and put out Street Hassle, an album as moving and uncompromising as anything he had done during (Continued on page 112)
tech talk:
45 watts RMS minimum per channel, into 8 Ohms.
From 20 to 20,000 Hz. With not more than 0.08% THD.

explained.

The easiest way to decipher amplifier specs like those above is to look at the first and last figures. What's in between can be said for just about any good stereo. It's there because the Federal Trade Commission requires it. What you need to know is this. The higher the wattage, the more power you get. The lower the THD, the less distortion you get.

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You don't even have to understand the technology to know what you're getting. It all translates into sound. The MCS Series 45 Watt System complete with rack, only $999.

Full 5-Year Warranty on speakers. Full 3-Year Warranty on receivers, turntables, tape decks, tuners and amplifiers. If any MCS Series® component is defective in materials and workmanship during its warranty period, we will repair or replace it—just return it to JCPenney.
his Velvets days. Taking that as the measure of his current work, I attended the concerts that formed the basis of this new live set with considerable expectations. Suckered again. The show I saw was, to be charitable, an extremely uneven affair, and so, I'm afraid, is the album. On the plus side, the band seems to understand him better than any he's worked with in years and Reed has resumed playing eccentric but engaging lead guitar. On the debit side, he seems to think a lot of his songs are pretty funny; in fact, he seems to want to become the Henny Youngman of sleaze, as witness some of the confrontations with the audience during Walk on the Wild Side. And you have to wonder why the Reverend Jesse Jackson is taking off after the Stones' Some Girls while Reed is still getting away with the scurrilous I Wanna Be Black.

It all comes down, finally, to what you want from the guy. Me, I'll stick with my Velvets records and hope that "Street Hassle" wasn't a fluke.

S.S.

KENNY ROGERS: The Gambler. Kenny Rogers (vocals); vocal and instrumental accompaniment. She Believes In Me; The Gambler; Tennessee Bottle; King of Oak Street; Making Music for Money; Morgana Jones; and five others. UNITED ARTISTS UA-LA934-H $7.98, © EA934-H $7.98, © CA934-H $7.98.

Performance: Formulistic. Recording: Good

In one flying leap from his last album, for which he installed himself, at least in the cover photo, at the center of a rented family so wholesome it would make a Norman Rockwell painting look sordid, Kenny Rogers now presents himself as "The Gambler" with another elaborate cover photo and foldout poster. More time and money seem to be spent on Rogers' album covers than on what goes inside them, since this record is another elaborate cover photo and foldout poster.

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Best thing that's happened to engines since high compression.

1.6 LITER MCA-JET SYSTEM IS STANDARD ON THE NEW 1979 DODGE CHALLENGER; 2.6 LITER MCA-JET SYSTEM IS OPTIONAL.

MCA-JET SYSTEM. A quiet revolution.

The high compression car engine marked the start of a new era in automotive power. We think our MCA-Jet System marks another.

If you're really into cars and driving, you'll appreciate the performance capabilities as well as the simplicity of our MCA-Jet principle. The system happens to be a cylinder head configuration that incorporates a third, or "jet" valve. An extra strong swirl of air is introduced into the combustion chamber through this valve during the induction phase to produce a faster, more thorough burning of the fuel air mixture.

Net result: a quiet, smooth running, clean-burning engine that meets... even exceeds... the most stringent emission requirements in both Japan and America. With excellent performance.

Now you see why we call it our quiet revolution.

MCA-JET SYSTEM is standard with the Mitsubishi-built 1979 Dodge Colts and Challengers and Plymouth Champs, Sapphors, and Arrows, also with the all-new Dodge D-50 pickup and Plymouth Arrow pickup.

MITSUBISHI MOTORS CORPORATION

MITSUBISHI MOTORS CORPORATION

CIRCLE NO. 38 ON READER SERVICE CARD
B E L I E V E it or not, I'm a pretty nice guy. I love animals (two cats at home), I brake for Moonies (well, maybe I'm flexible on that one), and every Christmas I weep at the end of Channel Five's annual screening of Frank Capra's *It's a Wonderful Life*. I mean, when Jimmy Stewart, Donna Reed, and the rest of the cast sing *Auld Lang Syne* I absolutely go to pieces. Yes, now it can be told—I'm as sentimental a twit as anyone I know, my admiration for Elvis Costello notwithstanding.

That admitted, I think it's grossly unfair of the miserable buggers to keep doing it to me, the miserable buggers in question being the musician heroes of my rock-and-roll youth, and the doing it being making these awful albums that leave me wondering if maybe what made me love their early work wasn't the music at all, but simply being seventeen. (I don't really believe that, of course—it strikes me as dubious that in ten years today's kids will still be enamored of "Frampton Comes Alive" as I am of, say, "The Rolling Stones Now.")

Meanwhile, every year or so some of my old heroes insist on unleashing shiny new state-of-the-art vinyl excrecences that momentarily get my hopes up (a fan, like hope, springs eternal) and then depress me utterly for weeks on end—a phenomenon that probably helps account for the large sales of imports by obscure English New Wavers. What have I—a zealot who has worn out five different copies of "Rubber Soul"—ever done, I ask you, to deserve such base treatment? Damned if I know, but one-fourth of the Beatles and three-fifths of the Byrds, the two groups that meant the most to me in the days when a disco was a Latin record store, apparently think they owe it to me. Hence the two albums now before me, imaginatively titled "George Harrison" and "McGuinn, Clark, & Hillman." It's a toss-up which is the more pathetic of the two. The surprising thing about that, of course, is that I am still capable of being surprised at it.

Actually, given how sadly his stock has dropped over the years, I am almost disposed to say something nice about George's effort, and to be fair it is an improvement over such debacles as "Dark Horse" and "Extra Texture." Co-producer Russ Titelman has given it a superficial gloss that is mildly appealing in a background-music sort of way, and he has apparently declared a moratorium on plugs for Sri Krishna in the lyrics. Still, though no one stuck in the material world could expect George to come up with any really new ideas at this stage of the game (yes, sports fans, he's still playing the same solo he thrilled you with in *My Sweet Lord* way back in 1970), it does seem rather strange that he hasn't made even a tentative bow in the direction of Power Pop.

Considering that the Beatles practically invented the genre cultivated by such current biggies as Cheap Trick, you'd think he'd be inclined to bring it all back home, if only as a marketing ploy to shore up his credibility. But no, except for *Faster*, and then only vaguely, the stuff here is as MOR-creamy and lifeless as everything else he's done since "All Things Must Pass." I guess you have to give George points for the integrity to maintain his chowderheaded ignorance of or indifference to the realities of the pop climate (it's probably a weird combination of both), because he's still doing cut-and-paste games with his Beatles stuff. *Here Comes the Sun* is blatantly recycled here as—get ready—*Here Comes the Moon*. That in itself should tell you all you need to know about the declining state of George's creative powers, but for what it's worth it should be added that the whole album is probably slick enough (in the Eric Clapton/Stephen Bishop/Toto/Top-40 4040 sense) to revive his career commercially, and since that was doubtless the only consideration motivating anyone concerned with the project, you could say it's a success on its own terms. I won't, however.

Although George's record is merely a tepid bore trying to be as inoffensive and suitable for FM as possible, "McGuinn, Clark, & Hillman" is the most unconscionable sellout in recent memory. As an incorrigible fan I hope they get very rich from it, which they never did as Byrds. David Crosby is richer than Croesus from Crosby, Stills, Nash & Young, and Mike Clarke is finally making a decent living from Firefall, so I can understand and even sympathize with MC&H's desire to finally rake in cash commensurate with the Byrds' enormous contributions to American music. But this piffle is an insult to anybody who ever loved them, and if you think I'm just being petty, I suggest you take a listen. What you'll hear are perfunctory harmonies, vacuous life-is-a-circle philosophizing, disco rhythms, and a band dominated not by Roger McGuinn's visionary twelve-string but by George Terry, the hack who (you may recall) provided a similar service for a somnambulant Eric Clapton.

I know that a stylistic rethinking was in order—Chris Hillman has a recurrent nightmare about winding up his career playing Byrds oldies in Holiday Inns—but surely mediocre California pop mush was too easy a solution. Consider this: Gene Clark has every bit as lived-in a voice as Waylon Jennings', and Hillman and McGuinn know as much about country music as anybody treading the boards in rock-and-roll. So instead of Hillman's bland solo albums (this new record boasts his old producers), why couldn't the jumping-off point for MC&H as a band have been the blistering George Jones honky-tonk that appeared briefly on McGuinn's last album? Think about it: they could have satisfied both their souls and their fans.

Well, somewhere along the line they decided to satisfy their wallets instead; I suppose they remembered that hard-country records rarely go platinum, whereas this one probably will. As with George's, it's so carefully calculated to appeal to the broadest radio audience that you can practically hear the market-research computer whirring in the background. Like I said, if old fan in me presumably wants MC&H to succeed despite everything. But if this is the way the band that made "Fifth Dimension" and "The Notorious Byrd Brothers" will make their transition into the Eighties, then, in the immortal words of Rick Nelson, I'd rather drive a truck.

—Steve Simels

GEORGE HARRISON. George Harrison (vocals, guitar): instrumental accompaniment. *Love Comes to Everyone; Not Guilty; Here Comes the Moon; Soft-Hearted Hana; Blow Away; Faster; Dark Sweet Lady; Your Love Is Forever; Soft Touch; If You Believe. Dark Horse.* DHK 3255 $7.98, ® M8 3255 $7.98, ® M3 3255 $7.98.

MCGUINN, CLARK, & HILLMAN. Roger McGuinn, Gene Clark, Chris Hillman (vocals and instrumentalists); instrumental accompaniment. *Long Long Time; Little Mama; Don't You Write Her Off; Surrender to Me; Backstage Pass; Stopping Traffic; Feelin' Higher; Sad Boy; Release Me Girl; Bye Bye Baby.* CAPITOL SW-11910 $7.98, ® 8XW-11910 $7.98, ® 4XW-11910 $7.98.
The Bose® 901® Series IV: A new approach to room acoustics creates a major advance in performance.

It's well known that living room acoustics are a major factor in how any speaker will sound in your home. Recently, an ambitious Bose research program analyzed speaker performance in dozens of actual home-listening rooms. The study showed that, while rooms vary greatly, their principal effects can be isolated to specific types of frequency imbalances.

Based on this research, the electronic Active Equalizer of the new Bose 901® Series IV speaker system has been totally redesigned. New controls allow greater capability for adjustment of room factors than conventional electronics, and make possible superb performance in almost any home listening room.

These new room controls also let us develop a basic equalization curve with no compromises for room effects, allowing still more accurate tonal balance. In addition, an important improvement in the design of the 901 driver makes possible even greater efficiency and virtually unlimited power handling.

The 9C1 Series IV Direct/Reflecting speaker creates a life-like balance of reflected and direct sound.

These innovations combine with proven Bose concepts to create a dramatic advance in performance: in practically any listening room, with virtually any amplifier, large or small, the 901 Series IV sets a new standard for the open, spacious, life-like reproduction of sound that has distinguished Bose Direct/Reflecting® speakers since the first 901.

The Mountain, Framingham, Mass. 01701
Rundgren seems to have some potential as a singer, but he's so infatuated with vocal manners he's copped from various other people and he gets so engrossed in dressing up the tuneless songs he writes that most of what you get here are vocal and instrumental sound effects. A fairly mundane melody, such as the nerisms he's copped from various other people, is used by Rundgren but he's so infatuated with vocal manners he's so infatuated with vocal manners that suggests the audience is being patronized. I get the feeling that Rundgren has “discovered” that a superficial treatment of almost anything will do; he tends not to offer any real insight into a subject but merely to exercise some of its catchwords. I presume we're supposed to salivate on cue. Sorry. My mouth is as dry as most of this so-called music.

CAT STEVENS: Back to Earth. Cat Stevens (vocals, piano, guitar); Jean Roussel (piano); Dave Mattacks (drums); Bruce Lynch (bass); other musicians, Just Another Night; Daytime; Bad Brakes; Randy; The Artist; and five others. A&M SP 4735 $7.98, © A&M 4735 $7.95. Performance: Good Recording: Good

Cat Stevens was very big indeed when he was seen as a sort of English street-folkie complement to progressive rock. Then he started changing directions and got a little too pretentious and grandiose for the times. He's been slinking back, in a zig-zag path, in recent outings, and if the title of this album carries a “coming down” connotation, it also connotes getting one's feet on the ground. In theory anyway. Actually, you can find in the album a sort of trilogy of Stevens modes: Just Another Night and Daytime start it off in his “hit" mode (the gentle; "Traveller and the Firecat" era mode), then Bad Brakes calls up the grandiose period (forecast in Daytime), and then there's some stuff—Last Love Song, the instrumental Nascimento, and Father—that edge in a direction suggested in "Numbers," Styropop, planet Pythagorian Fairy Tale album, Stevens' own kind of move in the jazz-folk direction they've experimented with in England more than here. And then New York Times takes you back into the dramatic dynamics and high volume of the grandiose period, and that phases back into the oldest, gentlest period in the last song, Never. A cycle, or at least a circle.

The new third of this circle, though, suggests possibilities for Stevens. The album would be better, in fact, if he'd bulged that part of it; Last Love Song is one of the three best in the bunch. And, although I'd count Just Another Night and Never as the other two (I liked the early Cat Stevens), I don't quite know the writing in them seems a little bit labored. In his first mode, Stevens seemed a lot better off when he wrote fast and impulsively; the harder he worked at it the more it sounded like hard work. He seems to have a feel for the flow of a jazzy tune, and his rather sudden singing style goes better with its softening effect than with the bombast and heavy pauses. This might be a way to come back without slinking, if his affinity for this new direction is as reliable as it seems. Anyway, here's evidence that there is still some raw talent left in Cat Stevens.

TANYA TUCKER: TNT. Tanya Tucker (vocals); instrumental accompaniment. Lover Goodbye; If You Feel It; The River and the Wind; Angel from Montgomery; and six others. MCA MCA-3066 $7.98, © MCAT-3066 $7.98, © MCAC-3066 $7.98. Performance: Scandalizing Recording: Good

Remember Tanya Tucker? Sweet little thing who wrote Delta Dawn and all them other keen-eyed, sharp-eared songs about small-town life? Well, Lordamighty, if she ain't gone Big City in the worst way. First off, there's the pictures of her here where she's got orange hair. She's wearing leather pants on the cover and what looks like a sprayed-on jump suit on the inside (which could be mistaken for a Playboy centerfold any day of the week), and she's holding these sticks of dynamite in all sorts of suggestive poses. She's just as scandalizing on the record, too, cater-waulin' her way through other people's songs like Lover Goodbye and If You Feel It in a shameless manner. It's not half bad for a rock-'n'-roller, but it sure don't sound like little Tanya used to. She tries gettin' back in decent people's graces by singin' one of her own songs, I'm the Singer, You're the Song, but that didn't cut no ice with me—or with the Mrs. The Mrs. made me burn the record right after the week, and she's holding these sticks of dynamite in all sorts of suggestive poses. She's just as scandalizing on the record, too, cater-waulin' her way through other people's songs like Lover Goodbye and If You Feel It in a shameless manner. It's not half bad for a rock-'n'-roller, but it sure don't sound like little Tanya used to. She tries gettin' back in decent people's graces by singin' one of her own songs, I'm the Singer, You're the Song, but that didn't cut no ice with me—or with the Mrs. The Mrs. made me burn the record right in front of her eyes. (Still got the album cover though—out in the tool shed.) P.R.

(Continued on page 118)
Motorola introduces the complete sound system for your car.

The TC887AX In-Dash Cassette with AM/FM Stereo, the EQB 3000 Graphic Equalizer, plus 3-way and 2-way speakers.

This new system from Motorola® gives you 30 watts of output and a sound that can sound as good as many home stereo systems.

The TC887AX has cassette features like automatic reverse for continuous play of the cassette without removal and reinsertion, locking fast forward to advance the tape quickly and quietly, locking rewind to rewind the tape and repeat a program, and direction indicator lights. Plus push-button tuning, a local/distance switch, balance control for adjusting right and left channels, a fader control for adjusting the front to rear sound level.

The Motorola EQB 3000 Graphic Equalizer has been designed specifically for the varying automotive environment. It compensates adequately for car acoustic levels, speaker placement and ambient road noise. With five frequency bands from 60 Hz to 10,000 Hz, and a fader, it enables you to tailor the sound to your preference.

The Pow-R-Handler™ Professional Series 3-way speakers have 20 oz. one piece magnets and one inch aluminum voice coil for superior heat dissipation. The 2-ways are co-axial speakers with 10 oz. one piece magnets.

And this is just one of the many systems you can create with Motorola components. Listen to them at a dealer near you. And start getting sound in your car that can be as good as the sound you get at home.

MOTOROLA
Auto Sound Systems

CIRCLE NO. 39 ON READER SERVICE CARD

To find the dealer nearest you, write Market Relations Manager, Motorola, Inc., Automotive Products Division, 1299 East Algonquin Road, Schaumburg, Illinois 60196. Motorola is a registered trademark of Motorola Inc.
PARLIAMENT: Motor-Booty Affair. Parliament (vocals); instrumental accompaniment. Mr. Wiggles; Rumpofsteelskin; Liquid Sunshine; One of those Funky Things; and four others. Casablanca NBLP 7125 $7.98, © NBL8 7125 $7.98, © NBL5 7125 $7.98.

Performance: Freaky
Recording: Fine

Parliament's latest excursion into funk explores some new territory, although the basic elements of the songs are familiar: a strutting, get-down-and-boogie beat; hypnotic, swaying melodies; double-entendre lyrics. What's been added are tricky arrangements and over-dubbing of spoken commentaries. The statements that rise above the music are very self-assertively black and overdone to the point of monotony. Worse, everyone is so busy doing his or her own thing—singing, talking, taking off into solo instrumental or vocal riffs—that I kept thinking I was hearing two or three records playing at once.

It works only in flashes. A trippy echo-chamber voice, for example, introduces us to Mr. Wiggles ("May we funk you?"). who warns us that "Motor-Boaty Affair" is no ordinary funk, but the funk Olympics. A solid melody starts to heat things up, but Mr. Wiggles never shuts up, the tune never emerges, and the whole song becomes just an intro to the album. Similarly, a song called Water Sign has something interesting going on in the background, but it's never given half a chance. Aqua Boogie—despite the screams of "I hate water, put me down, you're all wet" that punctuate it—struts enough to become the best track on the album. For the rest, it's all too freaky for me.

E.B.

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E.B.

Peaches & Herb: 2 Hot. Peaches and Herb (vocals); instrumental accompaniment. We've Got Love; Shake Your Groove Thing; Reunited; Love It Up Tonight; Four's a Traffic Jam; and three others. Polydor PD-1-6172 $7.98, © 8T-1-6172 $7.98, © CT-1-6172 $7.98.

Performance: Convincing
Recording: Very good

Ordinarily, I have an aversion to grown women who sing or speak in high, baby voices, but I can overlook this trait in Peaches (Francine Hurd) because of the first-rate pop music she makes with Herb (Herb Fame). This duo has been together since the early Sixties, when they were dubbed the "Sweethearts of Soul," and they obviously still have a good thing going. They mesh perfectly, not only in terms of vocal tones, but in basic rhythmic thrust and interpretation of their lyrics. They sing with an exceptionally convincing quality on the intimate numbers here, Reunited and Four's a Traffic Jam. There's nothing brilliant in the lyrics, stock fare about men and women breaking up and making up, but their intensely personal style of delivery makes these corny little songs come alive. Some of this is standard disco fare, but the entire album, even the hit single Shake Your Groove Thing, is a lively romper with better-than-average musical development. Well done, gang.

P.G.

Stereo Review
We've just improved every record you own.

Bold, creative new technology sets new standards for clarity, dynamic range, and stereo separation.

Of course the new AT25 doesn't look like other stereo phono cartridges. It's entirely different. And not just on the outside. We've rethought every detail of design and construction. All in the interest of the smoothest, cleanest sound you've ever heard. The AT25 frequency response is utterly uniform. Definition and stereo separation are remarkable. Dynamic range is awesome. Even the most demanding digital and direct-to-disc records are more spectacular, more musically revealing.

But set our claims aside and listen. The AT25 is unexcelled for transparency and clean, effortless transient response. Individual instruments are heard crisply, without stridency even at extremely high levels. Even surface noise is less apparent.

The cutaway view shows you how we do it. Start with the coils. Just two, hand-wound in a toroidal (doughnut) shape. A unique shape which cuts losses, reduces inductance, and lowers impedance. The coils are wound on laminated one-piece cores which also serve as pole pieces. Again, losses are lower. Eddy current effect is also reduced. Which all adds up to superior transient response. It's like having the electrical performance of the finest moving coil designs, but with the high output of a moving magnet. The best of both worlds!

Each magnetic system is completely independent. No common circuits. We even add a mu-metal shield between the coils to insure no leakage between channels. Which results in stereo separation which must be heard to be believed.

But there's more. An entirely new stylus assembly with one of the smallest whole diamond styli in series production. Only 0.09mm in cross section and almost invisible. It's nude-mounted and square-shank to insure exact alignment with the groove. And it's set in a Beryllium cantilever that eliminates flexing.

Instead of snapping into place, this stylus assembly is held rigidly to a precisely machined surface with a small set screw. A small detail which insures perfect alignment, no spurious resonances, and simple stylus replacement.

We treat cartridge shell resonances too, with special damping material applied to the top of the unique plug-in shell. The magnesium shell even has a calibrated adjustment for stylus overhang to insure perfect installation.

The many technical differences between the new AT25 and every other stereo cartridge are fascinating... and significant. But the real difference is in the resulting sound. It's almost as if you had plugged your stereo system directly into the studio console. Every subtlety of artistic expression is intact, no matter how complex—or simple—the music, no matter how loud—or soft—the performance. It's as though a subtle barrier had been removed adding clarity and presence to every record you own.

A cartridge of this sophistication and high quality cannot be produced quickly. Initially the AT25 may be in short supply. But your patience will be rewarded with performance which will send you back through your record library to discover nuances you never suspected to hear. And you'll eagerly await the sonic splendors of tomorrow's digital recording techniques.

The new AT25 stereo phono cartridge from Audio-Technica. It makes every other component you own sound better, including the records!
half, when the “Ooh, looking for love” refrain runs in counterpoint with a driving brass section. Wow!

There’s a lot more, too. For Sunday teas-dances, there’s the infectiously happy, hard driving Falling in Love Again; for some heavier action there’s The Runner; for romance, you can slow-bump your way through Woman in Love. Every song benefits from well-planned, dense arrangements that mix big-band horn sections, close vocal harmonies, electronics, and a never-flagging beat. It’s all done with the kind of musical imagination that’s needed to keep disco lively. Hats off to everybody concerned. E.B.

RECOMMENDED DISCO HITS

- **BOMBERS**: *Get Dancin’*. WEST END WE 22115 disco disc $2.99.
- **BONEY M**: *Dancing in the Streets*. SIRE SRD 1040 disco disc $3.98.
- **BROOKLYN DREAMS**: *Sleepless Nights*. CASABLANCA NBLP-7135 $7.98, © NBL5-7135 $7.98.
- **MACHINE**: *There But For the Grace of God Go I*. RCA PD 11457 disco disc $3.98.
- **SISTER SLEDGE**: *We Are Family*. ATLANTIC SD 5209 $7.98, © TP 5209 $7.98, CS 5209 $7.98.

(List compiled by John Harrison.)

RECORDING OF SPECIAL MERIT

NOEL COWARD AND MARY MARTIN: *Together with Music*. Original-soundtrack recording. Noel Coward and Mary Martin (vocals); Peter Matz (piano); orchestra, Tutti Camerata cond. Ninety Minutes Is a Long, Long Time; Together with Music; I Only Have Eyes for You; I Get a Kick Out of You; Les Filles de Cadiz; Uncle Harry; Nina; Mad Dogs and Englishmen; and seventeen others. DRG R DARC-2-1103 two discs $15.98.

Performance: Delightful
Recording: Good

Once upon a time, dear children of the Age of Tape, what you saw on a television screen was being performed live in a studio by the people you were watching. And so it happened that on Saturday evening, October 22, 1955, Miss Mary Martin in a Mainbocher gown met Mr. Noel Coward in a tuxedo on a CBS set to put on a ninety-minute Ford Star Jubilee “color spectacular” before an invited audience that included Margot Fonteyn and William Faulkner. There were no dancers, no chorus, no “guest stars.” Even the orchestra conducted by Tutti Camerata and the piano played by Peter Matz were out of view. What did Coward and Martin do for ninety minutes? Why, they traded clever insults and memories, sang songs separately and together. And if you don’t believe they held their viewers across the nation spellbound, just listen to this two-record set drawn from the soundtrack of that remarkable occasion. Except for four commercials and the announcer’s introduction, you’ll hear it all, and it’s all worth hearing.

The censors, who had a lot of power in those days, must have been nervous and confused that night because they made the singers change the phrase “four-letter words” in Cole Porter’s Anything Goes to “three-letter words,” and Mary Martin was required to sing what annotator Stanley Green refers to as a “laundered version” of My Heart Belongs to Daddy. On the other hand, Coward got away with all the racy references in a song about his ex-missionary Uncle Harry, and in I Get a Kick Out of You Miss Martin was allowed to retain the line about sniffing cocaine. The performers must have been a little nervous, too, since they’d been quarreling at rehearsals over the song Together with Music, which Coward had written for the show but which Martin had insisted he change because she had felt it wasn’t romantic enough. But when they were on, the world was theirs.

(Continued on page 124)
How Audio History is made.

A lot of speakers claim to be audio breakthroughs. Our new Model 14 really is. In fact, it's so unique, that before we could create it, we first had to invent a whole new family of components.

We began with a new type of horn. The Mantaray™ It's the first "constant directivity" horn ever created. Conventional horns, cones and domes (including so-called omnidirectional and reflective speakers) tend to "beam," that is, narrow their angle of sound radiation at higher frequencies. This effect causes the stereo image to lose strength off the center axis and to actually wander.

Mantaray, on the other hand, delivers a clearly defined sound wedge that keeps its strength regardless of the music's changing frequencies. You get the full spectrum of sound and the most solid three-dimensional stereo image you've ever heard. And since the sound doesn't diminish off center axis, the

Model 14 enlarges your listening area, your "stereo sweet spot". As an extra benefit, Mantaray's precise sound focusing means your music goes in your ears — not in your drapes, walls and ceilings. Consequently, it's more likely than other speakers to sound the same in your home as it does in your dealer's showroom.

Then to give you even higher highs, we developed the first radial phase plug, the Tangerine™

In contrast to conventional phase plugs with two equidistant circular slots that block some frequencies, the Tangerine's tapered slots permit a free flow of high frequencies to beyond 20 KHz.

Equally important to all this is our new Automatic Power Control System. Unlike fuse-type devices or circuit breakers, the system keeps track of the power pumped into the speaker, lets you know with a blinking light when power exceeds safe limits, and then reduces overloads automatically but without shutting the speaker off. It's quite a system.

In addition, the Model 14 offers you super-efficiency, high-power handling capacity and exceptional dynamic range, plus a new vented enclosure with a 12-inch bass driver for a tighter, crisper low end. So that's how audio history is made. And it's all yours at a price that means the best sound value available for your home today.

For a free brochure and the name of your local dealer, write: Altec Lansing International, 1515 South Manchester Avenue, Anaheim, CA 92803.
Whatever Happened to Reggae?

PETER TOSH:
almost total appeasement

Just about three years ago a lot of people had high hopes for the future of reggae in the American pop music market. As far as many of us were concerned, such possibilities couldn't have presented themselves at a better time. It was becoming obvious to us that American soul music would soon disappear, to be replaced by the all-enslaving monoboogety thump of disco. But traditional American soul-music values—heart, passion, iconoclasm, non-automated intensity—seemed to thrive in reggae, which drew heavily on James Brown, Otis Redding, Stax-Volt, and New Orleans rhythm-and-blues, all the while managing to contribute its own subtle, inimitable lilts as well.

And the more disco seemed to narrow down to one totalitarian beat, the more reggae seemed to reveal in diversity. Toots and the Maytals' gutbucket churn, Bob Marley's velvet knife, Burning Spear's hypnotic (some might say narcotic) chants, the Mighty Diamonds' Smokey Robinson harmonizations, the wild neopsychedelic clatter and ricochet of dub—all these served, for a little while, to disperse innocuous little ditties about how warm the sun felt on the back of the neck.

A lot of people felt that Marley had sold out, and for proof pointed to the differences between his 1977 album "Exodus" and the concurrently released "Equal Rights" by Peter Tosh, himself an ex-member of Marley's Wailers and author of the latter's classic Get Up, Stand Up. Where Marley offered sunshine panaceas or, at best, rambled vaguely about "rightness" vs. "guiltiness," Tosh was flat-out militant. But everybody knows just about how interested most late-Seventies Americans of whatever color are in "protest" music of any kind, so unfortunately, if not unpredictably, "Equal Rights" didn't sell.

It should perhaps come as no surprise, then, that "Bush Doctor," Tosh's newest record, and his first under the patronage of the Rolling Stones, is pure, 100 per cent pap. I doubt that the Stones are to blame for this; I imagine they'd have been more than pleased to have a dispenser of revolutionary anthems on their label, if only to shore up their own sagging radical credentials. No, credit for euphemizing his militance into virtually total appeasement must go to Tosh himself. After all, he produced this set, along with guitarist Robbie Shakespeare. Undoubtedly some listeners will take as a subtle shift in Rastafarian doctrine Tosh's change from unflinching aggression and grim reality to what is little more than macho self-aggrandizement (I'm the Toughest) and pleasantly trivial tunes in a setting so bland it ought to be called postcard reggae.

One must wonder if it was Jah's inspiration that caused Tosh to use birdcall sound effects à la Martin Denny for the third time in three albums—they even show up in two cuts here, Pick Myself Up and Creation, the latter a strummed autoharp spiritual which also features thunder, lightning, and rain and is so astonishingly corny it could've been on an old Harry Belafonte album. The title cut is more or less a reprise of Tosh's 1975 Jamaican hit Legalize It, with its catalog of marijuana's (mostly questionable) medical and social virtues. Despite the cute, uncredited I-Threes type of vocal back-up (it runs through most of the album), this track fails to transcend its clichés in the way its prototype so effectively did. As for the other songs, a single duet with Mick Jagger on an old Temptations number, Don't Look Back, is about the only respite from relentless, run-on Rasta preachments on a level so numbingly banal as to transcend even Marley's recent output: "Now my brothers/You got to be good/Just do what you know is right/Don't be badminded!"... and so forth.

Tosh is not the first hard-core reggae artist to sell out. Like Marley and the rest, he has a readymade excuse: the more listeners in the pop mainstream this garners him, the more potential converts to the gospel of Rastafari he wins. But if drivel like the stuff quoted at the end of the preceding paragraph doesn't drive you straight into the Babylonian arms of Boogie Oogie Oogie disco, then nothing will.

—Lester Bangs

PETER TOSH: Bush Doctor. Peter Tosh (rhythm and acoustic guitars, clavinet, autoharp, vocals); vocal and instrumental accompaniment. (You Got to Walk and) Don't Look Back; Pick Myself Up; I'm the Toughest!; Soon Come; "Moses"—The Prophets; Bush Doctor; Stand Firm; Dem Ha Fa Get a Beat-er; Creation. ROLLING STONES CJC 39109 $7.98, © TP 39109 $7.97, © CS 39109 $7.97.
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NATIONAL DAY OF CRASH PROTECTION.
Coward was at his most urbane, singing sentimental ballads and witty satirical ones, everything from I'll See You Again to a speeded-up version of Mad Dogs and Englishmen that had been bringing down the house in a Las Vegas club where he'd been busy perfecting his act. Martin brought back all the hit songs from South Pacific, made a marvelous mockery of One Fine Day from Puccini's Madama Butterfly, and showed off her French in Delibes' Les Filles de Cadiz. Then the two of them joined in a final medley that culminated in nothing less than The Continental. Coward's London sang-froid and an artfully artless charm of the Texas-born Martin were perfectly matched, and the music they made is never for one moment tiresome. A sustained delight. P.K.

EUBIE! (Eubie Blake). Original-cast recording.

Lennie McNeil, Lynne Godfrey, Janet Powell, Jeffrey V. Thompson, Alaina Reed, Gregory Hines, Ethel Beatty, Mel Johnson Jr., Terry Burrell, Marion Ramsey, Maurice Hines, others (vocals); orchestra, Vicki Carter cond. WARNER BROS. HS 3267 $8.98. © WB 3267 $8.98. © W5 3267 $8.98.

Performance: Shrewd
Recording: Very good

Eubie Blake, pianist and composer, is now ninety-six years old and has been musically active since he was a teenager. His two best-known melodies are I'm Just Wild About Harry and the gorgeous Memories of You. His catalogue (he is still composing) is enormous. In a recent newspaper interview he said he has enough material for half a dozen revues like Eubie! If that material is ever presented on stage, I hope it receives better treatment than the songs included in this recording of the Broadway production of Eubie!

Both ballads and up-tempo numbers are murdered by a monolithic, hammy, this-is-Broadway approach. The arrangements and performances are of the sludgehammer variety, for which I assume stage director Julianne Boyd (who conceived the revue) and musical director Hal Carter are responsible. Although it is laudable and heartening that Blake is being saluted for his talent and achievements (Shuffle Along, with music by Noble Sissle, was a smash success at its time), it is frustrating to hear performances that are less than adequate. Eubie Blake ought to sue for defamation of personality.

Performance: Fun
Recording: Very good

Ben Bagley, who for some years now has been dredging up the nation's more obscure and popular songs of the past from an apparently bottomless reservoir, comes up this time with the entire score of a half-forgotten musical. Too Many Girls is a Rodgers and Hart college-football comedy of the kind that livened up our stage and screen in the days before World War Two. Despite events in Europe, the urgent question on Broadway was whether four former all-American football heroes at Pottawatomie College could protect the innocence of an heiress named Connie. When the George Abbott production opened at the Imperial Theatre in New York on October 18, 1939, people in the cast making their Broadway debuts included Eddie Bracken, Van Johnson, Vera Ellen, Dorothy Kilgallen, and, of all people, Desi Arnaz.

In Bagley's revamped cast are Estelle Parsons as Connie, Nancy Andrews as Talullah Lou (who by the end of Act Two no longer wears the beanie that has been the official sign of her virginity), and Nancy Grennan as Eileen, a saucy snippet of a coed. In the quartet of ex-football champs disguised as students there's Anthony Perkins as Clint Kelley, Johnny Desmond as Manuelito (the Desi Arnaz role—you had to have at least one Latin in a number in a show in those days), Jerry Wyatt as Jojo, and Ken Parks as Al. Then there's Pepe, who is Manuelito's hot-blooded love interest, with Nancy Andrews wearing a South-of-the-Border accent for Pepe's big number, Spic and Spanish. Johnny Desmond sings the other Latin item, She Could Shake the Maracas, and he's no slouch either. Grennan and Parks get to sing the lovely ballad You're Nearer, but only Judy Garland ever did it full justice. The big hit from Too Many Girls was, hands down, I Didn't Know What Time It Was. Tony Perkins sings it appealingly, though I wish his voice were just a little bit bigger to match the size of the ballad.

But the performer who has the most fun with the vintage material assigned to her and is the most fun to hear is Estelle Parsons as Connie, the rich man's protected daughter, especially when she sings My Prince. And then there's the school anthem, anticipating Buckle Down Winsocki, with lines like "You made a lot o' me, Pottawatomie." If reality is getting you down, I can think of no safer place to retreat than Pottawatomie for an hour of clever lyrics and hummable tunes affectionately and effectively revived. P.K.
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- Accurate and easy-to-use test record ever developed.

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SRT14 contents:

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- Channel balance
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- Speakers and phono cartridge
- Noise test
- Recording player with various test signals permit the advanced audiophile and professional to make precise measurements of a host of other performance characteristics.

Stereo Demonstration Record and Cassette

This recording is the result of two years of intensive research in the sound libraries of Deutsche Grammophon, Connoisseur Society, Ballantine, and Cambridge Records. The editors of Stereo Review have carefully selected those excerpts which best demonstrate each of the many aspects of the stereo reproduction of music. The recording is a series of independent sonic demonstrations, each designed to test and prove more aspects of musical sound and its reproduction.

RANGE OF DEMONSTRATIONS. The recording includes the following technical details of stereo separation and multichannel sound:

- Acoustic depth
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- Sounds of ancient instruments
- Sounds of oriental instruments
- Sounding of the singing voice
- Classical and symphonic ensembles
- Accurate and easy-to-use test record ever developed.

[start of addressing process]...
THE CHIEFTAINS: 7. The Chieftains (instruments). Away We Go Again; Dochas; Hedigan’s Fancy; John O’Connor and the Ode to Whiskey; Friel’s Kitchen; No. 6 the Coombe; Gogan’s Fancy; John O'Connor and the Ode to Mementals). Away We Go Again; Dochas; Hedi...THE CHIEFTAINS: 7. The Chieftains (instruments). Away We Go Again; Dochas; Hedigan’s Fancy; John O’Connor and the Ode to Whiskey; Friel’s Kitchen; No. 6 the Coombe; Gogan’s Fancy; John O'Connor and the Ode to Mementals). Away We Go Again; Dochas; Hedi...

A sophomore guitarist, a junior banjo player, and a graduate who plays the fiddle—all from Oberlin College—got together to make this record of old-time instrumental music from places like the Ozarks, Pocahontas County, West Virginia, the backwoods of Kentucky, and the hills of Tennessee. Andy Cahan, who took up the bluegrass banjo after he saw the movie Deliverance, provides a couple of vocals where needed and strums his banjo buoyantly throughout. Guitarist Laura Fishleder, who has been playing the instrument since she was nine, plays it splendidly here. Lisa Orenstein, who is a research expert as well as an expert fiddler, is the alumna in the group and does some fine solo turns. If, “long around the middle of side two, you begin to wish you had never heard of Molly or Polly or bluegrass music altogether, and could sneak in a little Scarlatti for relief, that’s in the very nature of...(Continued overleaf)
TOSHIKO AKIYOSHI: Finesse. Toshiko Akiyoshi (piano); Monty Budwig (bass); Jake Hanna (drums); Count Your Blessings; Solveig’s Song; Mr. Jelly Lord; Warning! Success May Be Hazardous to Your Health; and four others. CONCORD JAZZ CJ-69 $7.98.

Performance: Fluent  
Recording: Very good

Toshiko Akiyoshi, who is co-leader, with husband Lew Tabackin, of what may well be the finest big band in the land, started out as a pianist. I was never as impressed with her keyboard work as I have been with her recent arrangements for the big band, but this new trio album gives me second thoughts; the lady is superb here as well. “Finesse,” with Monty Budwig and Jake Hanna in the supporting roles, has the lyrical, gentle-fingered Ms. Akiyoshi weaving delicate new threads into mostly old material that jazz artists rarely tackle these days. The range is wide, from Female Groove’s Count Your Blessings and Victor Young’s Love Letters to Grieg’s Solveig’s Song, a wonderful updated treatment of Jelly Roll Morton’s Mr. Jelly Lord, and a couple of originals. There is occasionally a trace of Art Tatum and Bud Powell in Toshiko’s playing, but overall she is as much her own individual as Tatum and Bud Powell in Toshiko’s playing, with a triple vindication of Waller, Guarnieri, and stride piano. As on his previous albums, Guarnieri is better with ballads since with up-tempo numbers he tends to emphasize speed and dexterity for their own sake. Fortunately, most of the selections here are taken at medium tempos. The exceptions are Ain’t Misbehavin’, I’m Not Worrying, Keepin’ Out of Mischief Now, Alligator Crawl; Jitterbug Waltz; Moppin’ and Boppin’; and six others. TJZ-1002 $7.98.

Performance: Very good  
Recording: Very good

Johnny Guarnieri is a facile and ingratiating pianist who in recent years has been specializing in “stride,” the style he most loved as a young man despite his service in the swing bands of Benny Goodman, Artie Shaw, Lester Young, and Lionel Hampton. Stride is a muscular, frisky style developed by black pianists in New York during the ragtime era; one of its most famous exponents was Fats Waller, who is now receiving the attention he deserves. “Stealin’ Apples” is thus a triple vindication of Waller, Guarnieri, and stride piano.

Record of Special Merit

LOUIE BELLSON: Prime Time. Louie Bellson (drums); Blue Mitchell (trumpet); Pete Chrislieb (tenor saxophone); Ross Tompkins (piano); John Williams (bass); other musicians. Step Lightly; Trash-In; Cotton Tail; Let Me Dream; and four others. CONCORD JAZZ CJ-64 $7.98.

Performance: Excellent  
Recording: Excellent

“Prime Time” is drummer Louie Bellson’s third album for Concord Jazz, a dedicated, fast-growing California label whose imposing catalog matches generally outstanding performances with uniformly excellent technical quality. One has come to expect something special from a Concord Jazz release, and this Bellson collection of quintet and septet sides lives up to those expectations.

Trumpeter Blue Mitchell, who came into prominence as a member of Horace Silver’s group between 1958 and 1964, made some sadly misguided and overproduced treks to the land of semipop on the Mainstream and Blue Note labels a few years back, but here he is in his element again. On side one, the quintet side, he fires clean, clear notes rapidly and logically on the uptempo tunes—Step Lightly, Space Ship II, and Ellington’s Cotton Tail—and cuddles with lyrical tenderness Benny Golson’s I Remember Clifford, his featured third of a lovely ballad medley. Sharing the front line with Mitchell is tenor saxophonist Pete Chrislieb, a thirty-three-year-old Californian who often performs with Bellson but mostly buries his considerable talent in studio work or in Doc Severinsen’s Tonight Show orchestra. Chrislieb can articulate at any tempo; his interpretation of Marian McPartland’s With You in Mind, in the ballad medley, is one of the album’s most eloquent statements, and his exchange with Mitchell on Cotton Tail proves him an equal to his better-known colleague.

Guitarist Bob Bain and percussionist Emil Richards join the group on side two, which also has pianist Ross Tompkins switching to an electric keyboard. The flavor is distinctly south-of-the-border, ranging from Let Me Dream, a polite bossa nova by Bellson, to as a result. Corea tries to strike a happy medium, but it doesn’t work. “Secret Agent,” like his other recent albums, is permeated with uneasy compromises and clichés. His synthesis of a flippant touch with the Glenn Gould theme is entertaining on The Golden Dawn, but the outer-space vocals by Gayle Moran on Drifting and Glebe St. Blues, as well as Al Jarreau’s vocal on Hot News Blues, are typical of the indulgent nonsense of jazz singing that passes itself off as spirituality. Ah, but then . . . but then there is a brief and fascinating encounter with Corea when he’s not fooling around: Mirage, with Jim Pugh’s multitracked trombone and Corea’s synthesizers, is an eerie, moving interlude that lasts only two minutes and eleven seconds but contains more music than all the rest of the album. It may be Corea’s way of keeping the faith against a better day, come when it will.

JOHNNY GUARNIERI: Stealin’ Apples—Johnny Guarnieri Plays Fats Waller. Johnny Guarnieri (piano, vocals). Ain’t Misbehavin’; I’m Not Worrying; Keepin’ Out of Mischief Now; Alligator Crawl; Jitterbug Waltz; Moppin’ and Boppin’; and six others. TJZ-1002 $7.98.

Performance: Very good  
Recording: Very good

Johnny Guarnieri is a facile and ingratiating pianist who in recent years has been specializing in “stride,” the style he most loved as a young man despite his service in the swing bands of Benny Goodman, Artie Shaw, Lester Young, and Lionel Hampton. Stride is a muscular, frisky style developed by black pianists in New York during the ragtime era; one of its most famous exponents was Fats Waller, who is now receiving the attention he deserves. “Stealin’ Apples” is thus a triple vindication of Waller, Guarnieri, and stride piano.

As on his previous albums, Guarnieri is better with ballads since with up-tempo numbers he tends to emphasize speed and dexterity for their own sake. Fortunately, most of the selections here are taken at medium tempos. The exceptions are Ain’t Misbehavin’, I’m Not Worrying, and I Found You Out. The first is in the Waller catalog; the prodigal Fats knocked it out for Clarence Williams, the early black music publisher and entrepreneur who made Waller’s Squeeze Me a national hit. The second is now attributed to Waller even though the official credits for the words and music belong, respectively, to Charles O’Flynn and Phil Ponce (Waller’s manager in the Thirties), probably because of Fats’ bad habit of turning out songs for quick money without bothering to secure the copyrights. Guarnieri is to be commended for “rescuing” these songs (and I hope he finds some more), but his interpretations of Keepin’ Out of Mischief Now and Jitterbug Waltz are excellent.

Guarnieri also performs a valuable service here by introducing two “lost” Waller melodies, I’m Not Worrying and I Found You Out. The first is in the Waller catalog; the prodigal Fats knocked it out for Clarence Williams, the early black music publisher and entrepreneur who made Waller’s Squeeze Me a national hit. The second is now attributed to Waller even though the official credits for the words and music belong, respectively, to Charles O’Flynn and Phil Ponce (Waller’s manager in the Thirties), probably because of Fats’ bad habit of turning out songs for quick money without bothering to secure the copyrights. Guarnieri is to be commended for “rescuing” these songs (and I hope he finds some more), and his playing is just fine, but he should never have tried to sing them in Fats’ vocal style!

HELEN MERRILL: Something Special (see Best of the Month, page 95)}

(Continued on page 130)
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APRIL 1979

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Chet Baker
Twenty Years of Pacific Jazz

Richard Bock started his Los Angeles-based Pacific Jazz label in the summer of 1952. His first recording session, a one-mike affair in a Laurel Canyon living room, didn’t seem like much, but it laid the foundation for a company that would successfully mirror West Coast jazz activities for the next two decades. Pacific Jazz might have died an early death if Bock hadn’t hit pay dirt almost immediately by recording Gerry Mulligan and an unknown twenty-three-year-old trumpeter named Chet Baker. Mulligan’s past associations (particularly with Miles Davis) had already gained him some reputation in jazz circles, but Baker, fresh out of the Army, had none. By the end of 1953, Bock’s recordings of these two musicians—both jointly and individually—had proved instrumental in catapulting them to international stardom. Their enormously successful, highly original pianoless quartet was eventually absorbed by a larger company, United Artists Music Company, which, in turn, became part of a conglomerate called Transamerica Corporation, the same folks who diluted Blue Note Records beyond recognition. Be that as it may, the company has now released four single albums containing Pacific Jazz/World-Pacific recordings made between 1953 and 1969, and it has had the good sense to put Richard Bock in charge of production. The Fifties and Sixties are represented by two albums each, the selections appear in near-chronological order, and the sleeves contain Bock’s own informative remarks on each selection as well as discographical data.

Jazz: The 50’s, Volume I” does not, as one might suspect, begin with the first Mulligan recording (though it was originally issued), but rather with Five Brothers, recorded by his quartet (with Chet Baker) almost a year later. I suppose technical quality was the determining factor, for the sound on all four albums is excellent, and so is the music. The first volume is devoted to smaller groups, from quartets to an octet led by trumpeter Cy Touff, it’s a wonderful collection from which I am hard put to select highlights, but mention ought to be made of Chet Baker’s fluent, fast-paced reading of Jerome Kern’s All the Things You Are and the tenor work of Bud Shank and Bill Perkins on another standard, It Had to Be You, which is further enhanced by a fine rhythm section led by pianist Hampton Hawes. The years 1956 to 1959 are covered in “The 50’s, Volume II,” which represents a period that saw the prospering label add some very impressive names to its roster. Guitarist Jim Hall is heard within the unique framework of the Chico Hamilton Quintet, playing Topsy from the Basie repertoire, and leading his own trio (with the late Carl Perkins on piano) in a mellow rendering of Things Ain’t What They Used to Be. Chet Baker reappears on two fine tracks. To Mickey’s Memory and Love Nest, the former with a quintet that included Bobby Timmons, the latter with a formidable rhythm section (Russ Freeman, Leroy Vinnegar, and Shelly Manne) that spurs Baker’s muted trumpet to dazzling heights. There is also a good track from the Montgomery Brothers’ 1959 date that marked the recording debut of Wes Montgomery and Freddie Hubbard, both of whom solo with strong hints of things to come, and there’s a swinging Four and One More by the Gerry Mulligan Sax Section, an impressive reed lineup that includes Zoot Sims, Allen Eager, Lee Konitz, and Al Cohn. The album ends with Gil Evans’ impressive big-band arrangement of St. Louis Blues featuring Cannonball Adderley, but for some strange reason the track fades out at the beginning of Evans’ piano solo, cutting it forty-six seconds short!

On “Jazz: The 60’s, Volume I” the sound of Pacific Jazz undergoes a change. Reaction to cool jazz had set in in the form of a funkier, church-oriented style that came to be known as “soul music,” but it bore little resemblance to the music called that today. Blues-rooted pianists were popular in those early Sixties, as were funky organists; Riverside had Junior Mance, Columbia had Ray Bryant, Prestige had Shirley Scott, and Pacific Jazz had Les McCann and Richard “Groove” Holmes. Many critics viewed this recording debut with dismay, regarding it as rank commercialization, but in light of today’s fusion funk I think we would all welcome it back. Certainly what Les McCann was doing almost twenty years ago—as exemplified here by One More Hamb-bok Please and A Little 3/4 for God and Co.—would win any critic’s vote if put up against his current performances. Also heard in this set is trumpeter Carmell Jones on Viva Tirado with the Gerald Wilson Orchestra and, to greater advantage, on New Groove with a Bud Shank quintet. New Groove, a Shank composition, wasn’t really so new, for it recalls all too closely the groove etched in 1958 by Art Blakey’s Blues March. Hearing the Jazz Crusaders’ That’s It and Young Rabbits again, I realized that a fading memory had made me chalk them off as a lesser jazz group than they really were. And hearing Dizzy Gillespie’s Man from Monterey fade away I also realized that my memory wasn’t failing me completely—the fade is new. “The 60’s, Volume II” covers the years 1965 to 1969 and is dominated by big bands.
though it does contain two excellent Jazz Crusaders tracks, a gently swinging Rosetta by the Joe Pass Quartet, and Portraits, a 1967 experiment with odd time signatures by pianist Roger Kellaway and saxophonist Tom Scott. There are good tracks by the big bands of Gerald Wilson and Buddy Rich, the most interesting being Wilson's Hypomode Del Sol, featuring violinist Jean-Luc Ponty in extraordinarily good form, but this track has also been cruelly abbreviated. If his recent records have given you doubts about George Duke's ability as a jazz pianist, his performance of Bluesnee with the Gerald Wilson Orchestra will convince you otherwise. Remember the days when jazz men used to move forward?

Except for cutting some of the tracks short, which is as inexcusable as it is inexplicable, Richard Bock has done a good job of assembling a cross section of Pacific Jazz's two prolific decades. But many of the sessions represented here deserve to be issued in their entirety. Let's hope that happens soon.

—Chris Albertson


MR. JACK DANIEL hardly ever used these old labels. But, we believe, they have plenty of good uses today.

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BEETHOVEN: Missa Solemnis, Op. 123. Anna Tomova-Sintow (soprano); Patricia Payne (contralto); Robert Tear (tenor); Robert Lloyd (baritone); London Symphony Chorus and Orchestra, Colin Davis cond. PHILIPS 6747 484 two discs $17.96, © 7699 086 $17.96.

Performance: Grand
Recording: Glorious haze

This is a restrained, grand, and moving performance recorded on a monumental scale. My objection to the Gothic Cathedral approach is that the chorus is relegated to an acoustic never-never land instead of being right up front. Perhaps this is some kind of religious-music piety. Or maybe it’s the way the English like their choral sound—big and resonant. Or perhaps it is an attempt to cover up the immense and endless difficulty of the choral writing (but that would be like one of those out-of-voice opera sopranos who suddenly turns her back on the audience when the high notes come).

Actually, the London Symphony Chorus seems to be quite a respectable choral ensemble, and I’m certain we could stand to hear them a bit more clearly—particularly the soprano, who suffer the most by having their parts that burst forth. It is an object lesson in the power of care and restraint. But I think these qualities would have emerged even more convincingly if we could have been let in on some of the orchestral and choral details as well as the grand line. This Missa Solemnis is very definitely a performance, if not a recording, of special merit.

E.S.

BEETHOVEN: Piano Concerto No. 4, in G Major, Op. 58 (see Best of the Month, page 92)

BERG: Chamber Concerto for Piano, Violin, and Thirteen Winds. Ligeti: Chamber Concerto for Thirteen Instruments. Lorant Szucs (piano); Laszlo Kote (violin); Budapest Chamber Ensemble, Andras Mihaly cond. Hungaroton SLPX 11807 $7.98 (from Qualiton Records, Ltd., 39-28 Crescent Street, Long Island City, N. Y. 11101).

Performance: Very good
Recording: Reasonable

RECORDING OF SPECIAL MERIT

BERG: Chamber Concerto for Piano, Violin, and Thirteen Winds; Four Pieces for Clarinet and Piano; Op. 5; Piano Sonata, Op. 1. Daniel Barenboim (piano); Pinchas Zukerman (violin); Antony Pay (clarinet); Ensemble InterContemporain, Pierre Boulez cond. Deutsche Grammophon 2511 007 $8.98.

Performance: Exceptional
Recording: Close, detailed

Berg’s chamber concerto is at once a passionate and a very intellectually organized piece of music—much more complex in many ways than anything of Webern or Schoenberg. Time has robbed the piece of its terrors, for it is a tour de force of European avant-garde music, has created all his mature work outside his native country, and it is only in the last decade that his works have been performed there. Now we have an excellent Hungarian recording of his chamber concerto paired with a lively, sympathetic reading of the Berg concerto—most likely one of its forebears.

Admirable as that disc is, however, there can be no doubt that the Boulez/Barenboim/Zukerman performances for Deutsche Grammophon set a new standard in the playing of this kind of music. This is Expressionism without tears: clarity and contemporary virtuosity combined with the full range of expression that the music demands. The Ensemble InterContemporain is part of Boulez’s grand Paris project for twentieth-century music, and it is a very fine group indeed. But the stroke of genius was to get Barenboim and Zukerman, two arch-exponents of romanticism, to play in the Berg concerto. It is on the money. The performance is moving and crystalline—and it even makes sense out of the long and difficult finale. Furthermore, Barenboim—alone in the sonata and with the excellent clarinetist Antony Pay in the Four Pieces—gives beautiful performances of some early Berg, making the connections between late Romanticism and “atonal” Expressionism quite clear. Berg's Chamber Concerto is not as accessible as his Violin Concerto, but in the hands of performers like these it could almost become a repertoire item! E.S.

BOLLING: Suite for Violin and Jazz Piano. Pinchas Zukerman (violin); Claude Bolling (piano); Max Hediguer (bass); Marcel Sabiani (drums). Columbia M 35128 $7.98, © MT 35128 $7.98, © MA 35128 $7.98.

Performance: Refreshing
Recording: Good

This is the third time that the French jazz pianist Claude Bolling has essayed a concert
piece for himself and a well-known classical soloist. The first was the Suite for Flute and Jazz Piano for Jean-Pierre Rampal and the second a Concerto for Classical Guitar and Jazz Piano for Alexander Lagoya. The current work was commissioned by Pinchas Zukerman, relatively straightforward (generally somewhere between Baroque, Schumann at his most Baroque, and salon music), and alternates with jazzy piano flings (more or less with drums and bass). Another problem is that traditional jazz styles (and Bolling is very much a traditionalist) are, like the writing on which they are often based, short-breathed, composed of short, clear, definite phrases in a clear key. This does not adapt well to long forms, and Bolling’s suite (like many such fusion pieces) is too sectional; it is even sectional within the sections, like musical Chinese boxes. The music is wildly eclectic; the movement titles—Romance, Caprice, Gavotte, Tango (with viola), Slavonic Dance (with a swing), Ragtime, Valse Lente, and Hora—give the idea. It is all brilliantly played here, and it is all a lot of fun, but, as much as I love a mish-mash, I must concede that the lack of artistic unity hurts. E.S.


Performance: Splendid
Recording: Excellent

If the Alban Berg Quartet were to rename itself the Johannes Brahms Quartet, the performances recorded here would be all the explanation necessary. I know of no other versions of the Brahms quartets on records, either individually or collectively, that are more moving, richer in detail, or more beautifully recorded. But despite all this, a whole package this expensive set is no prize. The performers, the engineers, and the listener are all ill-served by the gratuitously inconvenient layout, which not only requires a turnover for each of the three works but actually puts portions of the twenty-six-and-a-half-minute Quartet No. 2 on different discs. I simply can’t see the necessity—at any price—of splitting up a work less than thirty minutes long, let alone putting it on parts of two separate discs. This is not what the long-playing record was developed for, and it would seem to represent an almost contemptuous disregard for musical sense as well as for convenience to the listener. There are other flaws, performances, nearly as well recorded, that are both more convenient and more economical. The Budapest Quartet, in one of its most successful stereo recordings, put each expansive—performed quartet on a single side in Columbia M2S 734, with Rudolf Serkin joining in for the Schumann Piano Quintet on side four. The Weller Quartet’s attractive presentation of the Op. 51 pair on London STS 15245 might be complemented by the Fine Arts Quartet’s Op. 67 on Everest SDBR-3266 (backed by the Schubert A Minor), at a total cost of less than half that of the Alban Berg set. But if the side breaks don’t bother you, the Alban Berg Quartet’s Brahms is something to hear.

Performance: Super-polished
Recording: Good

In terms of repertoire, this new cycle of the Brahms symphonies under Herbert von Karajan’s baton differs from the 1964 model only in that a weighty and highly dramatic reading of the Tragic Overture is added as a filler to the disc containing the Symphony No. 3. I find only a few minor points of interpretive difference. As before, the opening movement of the First comes off with splendid power and body. The string playing of the Berliners in the andante is simply gorgeous. The third movement (marked Un poco allegretto) gets a tauter treatment than before, but the super-theatrical treatment of the already sufficiently dramatic introduction to the finale is somehow what less than convincing. Karajan has always had a good way with the light and shade of the Second Symphony, though I still take issue with his rather slack handling of the first-movement coda and with the lack of momentum in the turbulent middle section of the slow movement. The delicious allegretto is a virtuoso challenge for the Berlin players, who do it just marvelously. The finale here goes, if anything, even more swiftly than in 1964, but the last chords, like those of the First Symphony, are landlordly and perfectly expressive.

The Third and Fourth Symphonies fare best of all, retaining all the best interpretive aspects of the 1964 readings—sustained power, long line, elegant detail, a convincing coherence. The recorded sound is the major plus here: there is a notable gain in overall orchestral body and in presence for the entire string section. Given the wide choice of fine Brahms symphony recordings currently available—there’s one of each to suit almost any taste—my suggestion would be to wait for these new Karajan recordings to be released singly and then to acquire at least the one with the Third Symphony and the Tragic Overture, and possibly the Fourth as well. D.H.


Performance: Fine
Recording: Excellent

John Bray’s The Indian Princess and Raynor Taylor’s The Ethiop are two early musical

Guido Cantelli’s conducting career lasted only eleven years, but the music world still talks about him. He was twenty-five when he conducted his first big symphony concert with the orchestra of La Scala in Milan in 1945. In 1948, Arturo Toscanini attended a rehearsal for another of Cantelli’s Milan concerts and saw an heir in the making. He brought him back to America for a debut with the NBC Symphony in January 1949 and made the young conductor his protegé. On November 24, 1956, at the age of thirty-six, Cantelli died in a plane crash at Orly Airport in Paris. To the day of the old maestro’s own death the next year, no one told him about it, putting him off with some story about a back ailment that was keeping Cantelli in Europe.

Cantelli recorded the Franck symphony on April 6, 1954, in Carnegie Hall, just two days after Toscanini gave his final concert. It was one of the few times the NBC Symphony was recorded in stereo, and it is a splendid moment of a remarkable talent. The piece is a kind of musical catechism that alternately storms and sighs, cycling and recycling its themes, asking and answering. On records it often falls flat because of miscalculations of timing or overstatement. Franck was a great organist and used the orchestra much like a gigantic pipe organ; only Leopold Stokowski seems to have understood this and to have emphasized it in his recordings of the work. Beecham seemed best to catch its drama. Cantelli conducts it as his mentor might have—he had ever condescended to—tautly, unsentimentally, with every passage in splendid balance with every other, its full-blooded song proclaimed with a wistful, subtle spirituality. The recorded sound seems almost ahead of its time.

—Paul Kresh

FRANCK: Symphony in D Minor. NBC Symphony Orchestra, Guido Cantelli cond. RCA AR1.1-3005 $7.98, © ARK1.1-3005 $7.98.
Anthony Philip Heinrich (1781-1861) was an eccentric and prolific composer of Austrian origin who immigrated to America and wrote an immense quantity of music, from songs to symphonies, much of which remains unperformed and unpublished. Nevertheless, he cut quite a swath in his day, and a Boston critic hailed him as "the Beethoven of America." He was an all-out Romantic with a strong penchant for "program" music, covering everything from the landing of the Pilgrims to Indian tribal ceremonies and the flight of the wild passenger pigeons. His most ambitious music-pictorial effort was the descriptive symphony to be heard on a New World recording by the Syracuse Symphony Orchestra—the first complete performance of this extraordinary work.

Heinrich had a keen interest in ornithology, one no doubt nourished by his friendship with John James Audubon, whose portrait of the great condor adorns the elaborate liner notes by David Barron. The condor certainly looks impressive and it is, in fact, the largest of all birds of prey, with a wing spread of nine to ten feet. But an ornithologist wrote in 1831 that condors "are birds of slow flight and raise themselves from the ground with great difficulty . . . [and] their want of courage is denoted by their crouching attitude and the humility of their demeanor."

Romanticism has its own flights, however, and Heinrich imagined "The Ornithological Combat of Kings" as an empyrean contest between "The Condor of the Andes and the Eagle of the Cordilleras." It's curious, though, that in the titles of the four movements only the condor is mentioned—never the eagle. Heinrich is quite obviously glorifying the condor in the Finale: vivace brillante of his symphony.

When an earlier, incomplete version of this "Grand Symphony" was performed at Graz (Austria) in 1836, a critic wrote: "Your reviewer dares not maintain that this composition will please every ear." I subscribe to that statement. Some listeners are turned off by Heinrich because they can't figure out where (or how) to "place" him. He seems both curiously old-fashioned and strangely original. For myself, having listened to his music repeatedly over the past ten years or so, I would agree with the Grazier critic that "something peculiar in its design and treatment distinguishes it from everything that has yet come into our sphere of enjoyment."

As the first recording of a major orchestral work by Heinrich, this New World release is certainly a landmark in American music, but I regret that the entire recording was not devoted to Heinrich's music, including, for example, the Columbus (No. 1) of Artistic Perplexities) for small orchestra, with its brilliant variations on Yankee Doodle and Hail Columbia, or The Mighty Niagara, a symphonic poem performed by the Buffalo Philharmonic in 1976. A selection of Heinrich's piano music, arrestingly played by Neely Bruce is available on Vanguard 71478, however.

Gottschalk's symphony in two movements, Night in the Tropics, was composed while he was living in the West Indies, probably in 1858-1859, and the first complete performance took place in Havana in 1861. It was not heard in the United States until 1955. The first movement is lyrical, in the 6/8 meter typical of Hispano-Cuban music; the second evokes a fiesta with the dance rhythm of the rumba, emphasized by a battery of bamboula drums. The two-piano version heard on this recording is not by Gottschalk but by his friend N. R. Espadero as arranged by John Kirkpatrick. The result is charming, but I certainly miss those bamboula drums!

—Gilbert Chase


Although the Messe de Minuit might not be Charpentier's most profound work, it is certainly one of the most delightful concoctions of Christmas carols and original music ever adapted to the liturgy. Eschewing the colossal French church style to which the work is frequently subjected, the Boston Camerata here offers it as intimate chamber music. The sonorities produced by the dozen or so singers, complemented by slightly fewer musicians playing Baroque instruments, are light and clear. The reading is a relaxed and graceful one; the French Baroque manner of performance is adhered to strictly, but with taste rather than academic exaggeration. The jubilant use of notes inégales lends the jolly music a natural swing, and the precisely executed ornaments are used to enhance the melodic lines rather than for mere brilliance. Although the instrumental ensemble may seem rather thin during the ritornellos, the overall

(Continued on page 136)
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freshness of the performance easily compensates for this.

A bonus is the Sonate à Six, an unusual work that combines ensemble and solo work in an engaging fashion. The performance is not as strong as that of the Mass, but it offers a rare opportunity to hear a side of Charpentier hitherto unrepresented on discs. S.L.

COPLAND: El Salón México (see GROFÉ)

DEBUSSY: Pelléas et Mélisande (see Collections—Maggie Teyte)

DEBUSSY: Songs (see Collections—Yolanda Marcellus)

RECORDING OF SPECIAL MERIT


With this recording, made in Prague last May, the Suk Trio completes the cycle of the Dvořák piano trios undertaken jointly by Denon and Supraphon, with the Japanese company recording digitally and the Czechs in quadraphony (Denon released the Opp. 21 and 26 trios last year on OX-7114-ND, Op. 65 on OX-7122-ND). The performance here is fully as idiomatic, heartfelt, and elegant as one would expect from this distinguished ensemble, and the PCM digital recording is as exceptionally lifelike as it has been all through the series. The Dumky Trio is given a fine performance by the Yuval Trio on Deutsche Grammophon 2530 594, and the Israeli team gets it all on one side, with room for the Smetana trio on the other. But the Suk Trio is still more persuasive, I think, and at the end of side two there is an intriguing novelty in the form of the brief Elegy by Josef Suk (grandfather of the Suk Trio’s violinist Josef Suk and son-in-law of Dvořák). It is not an "important" work, perhaps, but it is a sweetly appealing one and does not appear to be available elsewhere at present. Good as DG’s sound is, Denon’s is quite in a class by itself. R.F.

DVOŘÁK: Symphony No. 9, in E Minor, Op. 95 ("From the New World"). Philadelphia Orchestra, Eugene Ormandy cond. RCA AR1-2949 $7.98, © ARSI-2949 $7.98, © ARKI-2949 $7.98. Performance: Loving Recording: Excellent

Ormandy and the Philadelphians are in top form here, and so is the RCA production staff. The result is a Dvořák New World performed and interpreted with great affection and ravishingly lovely tonal quality (the first two movements are outstanding in this respect). I’d like a somewhat lighter scherzo, though the exuberant sourcédka episode is a joy to the ear. The finale, too, well played as it is, could use some of the fierce urgency brought to it by Rafael Kubelik, for one. In all, beautiful but a bit too placid.

D.H.

FRANCK: Symphonic Variations for Piano and Orchestra (see Best of the Month, page 93)

RECORDING OF SPECIAL MERIT


The curiously uneven inspiration of César Franck’s muse is well illustrated in the juxtaposition here of the bombastic Pièce Héroïque (1878), dating from the period encompassed by Rédemption and Le Chasseur Maudit, with the three organ chorales from 1890, the last year of his life. The chorales represent the quintessence of his mature musical language and are his finest works for the instrument of which he was a renowned master. The E Major Chorale is a bit drawn out for my taste, but the B Minor, with its passacaglia element, is one of the great masterpieces of the post-Bach repertoire. The A Minor is the most immediately effective of the three and is only slightly less arresting as a whole than the B Minor.

It was fascinating to compare this disc track for track with the memorable 1957 Mercury recording of the same music by Marcel Dupré on the Aeolian Skinner organ at St. Thomas’ Church in New York. Frederick Swann, playing the rebuilt Aeolian Skinner instrument at New York’s Riverside Church, offers performances of equally commanding authority in state-of-the-art sound. Swann seems more rhythmically taut and classically oriented in his approach to both works, but to some extent this is almost forced by the acoustics of Riverside Church, which despite its large interior has a shorter reverberation time than St. Thomas’. I also find the textures and balances in the Swann performances cleaner and more just, and here again room acoustics come into the picture. St. Thomas has a somewhat cavernous coloration that can make balances, such as those between the line and accompaniment figures in the E Major Chorale, extremely difficult to manage. This problem does not seem to arise at Riverside; I prefer St. Thomas for a live performance, but Riverside seems to work better for recording.

Interpretively, Dupré took a more flamboyant, Lisztian approach than Swann does, and his performances, especially of the B Minor, are real blockbusters. Swann tends to hold his thunder in check for the true culminations of each piece, but he certainly does not spare it then. Although I would not willingly part with the Dupré disc, I can say without hesitation that this new one is an achievement of high distinction on every count. D.H.

FRANCK: Suite for Unaccompanied Flute (see RÖREM)
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ably one of the busiest, and under the baton of its Greek-born conductor Maurice Abravanel it has made some brilliant and extraordinarily satisfying recordings. Abravanel has been especially active in championing the cause of our native music, and he does an outstanding job with the two popular American works here. The Grand Canyon Suite, despite the erosion from overexposure through the years since its premiere in Chicago in 1931, remains an enjoyable tonal portrait of scenic grandeur. The Utah's approach is particularly kind—through restraint—to some of the more sentimental passages, such as the "Sunset" before the rather literal "Cloudburst" at the end. And what a storm that is! Even Toscanini never coaxed more out of those fierce winds and torrents of orchestral rain.

Copland's El Salon Mexico has also been committed to discs many times, but here, too, Abravanel, who has recorded it before, offers a particularly vivid sonic picture. In both works, he is more sensitive than many other conductors to the comic spirit of certain passages—Grofé's hee-hawing burro in "On the Trail," for example, and the lewd and leering water muskies—stands an enjoyable tonal portrait of scenic grandeur. The Utah's approach is particularly kind—through restraint—to some of the more sentimental passages, such as the "Sunset" before the rather literal "Cloudburst" at the end. And what a storm that is! Even Toscanini never coaxed more out of those fierce winds and torrents of orchestral rain.

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C A L E N D A R  O F  C L A S S I C A L  C O M P O S E R S

Back by popular demand and updated from its original (1966) printing, Music Editor James Goodfriend’s Calendar of Classical Composers is a listing of the most important composers from the year 1400 to the present, grouped according to the stylistic periods—Renaissance, Baroque, Classic, Romantic, etc.—in which they worked. This 12 x 24-inch aid, guide, and complement to your music listening is printed in color on heavy, non-reflecting stock suitable, as they say, for framing. A key to the calendar, consisting of capsule accounts of the principal stylistic characteristics of each musical period, is included. The whole will be sent rolled in a mailing tube to prevent creases; we pay postage. All you do is send 50c to:

Calendar of Classical Composers
Stereo Review, 1 Park Avenue, New York, N.Y. 10016

The song of the humpback whale inspired Alan Hovhaness to write his curious work for whales and orchestra, And God Created Great Whales; the prose of Herman Melville, which at times approaches the condition of music itself, moved Benjamin Britten to compose his haunting opera Billy Budd. Britten had E. M. Forster and Eric Crozier to prepare his libretto, but when Bernard Herrmann decided to base a cantata for male chorus, soloists, and orchestra on Melville’s Moby Dick, he settled on the author’s own prose. Choosing, with W. Clark Harrington, passages from the book “to make a logical sequence of narrative, dramatic and philosophic excerpts”—excerpts he later found it necessary to condense—he put together a piece of music of considerable atmospheric strength and appeal.

Like Billy Budd, Herrmann’s cantata is enveloped in orchestral sea music, the sound of the large orchestra made larger still through the use of “thunder drums.” The spirit of the book emerges in a series of tonal pictures: sailors chanting a hymn in a New Bedford church to an orchestral accompaniment, by the Pequod’s crew, like something played on “a huge harmonium”; Ahab’s monologues in which he swears revenge on the white whale with “a wrinkled brow and a crooked jaw”; which he swears revenge on the white whale with “a wrinkled brow and a crooked jaw”; a passage in the chapter called “Midnight Foc’sle”; a symphonic interlude depicting the Pacific on a clear steel blue day; and the final pursuit of the captain’s cetaceous nemesis.

Herrmann was trying, he said, to set “great literature to music.” He certainly wrote a muscular score, which here is brilliantly performed and recorded. If occasionally the listener longs for a few visual scenes to round out the sound of this cantata, it is perhaps because Herrmann was more a master at writing music of exactly the right quality to accompany movie action than a composer of works intrinsically exciting on their own. In (Continued on page 142)
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Moby Dick, the words do this job for him most of the time. There are moments, as during the hymn in the whaler's chapel, in the hornpipe scherzo, and in the final frenzied pages in the pursuit of the whale, when the score does indeed rise to the challenge of its subject matter, becoming, in its own right, an affecting musical experience. But the entire cantata cannot be described that way. P.K.

D'INDY: Trio in B-flat Major, Op. 29. Leland Munger (clarinet); Paul Olefsky (cello); William Race (piano). MUSICAL HERITAGE SOCIETY MHS 3857 $5.20 (plus $1.25 postage and handling from the Musical Heritage Society, 14 Park Road, Tinton Falls, N.J. 07724).

Performance: Animated
Recording: Very good

In reviewing the Montagnana Trio's recording of this work (Delos DEL 25431) a year ago, I observed that, although I am generally enthusiastic about D'Indy's music, I found his Op. 29 "simply a dullish work." I did not look forward to hearing it again, but I am glad I did hear this new MHS release, for it has caused me to revise my estimate of the Trio in B-flat Major. It may not be a masterpiece, but it is certainly attractive, exhibiting many of the characteristics of D'Indy's more familiar compositions and with a most agreeable workmanship (called Divertissement). The music comes to life at once in this fluent performance, and its charm never fades. What accounts for the difference between this presentation and the one on Delos is, most of all, the greater animation shown here. The music moves along inspiringly, and there is also a real sense of involvement on the performers' part; they seem to believe in the work, and they make it easy to share their conviction. The recording is close-up and a little on the dry side but otherwise exceptionally realistic and well balanced. It's a welcome addition to the catalog—but we still need new recordings of the Second Symphony and Istar.

R.F.


Performance: Conscientious
Recording: Good

This HNH disc holds the fifth commercial recording of the Charles Ives trio, and this version of it is distinguished by, among other things, the very full and illuminating notes written by Jeffrey Wasson in cooperation with Ives authority and interpreter John Kirkpatrick. The first movement of the trio is, as Wasson indicates, a study in "interface." The opening twenty-seven measures are for cello and piano right-hand, the next twenty-four are for violin and piano left-hand, and for the conclusion the two passages are repeated together. The middle movement (titled "This Scherzo Is a Joke") is a hilarious collage of Yale songs and other pop tunes of the day (bits and pieces of the same musical material turned up in the "Hawthorne" movement of the Concord Piano Sonata, in the second movement of the Fourth Symphony, and elsewhere in Ives' oeuvre). The finale is a highly evocative "Sunday service" piece combining dramatic and poetic elements with great effectiveness (the hymn tune Rock of Ages plays a major role throughout in various guises).

(Continued on page 145)
In general, the New England Trio (Sally Mays, piano; John Knight, violin; Lawrence Lenske, cello) adopts a more openly lyrical approach to this music than did Paul Zukofsky, Robert Sylvester, and Gilbert Kalish when they recorded it for Columbia in 1970. The approach works best in the last movement, but for the present I prefer the cautious, more sinewy playing on the Columbia disc. The HNH recording has a slight edge over Columbia’s in tonal body and room ambiance.

I had great hopes for this recording of the Roy Harris trio, which here makes its first appearance on disc since a 1953 issue from the University of Oklahoma. The work represents an early stage of Harris’ attempt to amalgamate the Anglo-Celtic melos, with its tendency toward variation, and the structural solidity to be gained from such Baroque patterns as the passacaglia, fugue, and canon. As it emerges from this performance, though, the trio seems like a somewhat labored exercise—prompted, perhaps, by the work Harris had been doing at the time (with M. D. Herter Norton) in transcribing Bach’s The Art of the Fugue for string quartet. As with the Ives trio, the recorded sound here is full-bodied, but it lacks something in tonal bloom.

D.H.

LIGETI: Chamber Concerto for Thirteen Instruments (see BERG)

MAHLER: Symphony No. 2, In C Minor (“Resurrection”). Elizabeth Ander (soprano); Alfreda Hodgson (mezzo-soprano); Ambrosian Singers; Symphonica of London, Wyn Morris cond. PETERS INTERNATIONAL 064/5 two discs $15.96.

Performance: Intimate

Recording: Likewise

Wyn Morris has given us some excellent Mahler performances on various labels, and now he is committed to completing the symphonic cycle, with the Fifth already released in England in addition to this new recording of the Second. While Morris’ feeling for the Mahler idiom is never in doubt here, his version of the Second Symphony will not appeal to everyone. It is not a ceremonial concept that he offers, but an extremely intimate one—intimate, many listeners are sure to feel, at the expense of the score’s drama. The opening Totenfeier is taken not only broadly, but with such a relaxed air that the obscurities seem like a family event rather than a public one. The second and third movements are beautifully played, but with the same absence of the accustomed intensity; they pass by as reverie-like interludes, without making much of an impression. However, the understatement serves the Urlicht rather well, I think, for surely this simple text should be set off in just this sort of intimate frame; Alfreda Hodgson sings it most touchingly, though her vibrato does make one apprehensive in the passages with long-held notes (I suspect it wouldn’t have been conspicuous at all if she hadn’t been miked so close). In the finale she and Elizabeth Ander blend beautifully, and the close miking leaves no detail of the score hidden. Here Morris galvanizes his forces into a thoroughly convincing statement of music that is often made to sound shallow through overinflation; the affection and intimacy that characterize the earlier portions of his reading now deepen into glowing affirmation. The intimacy, indeed, is emphasized.

(Continued on page 148)

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naries, spiky Hungarian rhythms in the scherzo,

eridy, but he came mighty close to it in this piece. Even here, though, there are rewards in the unfailing fluency of the string writing and the magisterial ease of the counterpoint.

The “sleeper” in this set seems to me to be the Quartet No. 2 of Alexander Tcherepnin, who was born in St. Petersburg, Russia, in 1899 and spent most of the last thirty years of his life (he died in 1977) in the U.S., for much of that time a professor of piano and composition at De Paul University in Chicago. Written in 1927, the quartet is laid out in three tense, spare movements (at ten and a half minutes it is the shortest piece on the album except for Stravinsky’s). Elements of neo-Classicism are blended with an unobtrusive yet at times surprisingly intense vein of romance. There’s nothing world-shaking about this quartet, but the composer’s inspiration is genuine and his craftsmanship was fully equal to its task.

The Tcherepnin piece also benefits from the best performance in the set. The New World Quartet is clearly an excellent group-in-the-making (although the cellist—at least as re-
corded—doesn’t seem to be quite a tonal match for his colleagues), and they respond generously to Tcherepnin’s sharply etched lines and strong, if understated, emotions. The performers and composers alike deserve better presentation than they receive in the rather careless and not very perceptive notes (the Hindemith quartet, for instance, is incor-
rectly called his Sixth, when it was actually its Fifth).

Despite such flaws, this is an instructive and enjoyable release that might with profit be followed by a second or even a third volume constructed along the same lines. Quite apart from such already recorded New World quar-
tets by Old World composers as Schoenberg’s Five, Husa’s Third, and Rieti’s Third and Fourth, and leaving out of account such uneven bodies of work as Milhaud’s last half-dozen, it would surely be worthwhile to investigate Fitelberg’s Fifth Quartet, Kfenek’s Sev-
enth, Labunski’s Second, Martín’s Second, Martín’s Sixth, Rathaus’ Fourth and Fifth, Toch’s Twelfth and Thirteenth, Wagenaar’s Second, Third, and Fourth, Weigl’s Sixth, Seventh, and Eighth, and several others by Bloch—all of which fall within the terms of reference at least as well as those chosen for this first outing. The whole idea is beguiling, even if some of the results are more or less pedestrian. And the Tcherepnin, at least, is well worth investigating for its purely musical satisfactions.

—Bernard Jacobson

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in the choral contribution, for in place of the mammoth chorus usually heard in this work we have the Ambrosian Singers, whose chamber-choir sound permits individual voices to stand out.

I found the performance convincing in its way, even refreshing, and, while I would hesitate to recommend it as a first choice among the several fine recordings of the Mahler Second, I think collectors who are serious enough about Mahler to want more than a single version of it might find this one most attractive for alternating with their "basic" favorites.

R.F.

PISTON: Sonata for Flute and Piano (see ROREM)

RECORDING OF SPECIAL MERIT


Performance: Elegant First
Recording: Very good

Here is the third current disc to couple the first and last of Prokofiev's symphonies, an apt pairing since each is in its own way "classical" in procedure and spirit. Whereas the First Symphony is all high-spirited stylization, the Seventh applies Classical symphonic procedures to substance of touching lyrical nostalgia, the kind of substance found in the ballet scores of the composer's maturity.

It is Andre Previn's handling of the oft-abused Classical Symphony that calls for the "Special Merit" rating. I don't remember hearing, either in concert or on records, another such remarkable amalgam of utter clarity and youthful freshness as Previn and his London players achieve here. Every inner voice of the first-movement development emerges with crystalline beauty and no trace of cold calculation. The purity of violin intonation in the slow-movement melody would do credit to Koussevitzky's Bostonians in their heyday, as would the lovely detail of subtle rhythmic accentuation. The trio of the famous third-movement gavotte is another high spot. The finale could use a shade more urgency, perhaps, but there is much to be said for not turning this brilliant movement into a mere virtuoso race.

Previn lavishes the same care on the Seventh Symphony, but here I definitely prefer the greater urgency that Gennady Rozhdestvensky brings to the piece. Previn's slowish pacing of the opening movement tends to break up the music's long lyrical line rather than making it cohere. For the finale, he uses the later alternative "up-beat" ending rather than the elegiac close of the original version, which Rozhdestvensky uses. The recording throughout is both bright and warm. D.H.

RAVEL: Songs (see Collections—Yolanda Marcoulescu)

REICH: Music for Eighteen Musicians. Steve Reich (piano, marimba); ensemble, Steve Reich cond. ECM ECM-1-1129 $7.98, ® M8E 1129 $7.98, ® M5E 1129 $7.98.

Performance: Neat
Recording: Excellent

This is Steve Reich at his most charming—it's almost easy-listening pop! A great deal has been made out of the fact that this music, unlike his earlier work, has real changes. Not to worry. This is classic Reichian pulsating, slow-change, hypnotic phase music, but with a rhythmic bounce, a sonic ease, and an occasional sudden and gratifying change of texture. The sound is somewhere between gamelan, certain African ensembles, and, well, a kind of spacy pop. Artful and decorative. E.S.

RESPIGI: II Tramonto (see Collections—Cathryn Ballinger)

ROREM: Romeo and Juliet, PISTON: Sonata for Flute and Piano. FRANCAIX: Suite for Unaccompanied Flute. Ingrid Dingfelder (flute); Herbert Levine (guitar, in Rorem only); Anita Gordon (piano, in Piston only).

COMPOSERS RECORDINGS, INC. CRI SD 394 $7.95.

Performance: Committed
Recording: Handsome

Ingrid Dingfelder continues her productive survey of "Contemporary Flute Music" (as this collection is headed) with another work composed for her by Ned Rorem, a by no means overexposed classic by the late Walter Piston, and a charming little six-movement suite composed by Jean Francaix in 1962. Romeo and Juliet, composed in mid-1977 and introduced the following March by the performers in this recording, is in terms of sonority alone even more intriguing than Rorem's...
recent Book of Hours for flute and harp. Rorem writes that his “sole intent was to invent a work that would graciously exploit both flute and guitar as individuals, and as a pair.” The work is in eight brief sections whose headings reflect the romantic rather than dramatic aspect of Shakespeare’s tragedy, and the music is accordingly intimate and expressively character. Proprietary commitment informs the performance, and similar zeal and skill are brought to bear on the two earlier sides on side two; all three works are handsomely recorded. A most attractive addition to the discography of both the flute and the music of our century, R.F.

RECORDING OF SPECIAL MERIT


Performance: Excellent
Recording: Excellent

El Pueblo Unido Jamás Será Vencido! (The People United Will Never Be Defeated) by Sergio Ortega and Quilapayun is the most famous song to have come out of the Chilean new-song movement, and since the overthrow of the Allende government it has become a kind of symbol or anthem of the Chilean resistance movement. Frederic Rzewski is perhaps the most important and interesting of a number of avant-garde composers who have turned to openly political subjects while incorporating traditional means of expression in a contemporary style. Rzewski’s stunningly beautiful set of thirty-six variations on El Pueblo Unido ..., are securely in the late-Romantic tradition of Brahms and Busoni. Certainly there are things here that could only have been written by someone who has been through the avant-garde tumult of the Sixties. Nevertheless, as wide as these variations range—and this is a fifty-minute work set forth on a huge canvas—the basics of melody, harmony, and phrasing are never left far behind. Clarity and intensity—in decided contrast to modern-art “cool”—are the twin poles of this magnetic music.

The other salient characteristic is virtuosity. Rzewski himself is no mean pianist. The first piece I ever heard by him was a big, crazy piano piece he played himself. He has never lost touch with the keyboard as a primary means of expression (he has been very involved with improvisation in recent years), and this has borne fruit in his recent large-scale piano works. The brilliant and expressive colors of this piece are very strikingly realized in the superb performance by Ursula Oppens. It is a very engaging and moving performance on the grand scale—something one hardly expects to encounter in new music these days. During, stimulating, and very well done.

E.S.

SCHOENBERG: String Trio, Op. 45 (see Haydn)

SCHUMANN: Piano Concerto in A Minor, Op. 54 (see “Best of the Month, page 93”)


Two years later he returned to London and, with the London Symphony Orchestra, recorded for English Columbia the Fifth Symphony, Tapiola, Pohjola’s Daughter, and the suite from the incidental music for Belshazzar’s Feast.

I grew up with the Kajanus recordings of the First and Second Symphonies, and even after forty-five years I have yet to encounter a more powerful reading of the First. Together with the Tapiola recording it gives a real idea of Kajanus’ caliber as a Sibelius interpreter. His reading of the Second Symphony is revelatory in its own way, especially in the brisk tempo adopted for the opening movement, but the orchestral playing is less highly charged. The Karelia pieces, which served as

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fillers for the original issues of the symphonies, are done with marvelous dash.

The task of resurrecting this unique interpretive legacy was begun in 1971 by Scandia Records in Finland as part of its "Historic Sibelius" series, but it was not until 1973-1974 that Anthony Griffith undertook to restore the entire body of 78-rpm Kajanus recordings for the EMI World Records series. Thus far, only his restorations of the First Symphony, the Karelia excerpts, Pohjola's Daughter, and Belshazzar's Feast have been issued in this country (on the Turnabout label). So while the Everest reissue of the First Symphony has a competitor in the still-available Turnabout THS-65045, that of the Second is as yet a merchandising "first." Everest seems to have worked from its own tapes of the 78's (the editing of the side breaks is cruder than on Turnabout/EMI), and in both the symphonies and the Karelia music the sound is less transparent and brilliant than Griffith achieved. However, the balance within the available frequency range is definitely closer to that of the originals. Although the records are not marked as being reprocessed in artificial stereo, they do sound better in stereo than in mono playback.

Some sour notes must be sounded concerning Everest's packaging: not a word about Kajanus appears in the liner notes, the performances are all misattributed to the London Symphony Orchestra, and the conductor's name is misspelled on the labels and jacket of the Second Symphony release. D.H.

R. STRAUSS: Don Quixote, Op. 35; Don Juan, Op. 20. Tibor de Machula (cello); Klaas Boon (viola); Theo Olof (violin); Concertgebouw Orchestra, Amsterdam, Bernard Haitink cond. Phillips 9500 440 $8.98, © 7300 647 $8.98.

Performance: Good Recording: Good

The Don Juan here is the same performance issued in 1974 as a filler for Haitink's reading of the Elgar Enigma Variations, and it is still one of the very best around in terms of revelation of detail and first-rate sonics. The Don Quixote, too, offers splendid sonics, fine performance by soloists and orchestra alike, and fascinating detail work. What it lacks, for me, is force of character—genuine fantasy of the sort that emerged from the reading by Paul Tortelier and Rudolf Kempe (it was issued here on Seraphim and has now unaccountably been deleted). Of the recordings presently listed in Schwann, I prefer this new Haitink to the somewhat overdrawn Rostropovich/Karaian treatment, but I would be inclined to award the palm to the fine budget-price Odyssey disc with Fournier, Szell, and the Cleveland Orchestra. D.H.


Performance: Good Recording: Very good


Performance: Outstanding Recording: Good

Lorin Maazel's reading of Ein Heldenleben is notable for its transparency of texture and wealth of fascinating detail. He soft-pedals the bombast and makes the most of the music's exotverted, lyrical aspects. The absolutely superb playing of the Clevelanders and the splendidly open recording by the Columbia production team add to the sonic beauties. Conductor Kempe is marvelously volatile in the fiercely exacting solo-violin part, the woodwinds do a great job in individually characterizing the critics, and the principal clarinet covers himself with glory in the great solo preceding the battle scene (which is definitely enhanced by four-channel playback).

The comprehensive recorded survey of Strauss's orchestral output by the late Rudolf Kempe continues to find its way into the American listings on the Angel and Seraphim labels (but why did Angel delete Kempe's Don Quixote?), and this 1974 Ein Heldenleben is an outstanding value at $3.98. Kempe's hero is a virile, muscular fellow, and his critics are a gang rather than the sharply limned individuals in Maazel's reading. The solo violin is decidedly less interesting than in the Cleveland record. However, from the battle scene onward, and most especially in the later pages, Kempe and his orchestra show us what great Straussians they really are. If the Dresdeners fail to match the finesse of the Cleveland players, they do get closer to the heart of the more introspective pages of the music, and there is some great playing from the first-chair trumpet. D.H.

SUK: Elegy for Piano Trio, Op. 23 (see DVOŘÁK)

TAYLOR: The Ethiop, or The Child of the Desert (see BRAY)


Performance: Grand Recording: Impressive

Maestro Rostropovich projects Tchaikovsky's tonal dramas against a very broad and deep sonic backdrop and builds up his interpretations to match. I prefer a somewhat more tightly knit reading of Romeo and Juliet, but Rostropovich's approach does open up new and somewhat terrifying vistas in the rather sprawling Francesca da Rimini. Dante's windswept second circle of Hell has seldom seemed as horrific as it does here, particularly in four-channel playback, and the London Philharmonic's first-chair clarinetist does himself proud in the famous solo episode representing Francesca's sad tale of adulterous love. There are, of course, any number of recorded performances of both works from which to choose, but this is one of the few single-disc couplings listed in Schwann, and certainly Rostropovich's Francesca is worth acquiring for its interpretative insights. D.H.


Performance: Excellent Recording: Good

All of Tchaikovsky's string quartets were composed before the three major symphonies (Continued on page 152)
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of his maturity. The D Major Quartet, with its justly popular Andante cantabile movement, has a lightweight quasi-Mendelssohian quality, and, as the Gabrieli Quartet performs it, the scherzo has special charm. The F Major Quartet strikes me as musically the most substantial and interesting of the three, standing up best under repeated hearings. The dissonant elements in the opening of the first movement and the whole of the slow movement, with its highly effective coda, are the high points. The fugato element in the polonaise-style finale anticipates the corresponding movement of Tchaikovsky's Third Symphony (the "Polish"). Despite its serious intent as a memorial to Tchaikovsky's violinist colleague Ferdinand Laub, the E-flat Minor Quartet seems only intermittently inspired, though there are fascinating string sonorities in the somber slow movement and the terse scherzo has much to recommend it. At the price, these expert and well-recorded performances are a first-rate value.

THOMPSON: The Testament of Freedom; Symphony No. 1. Utah Chorale (in Testament); Alexander Shreiner (organ, in symphony); Utah Symphony, Maurice Abravanel cond. Angel S-37315 $7.98.

Performance: Good symphony, stodgy Testament

Recording: Spacious

The most salient aspects of American composer Randall Thompson are, it seems to me, his flare for expert, highly effective choral writing and his delightful wit and urbanity. The latter shows up best, perhaps, in his Second Symphony, a minor masterpiece that was marvellously recorded on Columbia by Leonard Bernstein and the New York Philharmonic in 1970 but is now unfortunately deleted.

Thompson's The Testament of Freedom can be—when performed by, say, Serge Koussevitsky with the Harvard Glee Club and the Boston Symphony (I remember those 78-rpm discs) or the Eastman School of Music forces under Howard Hanson—a splendidly stirring piece of civic music. The deeply moving texts for men's chorus from the writings of Thomas Jefferson can stir American souls in much the same way that the patriotic texts for Prokofiev's Alexander Nevsky can affect a contemporary American. Regrettably, however, Maurice Abravanel simply fails to give the music the dynamic vitality it needs. (If you can lay your hands on the deleted Mercury recording with Hanson, MG 50073, you will understand exactly what I mean. Get that disc, though, the recent remastering of the recording for the Eastman School's own ERA label is disappointing, since excessive mid-range pre-emphasis thins out the bass altogether too much.)

Thompson's First Symphony seems an odd piece on first hearing because it is "unsymphonic"—for instance, it makes no use of sonata form. The jacket notes fail to explain the reasons for this, but in his article "The Music of Randall Thompson" (Musical Quarterly, January 1949), Elliott Forbes tells us that this symphony was an outgrowth of the composer's setting of two odes of Horace for chorus and orchestra (they were planned as a sequel to his Five Odes of Horace completed in 1924). Thompson evidently despairs of the new odes' ever coming to performance and therefore in 1929 rescored them for orchestra alone as the First Symphony. Musically, the work provides a pleasing if somewhat diffuse listening experience, but it's no match for its 1931 successor. Before discovering the First Symphony's poetic basis, I noted elements of both jazz-age Manhattan and ancient Rome (bell figures and modal harmonies), and now I am curious to hear the original version. The Utah Symphony's performance here seems capable, and the recording is very spacious, but it, too, is a little diffuse.

D.H.

VERDI: La Battaglia di Legnano (see Best of the Month, page 91)

VERDI: Nabucco. Matteo Manuguerra (baritone), Nabucco; Veriano Luchetti (tenor), Ismaele; Nicolai Ghiaurov (bass), Zaccaria; Renata Scotto (soprano), Abigaille; Elena Obraztsova (mezzo-soprano), Fenena; Robert Lloyd (bass), High Priest; others. Ambrosian Opera Chorus; Philharmonia Orchestra. Riccardo Muti cond. Angel SCLX-3850 three discs $23.94, © 4X38-3850 $23.94.

Performance: Good but overdriven

Recording: Very good

Nabucco stands high among the early Verdi operas. With its powerful choruses, strongly etched characters, and imaginative use of the orchestra it surpasses not only the two Verdi operas that preceded it but several later ones as well. There is, I think, a strong sense of the risorgimento thinly concealed among the Biblical happenings, and this patriotic undertone has assured the opera's continuous appeal, at least for Italian audiences.

The new Angel set has much to commend it, but not enough to replace the 1966 London recording with Tito Gobbi and Elena Obraztsova in the principal roles and Lamberto Gardelli conducting. Riccardo Muti captures the opera's raw vigor excitingly, with sharp rhythmic accents and a keen ear for orchestral nuance. But he leads like a drillmaster: hard-driving, almost obsessed with speed and loudness. His tempos for the finales of Act I and Act II, Scene 1, are nothing short of hysterical. Gardelli's less frenetic pacing is no less exciting, with more sensitively judged climaxes. It must be said, however, that the Philharmonia plays beautifully, responding even to Muti's unreasonable wishes.

In the title role, Matteo Manuguerra sings with a good sense of style and firm, well-focused tones, but without Tito Gobbi's magnetic presence, kaleidoscopic range of color, and uncanny ability to illuminate every meaningful phrase. Renata Scotto responds to Abigaille's turbulent character with strong theatricality, but the part severely taxes the artist's vocal resources at both extremes of her range. In the final scene, though, she sings with poignant beauty. By contrast, Elena Obraztsova seems to have revealed in the role's formidable demands. Without Tito Gobbi she fades away so soon after that brilliant promise.

The role of Zaccaria is, in its way, no less demanding, with bel canto passages alternating with fiery outbursts ranging up and down the scale. Nicolai Ghiaurov is rich-toned and eloquent, though rather less so than he was in his 1974 London (London 26146). The fiery dramatic gifts of Elena Obraztsova are barely utilized here, but she is distinctly superior to her London counterpart. Veriano Luchetti is also excellent in the modest role of Ismaele. Love plays a small role in Nabucco—it is all

(Continued on page 154)
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G.J.

RECORDING OF SPECIAL MERIT


Performance: Near perfection

Recording: Excellent

The Vieuxtemps concertos, particularly No. 4, used to be standbys of the violin repertoire; they never quite disappeared, and it is fitting that they come back to prominence through the strong fingers and grand style of Itzhak Perlman. In truth, the Fourth is an exceptional work of real stature—far above the Wieniawski Second or other surviving Romantic violin concertos. The work has withal the quality of some romantic bardic tale in which the violin plays the protagonist.Perlman (and conductor Daniel Barenboim) take it all perfectly seriously and make a lot of good music.

The Fifth does not really measure up to its predecessor, although it is a strong work and is equally well played here. It is the Fourth, both for its sustained power and for the superb performance (and recording), that deserves top billing. Perlman's playing is as near perfection as I ever expected to hear in these supposedly easy works for the violin. Even Heifetz—who played and recorded these works—did not better.

E.S.


Performance: ideal

Recording: Excellent

This disc comprises all the music Weber composed for clarinet and piano and represents the first recording of the Introduction, Theme, and Variations, a work unearthed only thirty-five years ago and thought to be roughly contemporaneous with the Op. 33 variations on a theme from Weber's opera Silvia composed in 1811. It is equally characteristic of the composer, and it would be hard to imagine it or either of the other works here in better hands. The adorable Grand Duo Concertant of 1816 has received half a dozen performances on records in the last few years, but none of them has so brilliantly captured the spirit of the work as this one. Jerome Bunke has a sure and fluent technique, a handsome command of tone, and both the flair and the enthusiasm for Weber's good-humored style necessary for full and joyous realization of all three pieces. Hidemitsu Hayashi displays similar skill and sympathy in the keyboard music Weber wrote for himself, and his playing of the two solo variations in Op. 33 makes one want to hear more of him. Bunke's virtuosity in the Op. 33 variations is downright amazing, suggesting in some passages that there must be at least two hands. He seems to be having enough fun for two, at any rate, and the listener may expect the same dividend of pleasure from these marvelous performances, which may be said to represent a Weberian ideal. The recording itself is excellent, the surfaces immaculate.

R.F.


Performance: Excellent

Recording: Ditto

Charles Wuorinen is just about America's No. 1 incomprehensible serious music composer. Naturally he gets all the grants, awards, and recordings. This monumental Percussion Symphony, however, is both a surprising nonconformity. The three movements (yes, fast-slow-fast) are separated by two arrangements of Dufay's beautiful Vergine Bella. Wuorinen, who writes a kind of Gothic twelve-tone music, has always had an affinity for the highly intellectual fourteenth century; in this context, Vergine Bella is like a dream, a gentle blessing from an unrecapturable past. In general, Wuorinen has a feeling for percussion instruments, and this music is very listenable—especially the lively finale, which has an almost charming awkwardness.

(Continued on page 156)
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E.S.

COLLECTIONS


Performance: Good

Recording: Fairly good

Cathryn Ballinger, a young mezzo with consider-able recital experience on the West Coast, here discloses a warm timbre and a good technique. There is some tentativeness in her attacks and embellishments in the four Baroque arias, but the sound is pleasing and the unconventional accompaniment (harpischord, cello, and guitar) works effectively. Respighi’s Il Tramonto is an atmospheric setting (in Italian) of Shelley’s The Sunset. The length of the poem, its richness of lan-guage, and its philosophical rather than dra-matic subject matter would seem to make it an odd choice for musical setting, but Respighi limited the accompaniment; a string quartet and kept the strands transparent. Pre-vious recordings by Sena Juričan and Irmgard Seefried (both deleted) were not available to me for comparison, but Miss Ballinger and the musicians involved here make a credible case for the work. The recording could have been more ideally balanced, however, and the liner notes should have offered Shelley’s original instead of a clumsy retranslation from the Italian.

G.J.

RECORDING OF SPECIAL MERIT


Performance: Expert

Recording: Very good

Broadwood is a name we associate especially with Beethoven, who was made a gift of a pi-piano by this English manufacturer in 1818 and acknowledged it with the declaration, “I will regard this as an altar upon which I will place the choicest offerings of my mind to the di-vine Apollo.” A very comprehensive annota-tive insert with this record gives a history of the firm, which was founded in 1728 by the Swiss immigrant Burkat Shudi (né Burkhardt Tschudi) and taken over by his son-in-law and former apprentice John Broadwood in 1783. It had grown into the largest piano-manufacturing company in the world by 1850, and it is still going strong at East Acton, if with a somewhat lower profile. Malcolm Binns is (it is a bit confusing to have this pianist doing these things in Britain and Malcolm Bilson specializ-ing in early-instrument keyboard perfor-mances in our own country) here uses a differ-ent instrument for the music of each of the six composers represented. The Handel pieces are played on a 1790 harpsichord, a superb in-strument that is, of course, well suited to the material. The fortepiano selected for the Cle-menti sonata was made three years earlier and may be the earliest such Broadwood still in playing condition. It does not sound tinny or tinkly, as one might expect, but has real pianistic glitter on top and a very solid bottom, even though the “quasi-harpischord” charac-ter that makes these instruments so intriguing to our ears is very much in evidence. The 1794 model used for the Haydn variations sounds still more like a modern piano, and in the 1819 grand piano chosen for the Beethoven the harpsichord character has all but totally dis-appeared, though there is a clangy texture at the top. We may assume that the Erard that Chopin used was not greatly different from the 1847 Broadwood grand on which Binns plays the barcarolle, but he may have been looking forward to refinements beyond his own time; in any event, this is the one piece on the disc that seems to me less than suc-cessful on the period instrument. The limpid-sounding square piano of 1854 seems ideal for the Mendelssohn pieces.

While the different sounds of these six in-struments are intriguing in themselves, the sort of mechanical action indicated by these sounds also suggests certain freedoms and restric-tions on tempo, phrasing, and other articu-latory concerns that may give us a clearer impression of just what the respective com-posers had in mind. This aspect of the record may be the most fascinating, but the perfor-mances themselves happen to be extremely sensitive and convincing ones—the Mendels-sohn, Beethoven, and Clementi in particular. In terms of scholarship, documentation (the aforementioned insert, which ought not to have been left anonymous, is itself worth the price of the package to anyone interested in the piano), and all-around musicianship, this is a first-rate production.

R.F.

RECORDING OF SPECIAL MERIT


Performance: Sparkling

Recording: Excellent

Leo Brouwer was born in Havana in 1939 and taught himself music until he was seventeen, when he was able to complete his education at the New York School of Music and the Uni-versity of Hartford. This nimble-fingered fel-low is a disciple of the Tárrega school, and it’s hard to know which to admire most: his subtle interpretations of colorful music for the guitar by other Cuban composers, or his audacious sound effects, pizzicatos snapped at the pins, and floating notes sounded by his
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America's Recording Tape Specialists.
Kurt Herbert Adler is pictured on the cover of “Adler of the Opera” wearing formal attire and an impressive array of decorations. A box note on the liner says that the release is in honor of his fiftieth year of operatic activity and his twenty-fifth anniversary as general director of the San Francisco Opera, but nothing further about him appears, nor is there any explanation of the particular relevance of the six little-known works on the disc to Adler’s career. (Can he have conducted them all in the opera house?) There is, however, very comprehensive information on the music itself, and it is certainly an imaginative, depressing plot if the rest of the score is as well-wrought as the overture. Like the Goldmark, it's not much on thematic allure but is gorgeously colored. Hermann Goetz's Francesco da Rimini was produced posthumously in 1877 (six months after Tchaikovsky's tone poem of the same title). The overture is a reminder that Goetz was one of the more interesting minor figures of his era, and Adler’s handsome performance impelled me to seek out the Genesis disc (GS 1031) on which the late Eduard van Remoortel recorded it (rather less persuasively than Adler) together with two more overtures and an appealing symphonic arrangement—hardly the sort of thing to give even a veteran discophile many problems with duplication of titles.

The Weberish pieces that open the two sides are the most attractive of the lot. Otto Nicolai used a theme familiar to us from Der Freischütz in the overture to his The Merry Wives of Windsor, and in the one here to Der Tempelritter (introduced in 1840, it was based on Scott’s Ivanhoe) we find the actual flavor of Weber plus more than a few pre-echoes of Tannhäuser, which Wagner produced five years later. Weber himself, of course, composed the music for Die Drei Pintos (which is to have its American premiere this June), but it was Mahler who put it together, fashioning the charming intermezzo recorded here from Weber’s sketches for the unfinished opera. Goldmark’s Merlin Overture (1886) is the longest piece on the disc, dramatic in feeling and superbly colored, but without the melodic richness the composer displayed in Sakuntala, The Queen of Sheba, or the adorable Rustic Wedding Symphony. There are plain “post-echoes” of Tannhäuser here, and of Tristan as well, not unlike those in the contemporaneous Gwendoline of Chabrier. Franz Schreker's Die Gezeichneten (The Branded, 1918) might be worth investigating despite its

ny by Goetz. Hugo Wolf’s short opera Der Corregidor, which has had something of a cult following, has been recorded in full once or twice; its overture is the least interesting segment of this collection, but it is also the briefest and easy enough to listen to.

All six pieces are given expert, flavorful performances; one feels that if Adler has not conducted these operas in the theater he would very much like to. The recording itself is up to London’s finest standard, which is to say excellent. Such “discoveries” may not be everyone's cup of tea, but those of us who find this sort of thing intriguing must also find it heartening to have it supported by the resources of one of the giant companies. I would be happy to have a follow-up disc or two, possibly if Goldmark’s Salome were included.

—Richard Freed

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### RECORDING OF SPECIAL MERIT

**YOLANDA MARCOULESCU: Songs of Debussy and Ravel.**

**Performers:**

- Debussy: *Green*; *Spleen*; Chevaux de Bois; *Le Jet d'Eau*; Trois Chansons de France; *Coloque Sentimental*; Fantoches; *Mandoline*; Ravel: *Sainte* Épigrammes de *Clément Marot*; *Chanson du Rout*; *Manteau de Fleur*; *Noël des Jouets*; *Les Grands Vents*; Sur l'Herbe; Ronsard a Son Ame; Rêves. Yo-landa Marcololcu (soprano); Katja Phil-laum (piano). ORION ORS 78312 $7.98.

**Performance**

*Expert* Recording: *Fairly good*

This is Yolanda Marcololcu's third recital of French songs, and it is every bit as admirable as the first two. Now this herefore unheralded soprano must be ranked with the top contemporary exponents of the French song.

The songs of Debussy and Ravel broke away from traditional paths: in them the poetry speaks through music instead of being shaped by it. Thus, an interpreter must have the gift of fully assimilating the poetic content in order to communicate it with utter naturalness. Such an aptitude is rarely possessed by artists to whom the French language is not native, but England's Maggie Teyte had it and so does Bucharest-born Yolanda Marcololcu. The Debussy songs in the present recital particularly bring Teyte to mind, both because she recorded some of them and because the Roumanian soprano personalizes her renditions with a Teyte-like warmth and endearing tone quality. The Ravel songs here are so rarely encountered that they amount to discoveries. Written over a considerable span of time (1896-1927), they are exquisitely wrought miniatures, at times evocative of medieval atmosphere, artful, harmonically adventurous, though of slight substance.

There are a few strident top notes, but the soprano's intonation is as impressive as her clarity of articulation. As she was in the previous Orion recital (Philabaum is a capable accompanist, but she is not favored with the best sound reproduction.

**SYLVIAS ASS: Operetta Songs.**

**Conductor:**


**Performance**

*Good, with reservations* Recording: *Could be better*

Operetta is far from extinct in Continental Europe, so this repertoire is within easy reach for a well-trained soprano. And these songs are not learned just for a recording session, to be forgotten thereafter—local radio and television stations in Central Europe are eager outlets for them. In any case, the songs included here are familiar to all operetta fans. The only title that seemed momentarily strange to me was the Tchaikovsky (I would translate it from the Hungarian as ""The Tri umphant Woman") or ""Querelleuse Lady""), which turned out to be a vocal arrangement of Chant Sans Paroles, Op. 2, No. 3. Since the music for the songs is familiar, the Hungarian language in which they are sung will not be an obstacle to enjoyment.

Young, beautiful, and extremely gifted, Sylvia Sass has covered a lot of operettas in a few short years. Her recent press notices seem to reflect the opinion that she may have been pushed too far too soon. On this occasion she is in good vocal form, though some of her high B-naturals are not effortless, and that is a troublesome sign in so young an artist. She has evidently studied the operetta discs of Schwarzkow (as she has studied the opera discs of Callas) and knows how to phrase insinuatly, making excellent use of her high piano tones. There are charm and a great deal of skill in her singing, but there is the sin of self-consciousness that takes her high piano tones. There are charm and a great deal of skill in her singing, but there is the sin of self-consciousness that takes

**MAGGIE TYTE: At Town Hall.**

**Performances**

*Remarkable* Recording: *Good for its age*

In 1945, immediately after hostilities in Europe ceased, Maggie Teyte came to the United States for a concert tour, which was eventually extended to include appearances as Melisande with the New York City Opera. The Town Hall recital that yielded these recordings took place on January 15, 1948, when Teyte was sixty years old, though one would never guess it from the amazing vocal health she evidently still enjoyed.

The Pelleas excerpts that Teyte sings here are known not only for their music but also from that of Pelleas, Arkel, Yniold, and Genevieve as well. She makes no attempt to change her basic vocal colors in the sequence, and yet she succeeds in suggesting the different characters through subtle alterations of manner. It is a remarkable tour de force, particularly in the Fountain Scene (Act IV), which calls for tightly interwoven exchanges between Pelléas and Melisande. Teyte's supreme mastery of Debussy's song/speech (she studied the music with Debussy himself, after all) is evident here, and it carries over as well in her reading of Britten's music, as well as in her performance of Ravel's ""Daphnis et Chloé.""

Maggie Teyte's representation on records was never ample enough to match her artistic stature, and we must be grateful for this exceptional souvenir of her art, which preserves for us the crystalline simplicity and absolute security with which she interpreted this elusive repertoire. The music, however, is only partially served here; pianist John Ranck is a fine accompanist, but in both works an orchestra is essential. **G.J.**
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Unlike other stereophones, the ear-cushions developed for the Pro/4 Triple A represent a breakthrough in both comfort and acoustical engineering. Through extensive studies on how stereophones are actually worn, Koss engineers were able to reduce lateral pressure with a direct contour Pneumalite® earcushion that not only offers soft pliable comfort, but also creates an ideal environment for minimizing the linear excursion of the driver. Thus, the driver is able to produce any volume level without distortion. So you'll hear all the fundamental and harmonic frequencies exactly as they were recorded.

In addition, Koss has designed a special Pneumalite® dual suspension headband that creates a feeling of almost weightlessness even over periods of extended listening. It makes wearing the Triple A's as pleasurable as listening to them.

Why not stop in at your audio specialist and see why the Koss Pro/4 Triple A belongs in a class by itself. Or write for our free, full-color catalog c/o Virginia Lamm. Better still, listen to a live demonstration of the incredible Sound of Koss with your favorite record or tape. We think you'll agree that when it comes to the Pro/4 AAA and other Koss Stereophones and CM loudspeakers: hearing is believing.

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