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Turntable Platter

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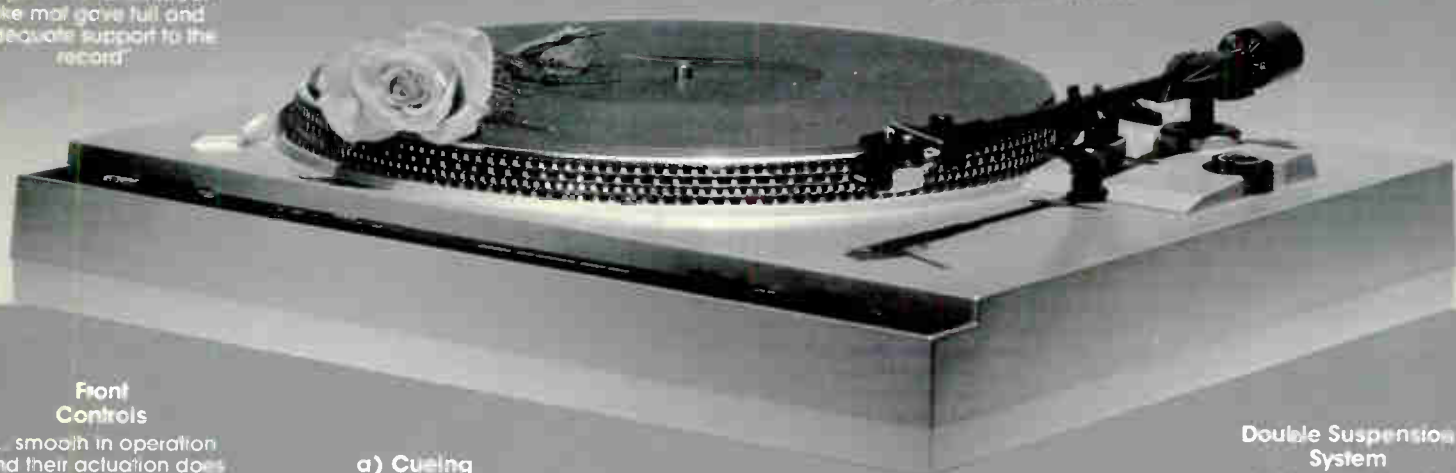
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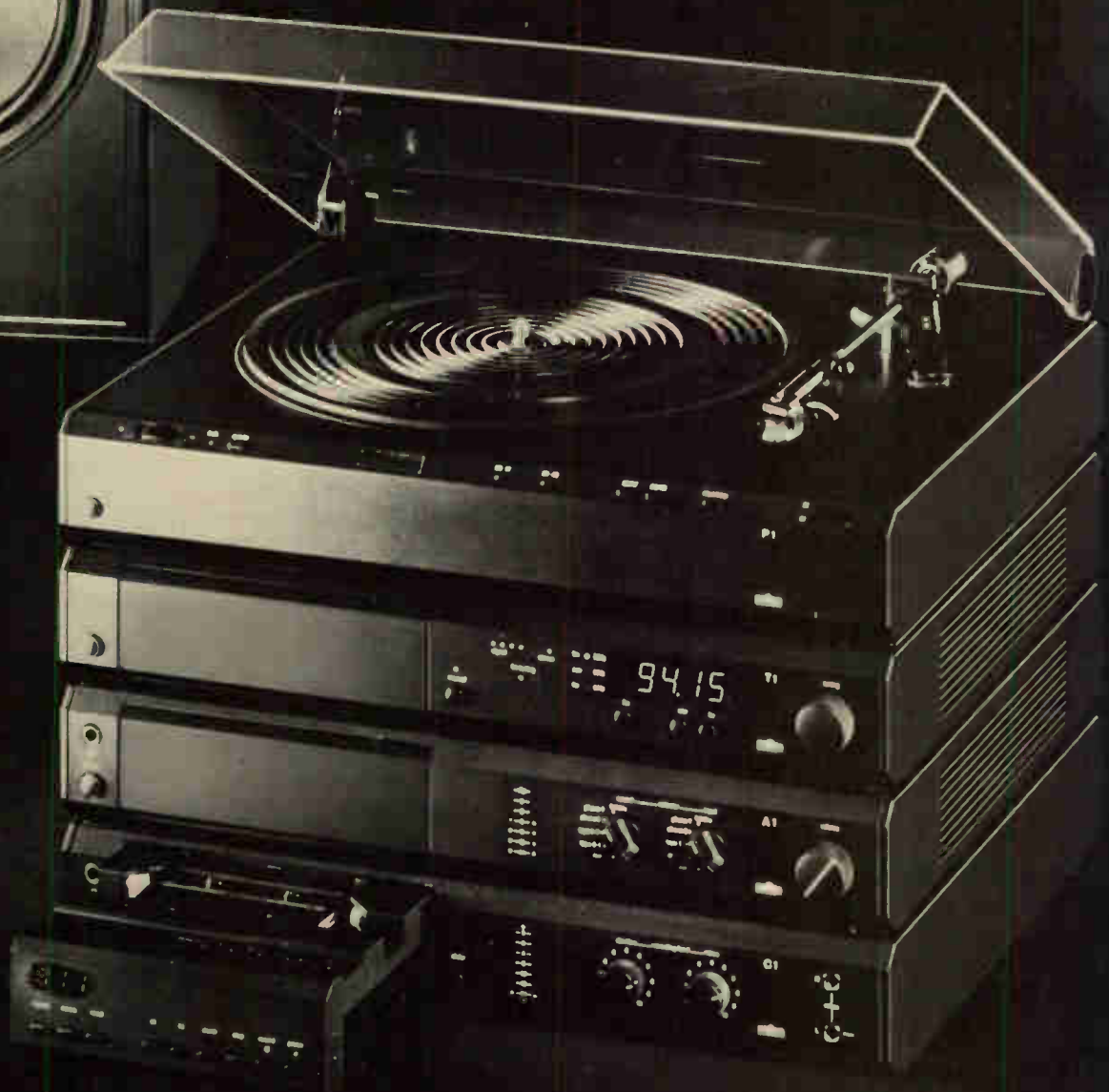
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THIS MONTH...

IAN G. MASTERS

Something very disturbing is happening in the US as we go to press. Several years ago, a couple of movie companies (Universal and Walt Disney) sued Sony on the grounds that their Betamax videocassette recorder was an invitation for consumers to steal copyright material from the airwaves. Originally they lost their case, but appealed it to a higher court.

Recently, the higher court overturned the first decision, ruling that "off-the-air copying of copyrighted audio-visual materials by owners of videotape recorders in their own homes for private non-commercial use, constitutes an infringement of ... copyrighted audio-visual materials", according to news reports. This is in contrast to long-standing practice in the US with regard to audio recording, whereby making your own tapes is legal, as long as they are only for your private use.

Frankly, either interpretation would seem logical to me. On the one hand, the material *is* copyright, so any unauthorized copying should be illegal; on the other, people are always going to make copies as long as they have the equipment, so it makes sense to acknowledge this and to spell out the conditions under which someone may or may not make a recording.

What is new is that the movie companies have sued not only the people doing the copying, but also the company making the equipment used. And in overturning the earlier decision, the appeals court has instructed the original judge to look into whether preventing the future manufacture of VCRs by Sony would be a proper way to protect the copyright holders.

The significance of all this goes far beyond the fates of the specific companies involved. Sony has already said that it would argue the case all the way to the US Supreme Court; but if they lose, several precedents will have been set. One obvious one is that any prohibition of VCRs would apply to products of any company making them, not just Sony. The laws, of course, are different in Canada. Even in the case of audio, it is a breach of copyright to tape records for your own use, although this is obviously an unenforceable law, and the same holds true for making video recordings. But so far no one has suggested that the equipment manufacturers should be punished for the sins of their customers. In fact,

there is some precedent in the opposite direction: although it has never been really clearly spelled out. At one time it was considered illegal even to *listen* to certain frequencies on the radio band, but since the radios that could receive these frequencies could not be prohibited, the specific restriction on this chunk of the radio spectrum was dropped. In fact, the way the law works in this country, *all* radio reception is illegal ... with certain exceptions, such as ordinary radio and TV broadcasting; but the equipment with which to receive even the non-exempted frequencies is legal.

Nevertheless, if the defendants in the US case were eventually to lose, and were prohibited from selling their VCRs in that country, a huge chunk of the audio/video market would simply collapse. It's not hard to imagine the sort of effect that would have on this side of the border.

Of course the owners of copyright material should have some effective means of protecting their property, otherwise why have copyright laws at all? And perhaps the prohibition of the machines themselves is the easiest way, even though it would prevent consumers from using them even for legitimate purposes. But I can't help feeling that this is far too extreme a measure, and that there *must* be another way.

Unfortunately, no one has succeeded in finding it so far, and the prospects of doing so are not very good. ■



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THE TECHNOLOGY

ERNIE WELLING

How good are you at predicting the future? I don't mean the science-fiction speculation that we all indulge in from time to time, but the hard, this-is-how-it-is-going-to-be forecasting on which plans can be built and money invested. If you're really good at it, there's a fortune to be made.

The problem is that galloping technology is providing so many new ideas so fast, with so many trade-offs, that it is tough to know how things are going to move. It's especially tough if you have to put money on it, as manufacturers and suppliers do.

This goes a little deeper than just new recording techniques or better amps. Think about wide-band transmission for example. Now there's a subject that you wouldn't think would apply to home entertainment; but before you dismiss the impact of fibre optics and other wide-band methods for sending signals, let me tell you a story.

You see, there is this house in a chic part of downtown Toronto with a rather extraordinary hi-fi and video system. It consists of two speakers, an amplifier, a projection TV set, and a couple of small boxes (more about those later). That's it—no records, tapes, recorders, receivers, turntables, or any of the other paraphernalia that we all love. There's a small keypad that you hold in your hand, and with it you can send infra-red commands to the system that controls the signal feeds to the speakers and to the screen.

Feeds? Well yes—that's where the wide-band transmission part comes in. All the programming is miles away in a central office, and the system is fed by fibre optic cables. Just imagine, your favourite album is stored on a videodisc and called up when you punch the right number on the keypad. It is transmitted to your system, such as it is, by digital light pulses sent down the optical cable, then it's decoded and amplified to feed your speakers. What's more, it sounds as good as if you had just put on a record in the room.

This house, as you probably have guessed by now, is not just the home of a well-heeled techno-freak, but a serious demonstration site run by Bell Canada. They have no interest in the pro-

gramming aspect of a system like this; but as a carrier, Bell is showing how good their carrying capabilities are. While they are showing off their transmission technology, they are also raising some pretty serious concerns for us all.

Imagine for a moment that something like this were available: the latest discs both audio and video, and AM-FM feeds (not off-air but real station feeds)—would you pay for it? Would all that be worth a monthly charge? After all, it's really a simple proposition: with these delivery methods, you wouldn't need to buy records, or even own half the equipment that you now have.

But there's more to it than cable hi-fi. With this kind of integrated home elec-

at the central office. The second small box contains interface circuits for this.

Utilities: the system also shows the amount and cost of water gas and electricity used since the last bill payment.

Now ask yourself that question again: would you pay a monthly charge for a service like this? It's not likely you'll have to answer the question, because there is no plan to have anything like this commercially available for some little while. But technically it's quite possible. All the technology is there, although Bell does not expect to be laying fibre cable into homes until the mid-80's.

So we come back to the gentle art of forecasting. It's no longer a question of what can be done, but of what people



SORCERER'S APPRENTICE

For those of you who are heavily into dubbing cassettes here's a double-duty deck that will do it in half the time. Onkyo's TA-W80 will function as an ordinary tape deck should, will play back two cassettes either one after the other or

simultaneously, and will dub at both 4.75 and 9.5 cm/sec with one record mode control. A C60 takes only thirty minutes, so you can dub that favourite tape and still make it to the party on time. Suggested retail price: \$659.00.

tronics, there are other services possible. In Bell's demo there is a wide range of offerings and it is worth listing them.

In audio there are three FM stereo signals, three AM signals, six continuous background music lines, and two spoken word services. All these are supplied with 15 kHz bandwidth.

The video feeds connect directly to local cable TV services.

Bell provides their own videotex service (which is called Vista), and here is where one of the small boxes is used; it is a modem. Obviously this system would provide a Telidon service too.

A video service includes remote access to a library of videodiscs and tapes, with stop, start, slow motion, still, and other functions accessible from the remote unit. Remember that up to 54,000 still shots are possible per side on a videodisc.

One of the features of the demonstration system is surveillance. Closed-circuit TV cameras in a variety of locations can be activated from the home system, and in some cases the camera can be made to tilt, pan, zoom, or focus.

In the games mode, the user has control over a video games computer located

want—that is, want enough to vote for with their pocketbooks. It's a question that a lot of planners spend a lot of time thinking about.

How about you? Your feelings about the technological future—and your predictions—are among the most important factors in their realization. We'd like to hear what you think about all this, so drop us a line, and we'll print some of the more interesting reactions in an upcoming issue. ■



Standing in line all night for Springsteen tickets was worth it.



So are new Maxell XL-S cassettes.

If music is a big enough part of your life, you'll pay the price for the best.

And right now, the newest Maxell cassettes are the best oxide cassettes Maxell has ever made.

These new XL-S cassettes provide more dynamic range. Higher signal-to-noise ratios. Wider bias latitude. Lower intermodulation distortion. And better print-through characteristics.

All of these improvements are in comparison with Maxell UD-XL, Canada's best-selling premium cassette tapes — the one everybody else keeps trying to beat.

It took Maxell to do it. In silver XL-I, for normal bias. And gold XL-II for high bias.

Try just one for yourself. And, if your system's good enough, you'll hear a significant difference in realism.

By the way, you may have to shop around a bit to find them.

That's because XL-S is available only at selected premium audio dealers.

But hey — you can't buy Springsteen tickets at the supermarket, right?

maxell



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H. BURRELL HADDEN

Every so often, I am reminded of the difficulties of long distance FM reception, mainly because of the reception at my country house some 75 or 80 miles northeast of Toronto. At that location, my tuner, which is a top-of-the-line model of two or three years ago with a multi-element antenna mounted about ten metres above ground, gives fairly good reception of the Toronto FM stations on the CN Tower, but it is not totally reliable. At times, the signal is good enough to enable tolerable listening in stereo, but at other times the only escape from the noise is to go to mono. The signal fades below the limiting level of the tuner, and the noise is only too audible. Reception of nearer stations is, of course, perfect, but stations even further away than Toronto are scarcely audible at all.

Some time ago, I installed an antenna preamplifier, a wide-band model giving a gain of some 10 dB over the FM band.



Ortofon has a new moving coil cartridge with an integrated headshell. The sleek, compact shape of the MC 200 incorporates a ring-shaped, samarium cobalt magnet, variable damping at different

INTEGRATED MOVING COIL

frequencies, and a boron cantilever with Fine Line, asymmetrical stylus tip. The stylus assembly is user-replaceable, but the manufacturer recommends you have it done at an Ortofon dealer. List: \$395.00.

This increased the signal presented to the tuner sufficiently that the Toronto stations were always receivable in good stereo, except for the occasional rapid fading due to multipath from aircraft flying close to the line of sight. The more distant stations were receivable in mono, with some slight background hiss, and occasionally in fair stereo.

I thought that was probably the best I could do, until I had the opportunity re-

cently to try out a very interesting little box, the Magnum Model 95 FM Power Sleuth. This Canadian-made device is a preamplifier for FM reception, and is connected, as might be expected, between the antenna and the input connector of the tuner. The difference between it and the antenna preamplifier I have been using is that the Sleuth is a *tuned* amplifier. It must be set to the frequency of the signal you wish to receive. This has two

THE JOY OF CX?

In an attempt to bring audiophile-quality sound to "average" record buyers, CBS this year announced a new noise reduction system called CX. Robert Angus outlines some of the background and reactions to the system, and Alan Lofft conducted some preliminary listening tests.

AN UPHILL CLIMB. When the CBS Technology Center introduced CX noise reduction at the beginning of the summer, record company executives and hi-fi dealers were hailing it as the salvation of their businesses, a way of encouraging people to begin buying records and audio equipment again. Accordingly, a number of component manufacturers—CM Labs, MXR, Sound Concepts, Phase Linear, and Audionics, among others—quickly introduced CX decoders for what were then non-existent records. Now they're wondering if they haven't made a mistake, despite the fact that RCA and DiscoVision Associates have announced plans to incorporate CX circuitry in the second generation of videodisc players.

What has the add-on manufacturers worried is that, although RCA and the Warner-Elektra-Atlantic records group have announced their intention to use CX, and CBS had planned to CX-encode all of its future releases, only about a dozen CX discs have actually appeared in

the U.S. and only a couple in Canada. A number of independent studios, recording engineers, and artists have revolted, calling it "a disaster" and claiming that "you actually get an increase in noise instead of a decrease."

CX, like the older dbx, is a compression-expansion process, in which signals are processed during recording. In the case of CX, this is done on a selective basis, while dbx requires decoding during playback to obtain satisfactory results. CX claims a reduction in record surface noise of 20 dB, but also claims to be compatible for practical purposes with existing playback equipment (i.e. most listeners are not expected to use a decoder). Since CBS, RCA, and WEA plan to make only CX versions of their new titles available, record producers and artists naturally have investigated how their undecoded discs will sound—and some, at least, don't like what they hear.

Only the sharp-eyed among record buyers know when they're purchasing a CX-encoded disc. CBS uses the CX trade mark only on the back liner of encoded records, and then without explanation—a much subtler approach than CBS used to tag SQ-encoded quadraphonic discs a few years ago. It would appear that, in the name of single inventory—one record instead of two—both CBS and American

record dealers want to downplay the new process, a fact that makes it almost impossible for owners of CX hardware to find something to play.

Why so few CX titles so far? "Well," says a source at CBS in the US, "it's all up to the producer. He has to approve the album for release, and it's taken us longer than we expected to familiarize producers with the process." Will CBS meet its goal of 100 albums by the end of 1981? "I'd think 50 would be more like it," the source said.

Meanwhile, dbx, the other disc noise reduction company, has not surprisingly come out with some strong criticism of the new system. According to dbx VP Jerry Ruzicka, "contrary to CBS claims, the CX disc is not playback compatible. Its sound quality is not uniformly acceptable without decoding, especially for classical music. Furthermore, the sound quality of undecoded CX discs will be perceived by many as being inferior to conventional LP pressings. When decoded, a CX disc does offer a sound quality better than a conventional pressing, but its residual surface noise is still audible. Another drawback . . . is that it requires level-adjust calibration by the consumer in order to achieve proper decoding."

In announcing their decisions to use CX for CED and laser-optical videodiscs, RCA and DiscoVision pointed out that the question of compatibility with exist-

advantages: it will optimize the gain at a particular frequencies. This makes it possible to receive stations that are weak, but close to stronger stations on the dial. Furthermore, the gain at the tuned frequency is about 30 dB, an improvement over the 10 dB of the wideband unit.

The design of a radio frequency preamplifier is quite difficult. If the unit is to be any good at all, the inherent noise produced by it must be at a lower level than the weak signal provided from the antenna (a consideration that also applies, of course, to the design of the tuner itself). In practice, this means that the thermal noise of the first tuned circuit is the important factor, determining the smallest radio signal that can be successfully amplified. Otherwise the amplifier will amplify the noise as well as the signal, and the entertainment value of the result will be impaired.

A preamplifier should also have some means of adjusting its gain, so that the tuner input stages will not be overloaded by strong signals. After all, we do not *always* want to listen to distant stations, and it can be a nuisance to have to disconnect the preamplifier.

All these things are taken care of in the Magnum Sleuth. The amplifier has three stages, and the gain control attenuates strong signals in the anti-clockwise position. When hooked up to the tuner at my country house, all the Toronto stations were received in stereo with as good fidelity as in the city. The occasional multipath due to aircraft was still there of course, but even this seemed to be reduced. The weaker stations from greater distances were receivable in slightly noisy stereo and clear in mono. Some even farther distant stations were now audible, but with more noise than would make for good listening.

The Magnum unit proved to be a very useful addition to a sound system if you live on the deep fringe of the coverage of your nearest FM stations. At about \$160, it is a really good buy.

Never content, however, I decided to find out what would happen if I used *both* the FM Sleuth and the wideband antenna amplifier? So of course I tried it, thinking that the noise level in the antenna amplifier might now limit the performance of the Sleuth. No so. The results were even better, showing there may still be some

margin to make a single unit with even more gain than the Sleuth. Nevertheless, as it stands it is an excellent unit, and performs very well indeed. ■



ing equipment was moot, since there are less than 100,000 videodisc players now in use. (R.A.)

A FIRST LISTEN. CX stands for Compatible eXpansion, and unlike dbx, a CX-encoded disc may be played back through a conventional system and deliver acceptable sound—or so CBS claims. Played through an outboard decoder, however, a CX record does offer impressive gains: virtually total suppression of surface noise, and an extension of the dynamic range by 20 dB, bringing the theoretical dynamic range of an analog CX disc to more than 80 dB—very close to that of a digital master tape and certainly more than enough to encompass the full dynamics produced by a large orchestra, chorus, or rock group.

Since its introduction in the Spring, a great deal of controversy has developed around use of the CX system, mainly among record producers and disc mastering engineers, who claim that CX encoding of a record results in audible degradation of the sound when it is played back undecoded.

For our listening tests, we managed to get hold of two CX decoders, from CM Labs and Audionics, and *one* CX-encoded disc: *Johnny Mathis: The First 25 Years* (CBS C2X 37440). At presstime, this was the only CX record available in Canadian record stores, although by the time you read this there should be more.

First, we should say that CX certainly *works*: when the CX decoders were connected to the tape monitor loop and calibrated with the supplied calibration record, there was *no* surface noise audible—even at high listening volume. You hear the stylus set-down click, and then *nothing* until the music begins. A very bad click or tick will come through, but at a reduced level.

Of course the real test was to listen to the CX record undecoded to see if it was truly compatible. Since the Mathis album is a compilation of cuts from his albums over the last two decades, we dug into our record collection and pulled out an old Columbia record, *Johnny's Greatest Hits*, that included some of the same cuts—not CX encoded, of course. Running the two discs side by side on dual turntables and A/B-ing both ("Chances Are", "When Sunny Gets Blue", etc) revealed no significant audible differences. When the CM Labs or Audionics decoders were switched in with the CX disc, there was a considerable expansion of dynamic range noted on some of the recent Mathis cuts; selections from older albums sounded pretty much the same—which is as it should be.

We *did* hear differences in the action of the two decoders, but it's simply too early to say, on the basis of one test record, whether these differences are attributable to actual differences in the decoders, the calibration of the two units (one

decoder was considerably more critical in its calibration), or as-yet-unknown variables in the operation of the CX circuitry. Since these decoders are manufactured under license from CBS and built to CBS specs, their operation should theoretically be identical.

CX is a 2:1 compression-expansion system that, on recording, compresses signals from above 0 dB to -40 dB in a 2:1 ratio. There is no compression of sounds more than 40 dB down, otherwise master tape noise would be exaggerated when a CX record is played back undecoded. The attack and release times of the expansion circuits have been very carefully engineered to minimize audible "breathing" or "pumping" of low-level noise or musical passages.

In terms of CX's future, it should be pointed out that CX records sell for the same price as non-CX discs (since the process adds nothing to the cost of a record), and that CBS is making the system available to any record company on a royalty-free basis (both RCA and WEA have already agreed to use CX). CX has enormous future potential—if the screaming and yelling dies down.

We (mostly) liked what we heard, or, more specifically what we *didn't* hear—horrendous breathing or pumping, gross spectral shifts, and so forth—and it will be particularly interesting to see how well the system works with classical music of wide dynamic range. Stay tuned. (A.L.)



Get it more together

Did you ever think of connecting your portable cassette player or radio to the hi-fi? Or recording from the was all too complicated. But now it isn't. Sony has a range of accessories that can do all these things and

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MX-20



Telephone Pick-Up
TP-5T



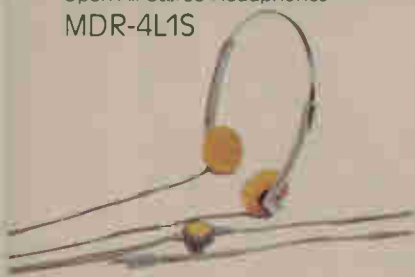
Earphone
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Dynamic Stereo Headphones
DRS-5



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BE-9H



Cassette Eraser, Erasable Metallic
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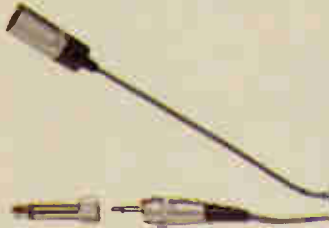
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PETER MILTON

Aniversaries are important because, as our society continues on its headlong rush of progress, they keep us in touch with our roots. A backward look is essential if we are to appreciate the perspectives of the future. So I give you another important date, one from which comes the whole complicated edifice of hi-fi.

One hundred and fifty years ago, in 1831, Michael Faraday discovered the principle of electromagnetic induction (and, in case you might think that he was not using the very latest in modern technology, he did it using a toroidal transformer!). During October of that year, his research led him to the invention of the dynamo, and by November he felt that he had sufficient facts to present his discoveries to the Royal Society. There is a story that Sir Robert Peel, the prime minister, visited Faraday in his laboratory and, pointing to the dynamo, asked what it was. "I don't know," said Faraday, "but I wager that one day your government will tax it!"

In the light of hindsight, it seems strange that the discovery should have been so long coming. Magnetism, electricity, heat, and light had already been studied; the battery existed; electromagnets were available; but the principles of induction were elusive. Faraday had narrowly missed the discovery six years earlier, and most of the major scientists working with electricity (all half-dozen of them) knew that an interaction between magnetism and electricity was impossible.

Electrical science was an off-shoot of chemistry. Faraday himself was a brilliant chemist, contributing to progress in steel alloys, optical glass, and the compounds of chlorine; so advances in the more-or-less spare time study of electricity were naturally rather slow. Some of the ideas regarding electrical currents were strange, but lest we poke too much fun at "imponderable fluids" acting at a distance, reflect on the equally strange idea of electrons travelling one way and "holes" travelling the other.

Newtonian physics was not very helpful when it came to dealing with electricity. Its laws were elegant and simple: atoms were hard little objects like dried peas zipping across empty space; when they encountered external forces, they neatly obeyed the rules of Euclid's geom-

etry. The trouble was that electricity, heat, light, and magnetism were not easily explained within this framework; and since their effects were different, they were regarded as completely separate things.

The real breakthrough, curiously, came from the direction of metaphysics, a branch of philosophy closely related to religion. We tend to think of religion, insofar as it concerned science in those days, is being a repressive force; but by the end of the previous century, scientific progress was seen to be inevitable and the sharp break between the material and spiritual worlds had to be resolved. Immanuel Kant—just two hundred years ago, in 1781—provided the key.

From the scientist's point of view the important implication of Kant's thought was that, if our universe consists of forces, then matter, electricity, magnetism, and all other non-material phenomena are convertible, one into the other. Next, the scientists had to set about the long task of proving it.

The Danes were contributing to the science of electricity very early in the day; and Hans Christian Oersted, who was attracted to Kant's philosophy, had some interesting ideas. Electrical current, he said, was a kind of "dynamic oscillation", or wave motion of forces down a wire



DO-IT-YOURSELF THUNDER

Heathkit now has a subwoofer available in kit form. The AS-1320 contains a 38-cm woofer in a vented enclosure and requires either a separate passive crossover, such as the Heathkit ASA-1320-1, or electronic crossover (AD-1702) and second amp. Retail price is \$499.95 for the subwoofer, \$74.95 for the passive crossover, and \$229.95 for the electronic

ELEGANT ENGLISH PURITY

The updated Systemdek turntable has trim lines as well as the elegant simplicity demanded by the purist. Features include a three-point floating suspension, 4.8 kg platter, accessible leveling adjustments, oil-pump bearing, synchronous high-torque motor, interchangeable tonearm boards, and anti-resonant dust cover. Suggested list price: \$825.00, without arm, of course.

ticles remained stationary.

Here was the missing clue: the waves moved, the particles were stationary, and the effect was induced at some distance.

Other experimenters had been working with electromagnets and had reported that iron had intensified the magnetic effect. When the connections were reversed, the change in polarity was instantaneous. This time, in August, 1831, Faraday was looking for a transient effect, since he was concerned with wave motion.

His apparatus was an iron ring six inches in diameter, wound with three lengths of twenty-four feet of wire on one side and two lengths of thirty feet on the other, making a variable-ratio toroidal transformer. One side was connected to a galvanometer and the other to a battery. This time he was watching the galvanometer as he switched the current. The needle oscillated and finally settled down when the circuit was made and broken.

As soon as he saw that it was the *change* in current that caused the transfer of energy, Faraday noted the generation of current when a magnet was inserted and withdrawn from a long coil. It was a short step from reasoning that, if pulsating current was derived by moving a coil over a magnet, DC could be obtained by spinning a disc between the poles of a magnet. Suddenly, everything came together. In the last third of 1831, the dynamo and the DC motor had been invented, the laws of induction were formulated, and Faraday began to talk in terms of "lines of force". It was a long haul from Kant's philosophy to the foundation of our industry. ■

(this was in the days of DC). The case of conduction determined if the result was heat or light. He reasoned that, if magnetism was another aspect of force, then it should be produced by the flow of electricity.

Oersted was due to give a series of lectures on electricity in 1819/20. Although he had set up his equipment to look for magnetism, he never quite got around to trying it. One evening, during a lecture that was intended to demonstrate the heating effects of an electric current, he was convinced that the conditions were right and placed a compass needle under the wire. He found the effect, but the results astounded the world: the magnetic force went *around* the wire instead of along or away from it.

The discovery led to what seemed to be a reasonable converse theory at the time: that bar magnets had currents of electricity flowing around the central axis. André Marie Ampère did not think things through when he proposed the idea, but it generated several experiments. If a coil around a steel bar could produce a permanent magnet when current flowed in the coil, then a permanent magnet in a coil should produce a current. When this failed, Augustin Fresnel reasoned that a loop of wire carrying a current should produce a current in a closed loop placed next to it. Faraday had the same idea in 1825 when he ran two wires side by side. In both cases, they switched on the current and *then* looked at the galvanometer ... and missed the small oscillatory movement of the needle during the switching.

The circular field surrounding the current-carrying wire behaved like a bar magnet in some respects, and the idea was put forward that the current in the

wire flowed in a helical path. If this were so, the wire would rotate when a magnet was placed near it. When Faraday investigated the idea, he found that the wire did not rotate, but instead tended to move at right-angles to the pole and in a circle around it. To demonstrate the effect, he stuck a bar magnet upright in a piece of wax in a deep basin. The basin was filled with mercury until only the tip of the magnet was visible. A wire was suspended above the magnet with the end trailing in the mercury and the circuit was completed with a battery. The wire rotated around the magnet when the current was switched on, and the first electric motor was born.

One of the things Faraday was looking for was a satisfactory way of explaining electric current. Oersted had described a wave motion; Ampère was in favour of two "fluids", one positively charged and one negatively charged, both flowing in opposite directions. Faraday thought of some form of electric state, quite passive in nature; but he could not square this with a rotating wire—something *had* to move.

Fortunately his daily work carried him into glassmaking and optical problems, and here he came across Fresnel's work on light, in which he proposed a wave theory. Fresnel drew a parallel with sound, and Faraday followed his experiments. These led to the study of vibrating plates; but instead of working with a powder on the surface only, as had Fresnel, Faraday pumped the air out of the chamber containing the plate and accounted for the air load. From this he went on to examine the waves set up in liquids on the surface of the plate. He saw that the waves on the surface were due to the plate beneath and that these could travel, although the par-



THE QUESTIONS

ALAN LOFFT

A relative asked me to copy some cassettes for her on my home stereo equipment for use in her car. The car's deck lacks both bias adjustments and Dolby, so I made a copy for her on good-quality, low-bias tape with Dolby off. Although the playback sounded fine on my own equipment, she claimed the tape sounded "dull" on her car deck and that a borrowed cassette made on high-bias tape *with* Dolby sounded much better. I thought that if a tape deck lacked a bias switch it would be set up for low-bias tape, and that playing a high-bias tape could damage the heads. Is this correct?

Mrs. Dorothy Rice
Fruitland, Ontario

You cannot damage tape heads by playing high bias tape on a normal-bias deck (or vice-versa). Compared to a good, domestic cassette deck, many car tape decks suffer from rather limited high frequency response; that's why the cassette that sounded fine on your home machine proved to be dull-sounding on the car deck.

You are correct in assuming that a cassette deck lacking both bias and EQ switching would be set up for regular, low-bias, ferric tape. However, if you play a high-bias chrome or ferrichrome cassette on such a deck, the sound will have considerable treble emphasis; and in the case of many car cassette decks, this will nicely compensate for the high frequency roll-off that these decks exhibit. That's why the high-bias cassettes sound better on your relative's normal-bias deck. Furthermore, if you make tapes for her *with* Dolby on and they're played on a non-Dolby deck, there will be an additional high frequency boost of up to 10 dB. Try making tapes for her with regular, low-bias tape and Dolby on; that should provide enough treble boost. If she still complains that the cassettes sound dull, then switch to a high-bias chrome or chrome-equivalent tape and continue to record with Dolby on.

Iwould like to record some cassettes combining voice instructions with background music. The problem is that with cassette recorders one can record only one thing at a time—either voice or music. How can I get the two onto the cassette?

W.P. Krol,
Montréal, Québec

A small microphone mixer will enable you to blend the outputs of one or more microphones with that from two turntables and allow you to adjust the relative balance of each prior to recording. Radio Shack currently has two models—the 32-1100 and the 33-1057—either of which will accept a magnetic phono input as well as microphone and line inputs. The 33-1057 would probably suit your purposes best, since it accepts high or low impedance mikes and has a master gain control—a handy feature for adjusting the overall output of the mixer once the voice/music balance has been set. If you would prefer a highly professional model, you might look at the Shure M67, a sturdy, compact unit that has been used in the industry for years.

Whichever unit you choose, connect the output of the mixer to the Line/Aux input of your cassette deck, put the deck in the Record/Pause mode, and set the tape deck's record level to about the midpoint of its range (or where you set it when you're recording from your turntable). Advance the master gain on the mixer to about $\frac{3}{4}$ of its rotation and then set the mike level so you're not peaking the deck's VU meter into the red. While monitoring the output of the mixer with headphones (plugged into your cassette deck), gradually increase the phono gain until you've achieved the desired balance of voice with music. Now readjust the overall master gain so you're not

overdriving the line input of your deck.

If the magnetic phono input on the mixer doesn't have enough gain for your cartridge (it might not if you have an unusually low output cartridge), leave the turntable connected to your receiver and connect the receiver tape output to the Aux input on the mixer, setting the voice/music balances as before. To avoid excessive background hiss or distortion, try and keep all level adjustments within the lower $\frac{2}{3}$ of the control range.

When taping old 50s and 60s records, I notice some sound too tinny—not enough bass—for my liking. Can I hook in a graphic equalizer to adjust the frequency balance during the recording mode? Surely jumping up and down to adjust the bass and treble for each song during playback isn't the answer.

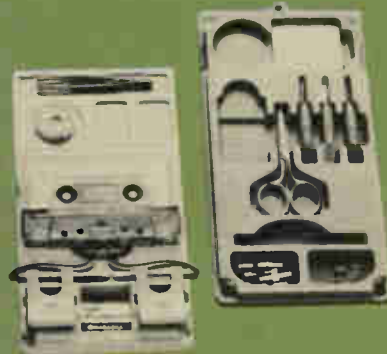
Michael Thomas,
London, Ontario

No problem. Simply connect a five- or ten-band graphic equalizer (the latter would be a better choice for your purposes) between the tape output jack on your receiver and the Line/Aux in jack on the tape deck. Set your record levels, switch on the tape monitor and adjust the sliders on the equalizer until you've "cleaned up" the sound of the disc to your satisfaction—then you're all set to record.

Few, if any, of those old records have any musical information above 8000 Hz, so you can kill all the frequencies above that point and eliminate a lot of groove "hash". Be sure to put the receiver into the mono mode for mono discs; this will further reduce groove noise by about 50 percent. With 78 r.p.m. discs you can probably attenuate everything above 5 kHz.

Of course many of your old records will benefit from some bass boost (old Beatles discs, for instance, have almost *no* bass), and you may find some will sound better with a gradual lift in the 3 kHz-to-5 kHz region followed by a steep cut at 8k—experiment a bit and use the bypass switch on the equalizer to A/B the before/after EQ adjustments prior to recording. If you're using a cassette deck, don't apply *too* much midrange and upper octave boost; the deck's recording equalization circuits already apply up to 20 dB of high frequency boost and a further lift from the equalizer might well drive the recorder into tape saturation or distortion.

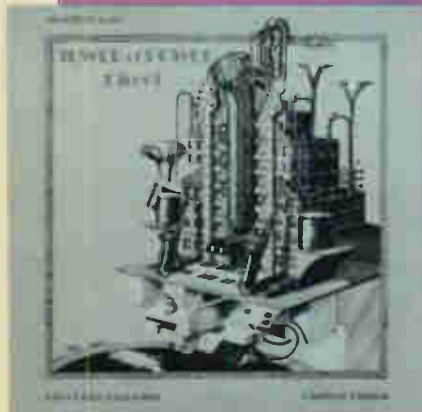
By the way, a number of new 10-band models made by Marantz, Sansui, ADC, Audio Control, JVC, MXR, Sound-



CASSETTE EDITOR

Ever tried to edit or repair an invaluable cassette recording on a conventional splicing block? Now there appears to be a tool designed for the job. Nagaoka's PC-507 tape splicing kit will handle open-reel, cassette, and even micro-cassette tape. Suggested list: \$30.

craftsmen, and Vector Research allow switching of the equalizer into the tape path for recording or playback without having to reconnect patch cords.



AUDIOPHILE RHYTHM & ROLL

Sheffield Lab is a purist direct-to-disc recording company and one of the most recent releases on this label is *Tower of Power Direct*, a blend of rock and roll with powerhouse rhythm and blues. The new Canadian distributor claims that you should be able to buy this and other current Sheffield releases for less than you used to. They still cost \$24.95, suggested list, an audiophile price for audiophile quality.

I read that you can't use a PCM adapter when dubbing cassette tapes because of a cassette deck's limited frequency response. According to my source, a videocassette recorder is the answer. How? A video recorder's average frequency response is only 50 Hz to 10 kHz!

Lenard Dean,
Calgary, Alberta

You are confusing *audio* with *video* frequency response, as well as misunderstanding the basics of digital (PCM) audio recording. To record a North American TV signal, a videocassette recorder must have a frequency response, or bandwidth, of 4.2 MHz—4.2 million Hz! To achieve this rather extraordinary response, one can move a great deal of magnetic tape at high speed past a *stationary* recording head or, alternatively, have a number of magnetic heads spinning rapidly across the surface of a tape. The latter is the operating principle of the video recorder, where two magnetic heads (some models use four), spinning hundreds of times per minute, lay down the video information in a series of diag-

onal tracks across the surface of a very slow-moving 1/2-inch magnetic tape.

The *audio* portion of the TV signal is not recorded by the video heads, but by a separate magnetic head (like the one in your cassette deck), on a narrow track along the edge of the video tape. Because the tape moves so slowly (slower than an audio cassette), the frequency response is not very good (typically about 100 Hz to 8 kHz), and at the extended-time, slow speeds, it's even worse.

As for using an audio cassette deck to record *digital* audio from a PCM adapter, you are by now probably aware that PCM digital recording "describes" the audio signal in terms of about 50,000 pulses per second, generating, for a 30-minute program of two-channel stereo, about 3 *billion* computer "bits" of information. The information storage capability of any magnetic recording medium is determined by the tape-to-head (or head-to-tape) speed, so the audio cassette tape moving at 4.75 cm/sec is quite incapable of storing this tremendous amount of digitalized audio information. The only readily-available device that *does* have this capacity is a VCR.

When I record with Dolby on, it seems to eliminate the tape hiss fine, but it also seems to take away quite a bit of the high frequency material. I've been using rubbing alcohol to clean the heads—could this be the problem?

Michael MacTavish,
Moose Jaw, Sask.

You should be using a specific tape head cleaner (or isopropyl alcohol in the 91% pure form) rather than rubbing alcohol; the latter sometimes contains lubricants that can gum things up. Any of the tape head cleaners by Bib, Jana, Nortronics, Robins, and so forth, will do.

Your high frequency losses with Dolby on (if your heads were gummed up by rubbing alcohol, you'd also have high frequency losses with Dolby *off*) are very likely a product of Dolby "mistracking" due to a difference in tape sensitivity between the tape your deck was factory-aligned for and the one you are currently using. This is an increasingly common problem with modern cassette decks, since very few manufacturers bother to include Dolby calibration controls.

However, there is a way of diagnosing a Dolby mistracking problem. Record a steady-state pure tone source with the record level set at 0 VU and Dolby *off* (the Stereo Review SRT14-A Test Record contains several 1 kHz and 3 kHz tones for test purposes; it can be ordered

from Test Record, Dept. 30013, P.O. Box 278, Pratt Station, Brooklyn, NY 11205 for \$10.95 US funds).

Now play the tape back and carefully note the playback levels on the VU meters: there should be less than 2 dB difference between the record and playback levels for proper Dolby tracking. If the playback level is more than 2 dB below 0 VU, then the tape you're using is not sensitive enough and is causing the Dolby circuits to mistrack with consequent high frequency losses. Check the owner's manual to determine the specific brand and type of tape recommended for your deck and do the above tests with that tape. If the playback level still reads more than 2 dB low, then the Dolby calibration or record amplifiers are misaligned and the deck should be returned for servicing. If no specific tape is recommended, then try a number of different brands until you find one that will deliver playback levels that are within 2 dB of the 0 VU record level (obviously the smaller the difference between record and playback levels, the more accurate the Dolby decoding).

Since your problem is one of low levels on playback (and resulting high frequency losses), you should try a number of tapes of *higher* than usual sensitivity. In *Audiolab* tests of cassette tape, the following exhibited higher than average sensitivity: Philips Super Ferro and Super Ferro I, Maxell UDXL I, Scotch Master I, and TDK OD. ■



Readers are invited to send their hi-fi questions to Audio Canada, 425 University Ave., Toronto, Ont., M5G 1T6. Letters published will be chosen on the basis of general interest; and for each question used, the writer will receive \$10. We reserve the right to choose and edit letters, and cannot undertake to answer questions except in the pages of the magazine.

THE SOUNDS OF CHRISTMAS

Photography by STRUAN

Produced by Johanna Rennhofer



Fashions by Paul Cornish

STOCKING STUFFERS

Deck the halls with boughs of holly, but for that ever-loving anxious audiophile in your life no amount of tree-pruning will suffice. Instead, take a Christmas ramble through Audio Canada's lineup of sound spectaculars and make this holiday season one worth listening to.

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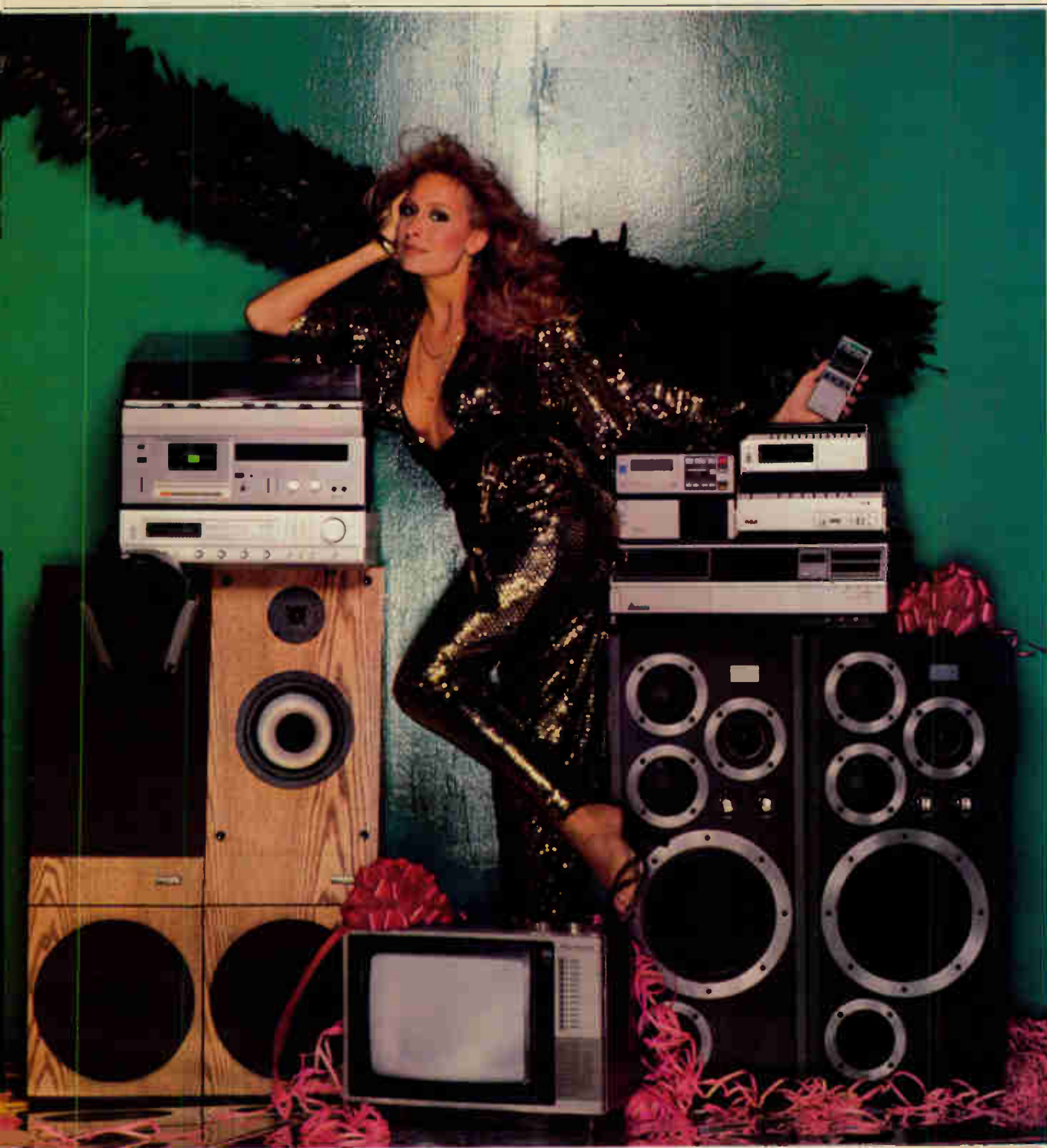
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AUDIOLAB

AUDIOLAB
TEST REPORTS

SIX LIGHTWEIGHT HEADPHONES

IAN G. MASTERS

For most serious audiophiles, headphones have always been considered a convenience, but hardly a "real" hi-fi component. Not that some of them have not been excellent reproducers of sound—our tests over the past five years or so have discovered some superb phones. But most listeners use speakers most of the time, reserving their use of phones to those occasions when speakers would be inconvenient.

In the past couple of years, however, the humble headphone has gone through a real renaissance, largely because of the advent of equipment that *requires* their use. The little tape players that one sees everywhere these days have given rise not only to a whole new generation of phones, but have also popularized the extremely lightweight models that can be used in practically any circumstances. Heavier phones would be irksome—and probably dangerous—if used when jogging or skiing.

Lightweight phones are not new, of course, but they have never been as popular as they have recently become, so we decided to test a batch of them, to see how good they are.

Four of the real featherweights were chosen: Audio-Technica's ATH 0.5 which sells for \$69.95, the Koss Sound Partner (\$49.95), Sony's MDR-7 (\$129.95), and the Stanton Micro Wafer XII (\$59.95). For comparison, two other lightweight (but more conventional) phones were included in the tests: the somewhat larger Beyer DT 880, which goes for \$169.95, and the Sennheiser HD 414X, the current version of a very well-known phone, which sells for \$84.00.

Testing headphones is not as straightforward as it is for most other audio components, where flat frequency response is an ideal—generally speaking, the closer most components come to achieving flat response, the better they sound. With headphones, however, the very fact that the phones interfere physically with the outer ear means that the designer must build into his product some compensation

for the bypassed aural functions. A signal that is flat when it reaches the outer ear is anything but by the time it gets to the eardrum, as there is considerable acoustic modification by the ear itself. But the headphone alters this by deforming the ear and by coupling very closely with the air in the ear canal. So for a phone to sound natural, it must exhibit a curve that duplicates the modifications the ear would make. Unfortunately, all ears are different, so no single compensation curve will be ideal.

It is possible, however, to build up a family of curves that represent the range of responses required for the average person to hear a natural sound. These curves, first produced by Dr. Edgar Shaw at the National Research Council in Ottawa, are shown as the shaded area on the graphs below. In a number of tests over the years, we have found that the phones whose curves most closely conformed to these shaded areas were the ones judged best-sounding by our listening panel.

The frequency response measurements shown were made using a lifelike rubber replica of a median-sized human ear fitted with a microphone at the entrance to the ear canal. The replica was mounted to simulate the side of the head, and a support some 18 cm away was used to hold the other side of the headphone and allow the headphone to exert its normal force. The lower curve in each case was measured in this way, the upper one representing a similar setup, but with some pressure applied to the outside of the earcup. In each case, the right earpiece was used for our tests.

Other tests included measurements of left-right matching, and the effect of decoupling the phone from the ear canal by insertion of the stem of a pair of eyeglasses under the earpad. In many headphones, the amount of isolation from outside sounds is important, but all the phones included in this series of tests were of the open-air type, with virtually no isolation. For the record, the only one of the batch with any measureable isolation was

the Beyer, with 1.5 dB (a really good closed phone can provide as much as 40 dB, with 25 to 30 dB being more typical).

The heart of the test, however, was the subjective portion, in which our listening panel auditioned all six phones against each other and against a speaker of known quality. Levels were carefully matched using pink noise, and a wide variety of music was used in the test. Not only was sound quality judged at this stage, but also comfort and stability—the phones should be pleasant to wear, but



Audio-Technica ATH 0.5

they should also stay on the head, particularly if they are to be worn when you are running or bicycling.

Overall, our panel was pleasantly surprised at the quality of these modest phones. No longer do you have to have several pounds of plastic and metal on your head to get good sound. Our specific findings:

Audio-Technica ATH 0.5. Basically this is a nice, smooth phone that suffers only from having a rather restricted bandwidth. This can be seen in the curves,

AUDIO VIDEO
CANADA

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where there is considerable rolloff at the low end, and in which the curve hugs the lower portion of the shaded area at the upper frequencies, lending a rather muted quality to the sound.

Left-right matching was good, measuring within 2 dB over most of the audio range, and the phones did not seem particularly sensitive to position on the ear. The panel found this quite a comfortable phone, and not prone to fall off the head; but several members found the distinctive position-adjustment system awkward. Rather than the conventional headband adjustment, the Audio-Technica has eccentrically-mounted rotatable earpads—turn them one way and they reach farther down, turn them the other, and they ride

higher. Ingenious, but not always convenient.

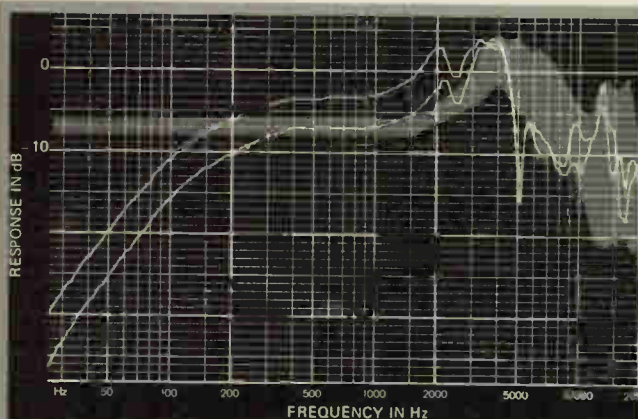
Nonetheless, at \$69.95, the panel felt this phone to be good value, and suitable for all but the most critical listening.

Beyer DT 880. This is not a featherweight, and is not likely to be used for the same sort of purposes as the others in this test, but it is nonetheless a very light headphone, and won hands down as being the most comfortable headphone in the group. It's an open-backed circumaural phone, and might be expected to be heavy from its appearance. It is anything but.

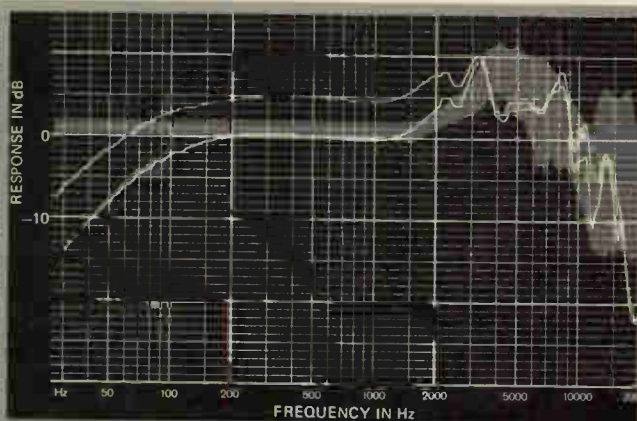
Left-right matching was excellent, diverging by 2 dB at a few points on the spectrum, but basically matching per-



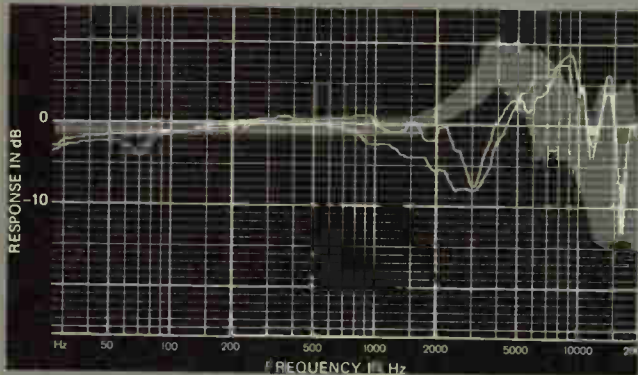
Beyer DT 880



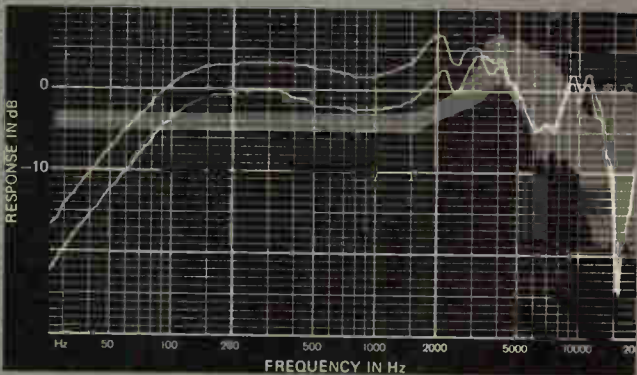
Audio-Technica ATH 0.5



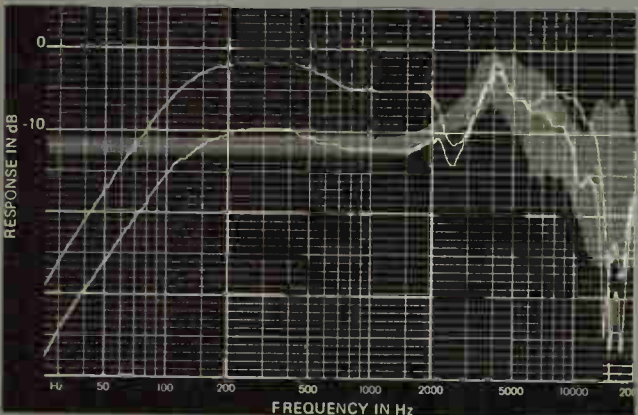
Sennheiser HD 414X



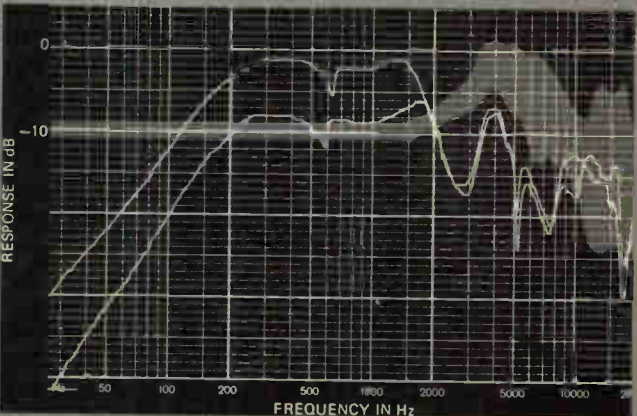
Beyer DT 880



Sony MDR-7



Koss Sound Partner



Stanton Micro Wafer XII

Headphone frequency response measured with a microphone mounted in the ear canal of a realistic replica of a human ear. Measurements were made with normal pressure (lower curve)

and with added pressure on the earcup. Shaded area is the range of frequency responses measured at the ear canal of an average ear.

fectly everywhere else. Inserting the eyeglass stem changed the response hardly at all, suggesting that this phone is not sensitive to position on the head, or particularly dependent on perfect coupling to the ear canal for its effect. This is all the more remarkable in view of the fact that of all the phones in the batch, the Beyer was the only one with really good bass, as can clearly be seen on the frequency response curve.

Things are not quite so good at the top end, where a midrange sag and a very aggressive high frequency output combine to produce a fairly coloured sound, worse on some material than others. It's a pity, because in all other respects this is a superior headphone and, at \$169.95, a quite expensive one.

Koss Sound Partner. This is a remarkable little phone, definitely designed to combine good sound with comfort and convenience. For one thing, it's tiny—it folds up and fits into a little bag that can be

Sennheiser HD 414X. This is the latest version of a phone that shows up all over the place—a favourite of recording and broadcast studios, as well as of audiophiles. A "standard" phone, rather than an ultra-lightweight, the 414X is nonetheless very light and extremely comfortable.

The frequency response curve tells most of the story with this phone, as it conforms to the range of "ideal" curves very well indeed, except in the low bass. The panel noted the rolloff at the low end, but felt that what bass there was was smooth. Otherwise, there was very little wrong with this phone. Left-right matching was virtually perfect, and position and coupling of the phone had no appreciable effect on its sound.

This may not be an ideal phone to wear when skiing, but is an excellent bet for any other uses. At \$84.00, it's also very reasonably priced.

Sony MDR-7. Sony is probably as re-

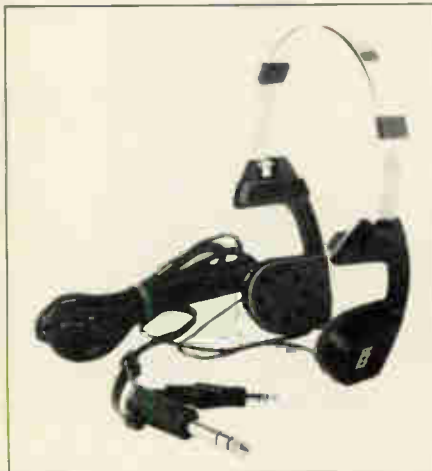
some material, but not enough to change the panel's overall favorable impression.

The two sides matched within 2 dB over the audible range, and the eyeglass test showed that this phone is quite insensitive to position on the ear. As for comfort, the panel found that the attachment of the cord to the headband on one side, rather than individually to each earpiece, was a bit awkward, and the headband angled the phones slightly wrongly, but this could be eliminated by a small twist.

As lightweight phones go, the MDR-7 is quite expensive, at \$129.95; but that is probably not an unreasonable price to pay for performance this good.

Stanton Micro Wafer XII. Stanton's entry into the featherweight sweepstakes is somewhat less successful than the other phones in our sample, but it's also one of the least expensive, at \$59.95, so perhaps that accounts for it.

The thing our panel noticed immediately was the XII's narrow bandwidth,



Koss Sound Partner

kept virtually anywhere. When in use, it was the most stable of the lightweight phones, as well as one of the more comfortable. It is also the least expensive phone in our test sample, at \$49.95.

All of that would be irrelevant, however, if it did not perform well. Fortunately, it did very well in this area too. The frequency response curve shows that the Sound Partner's response corresponds well to the shaded area, except at the very low end, where there is a rather sharp rolloff below 200 Hz. This was audible to our panel, but they felt that it was acceptable, considering the unit's other merits. The hump in the curve above this frequency gave an impression of fullness that offset the lack of real low bass.

Left-right matching was within 1 dB across the range, and our eyeglass test showed that this phone is quite sensitive to position and coupling. But since it is very stable, this should not be a problem.

All in all, a creditable effort from Koss.



Sennheiser HD 414X



Sony MDR-7

sponsible as any company for the activity in lightweight phones, with their introduction a couple of years ago of the Walkman tape player. If so, then they have furthered the cause of lightweight quality with this phone, which made a considerable impression on our panel. Aside from the lack of very low bass—not unusual with open headphones—the panel found the MDR-7 a pleasant, natural, and accurate headphone. This is borne out by the curves, which show a good agreement with the theoretical "ideal" curve. The peak between 9 and 11 kHz made the phone a touch strident on



Stanton Micro Wafer XII

and this can be seen clearly on the frequency response curves, where it displays little agreement with the "ideal" curves except in the midrange. Our other tests showed that this phone is also quite position-sensitive, a condition aggravated by the panel's finding that it was quite unstable, with a tendency to move around on the ear.

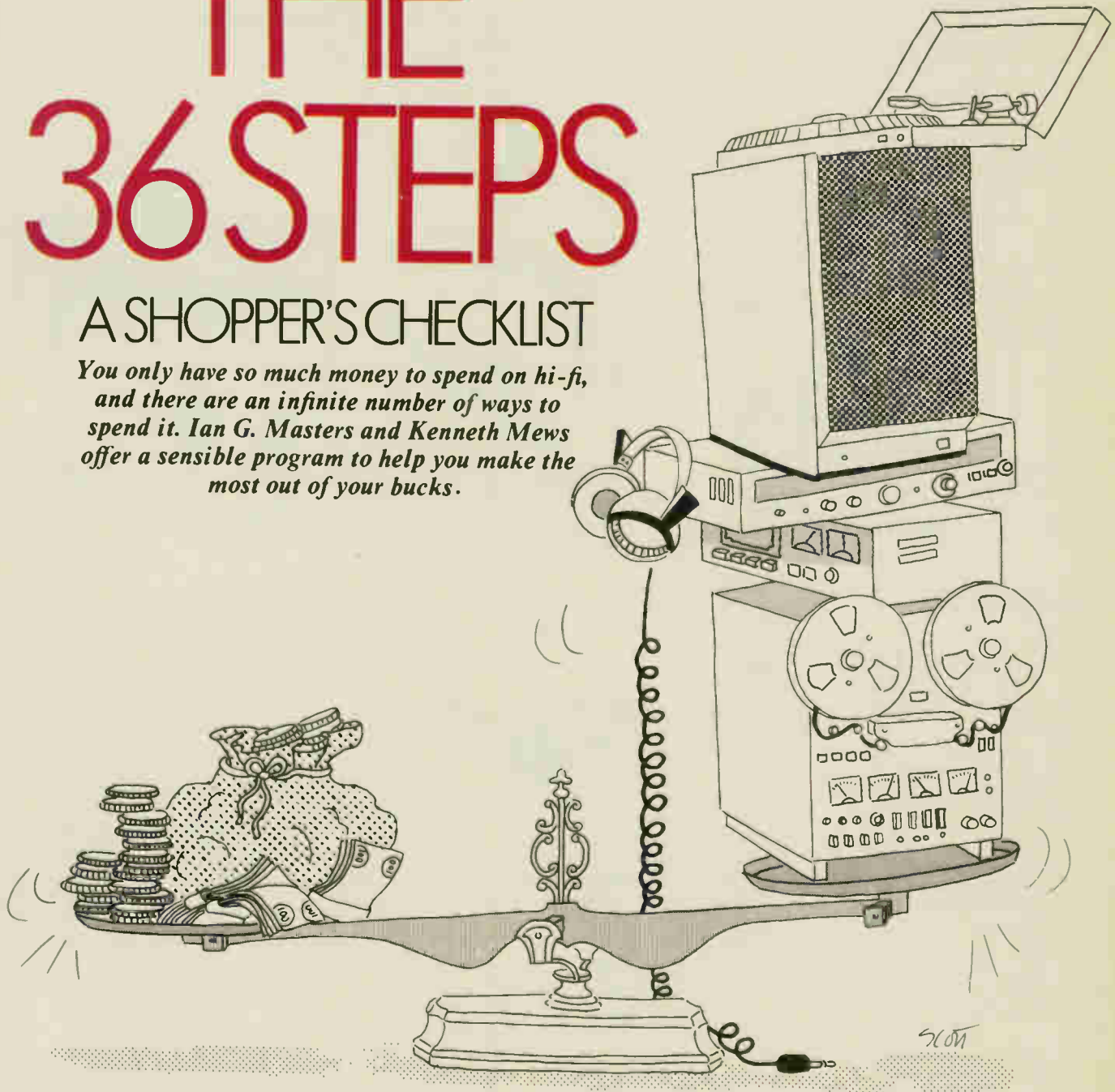
In fact, the XII performed pretty much as we had expected the featherweights would before we actually tested them. The fact that the others in this test were so much better is more a tribute to their designers than a criticism of Stanton's. It's tough to be merely good when your competition is exceptional.

We were amazed at how good these miniature phones could be. Real hi-fi is now truly portable, at least where the transducer is concerned. No wonder every third head you see has a pair of phones on it. ■

THE 36 STEPS

A SHOPPER'S CHECKLIST

You only have so much money to spend on hi-fi, and there are an infinite number of ways to spend it. Ian G. Masters and Kenneth Mews offer a sensible program to help you make the most out of your bucks.



Sooner or later, the time comes actually to buy a hi-fi system—you've had it with the old Seabreeze, and are ready for some really good sound. You could fly blind, of course, and pick up whatever is going for the money you have; or you can take an organized approach to getting the best for your bucks.

On the following pages, we have set out a program for making a sensible choice, particularly for a first system. Go through it step-by-step, and check off things as you do them. This won't guarantee trouble-free audio shopping, of course, but it will take a lot of the confusion and guesswork out of it.

1 **Decide on a budget.** Sit down with a pencil and paper and figure out exactly how much you can squeeze out of your monthly paycheque, savings account, or friendly loan shark. You should count on a ballpark figure of about \$1,000 minimum for a decent, high fidelity, sound system; but of course you can spend \$10,000 and up if you're determined to get that tiny fraction of a percent improvement state-of-the-art components offer.

2 **Get an overall feel.** Do your homework. The craftiest salesman is no match for a well-informed consumer. You're going to spend a lot of hard-earned cash on this purchase, so it will pay you to get to know a little of the language of audio. Read magazines and where better to start than with audio magazines like *Audio Canada* with "The Basics" column in most issues, our "Getting Into Audio" issue (November 1980), and *The Canadian Hi-Fi Buyer's Catalogue* published every September with complete specifications and suggested list prices for virtually every piece of audio equipment available in Canada.

3 **Pick up spec sheets.** When you get to the next stage and have started visiting dealers, don't forget to pick up brochures on particular products that interest you. This will enable you to compare manufacturer's claims with the actual performance of a component under laboratory test conditions as reported in *Audio Canada's* "Audiolab" and similar independent magazine reports.

4 **Go back to the drawing board and revise your budget.** Once you know what's out there, you're probably going to feel you've been a bit on the stingy side.

5 **Can you afford to go for separates?** You must decide fairly early whether you're going to buy a receiver or separate preamplifier, tuner, and power amplifier. There's usually much more flexibility with discrete components—features like two tape monitors for dubbing cassettes—and they

make it easier to add things to your system later on. But they do cost more.

6 **Are you looking to mix and match components or purchase a "package"?** It is really worthwhile going through the exercise of selecting the ideal component for you in each category regardless of brand although it would be much simpler to choose a package deal assembled either by a major manufacturer from its own product line or by a retailer from various lines he carries. Either one could be a good buy if it includes all the features you want, and if all the elements measure up and are of comparable quality. Pay special attention to the speakers. Some package speakers are thoroughly adequate, others are just awful, added to keep the cost down.

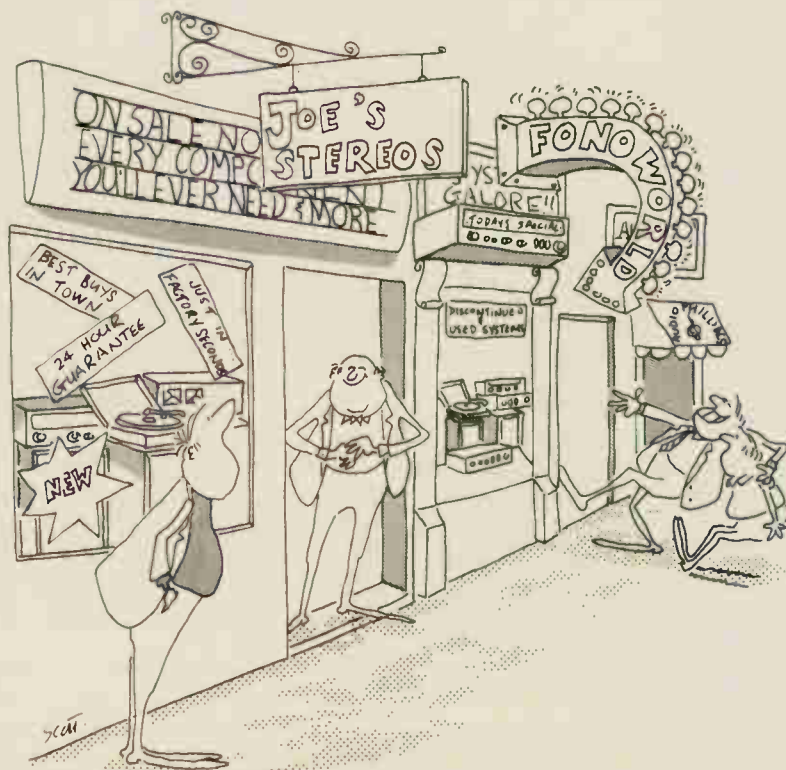
7 **Do you want tape?** That \$1,000 minimum figure mentioned at the beginning of this checklist will have to go up at least another \$250 to \$300 if you want to get into the mysteries of active audio—tape recording on cassette, the fastest growing area of audio today. It's fun, but it will take some learning and practice before you're satisfied with the results.

8 **Allocation of your budget.** To ensure that you get a well-balanced system, you should spend about forty percent of the kitty on speakers, another forty on the receiver (or separates), and twenty on the turntable and cartridge combination.

9 **Where are you going to put all this stuff?** Unless you decide on a micro-system that will fit practically anywhere, it's a good idea to give some thought now as to where your new system is going to live. Have you got appropriate furniture? The size of the room will influence the type of speaker you choose, for example—the kind that fits on a bookshelf or staggering behemoths. You may have to move to a bigger place.

10 **Find out who the dealers are in your area.** Check the Yellow Pages, look at the ads in the local newspapers, canvas your friends for their experiences. This will give you some idea of which ones are worth a visit—whether they carry the lines you are interested in, for example. By all means go out of your way to visit a major specialist store to see a broad range of equipment, but don't forget the guy around the corner. He may be more interested in giving especially good service to a customer from the neighbourhood. You're likely then to send him customers in the future.

11 **Pay a visit to a number of stores** This is not a buying trip. Just a visit to case the joint. Talk to the sales staff, pick up brochures. It helps if you can go at a relatively quiet time—during the week or late Saturday afternoon. Resist an impulse purchase. This may be harder than you think, since audio salesmen are a persistent breed.



**"WITH SPEAKERS,
PRICE IS REALLY NO
INDICATOR OF QUALITY,
SO DON'T REJECT
A SPEAKER YOU LIKE
JUST BECAUSE
IT MAY BE CHEAPER"**

12 Pick three and give them three points, two, or one according to the following categories: (You may, of course decide to buy at several stores; but then you may have to make a sacrifice on price or free set-up, or something else.)

1

2

3

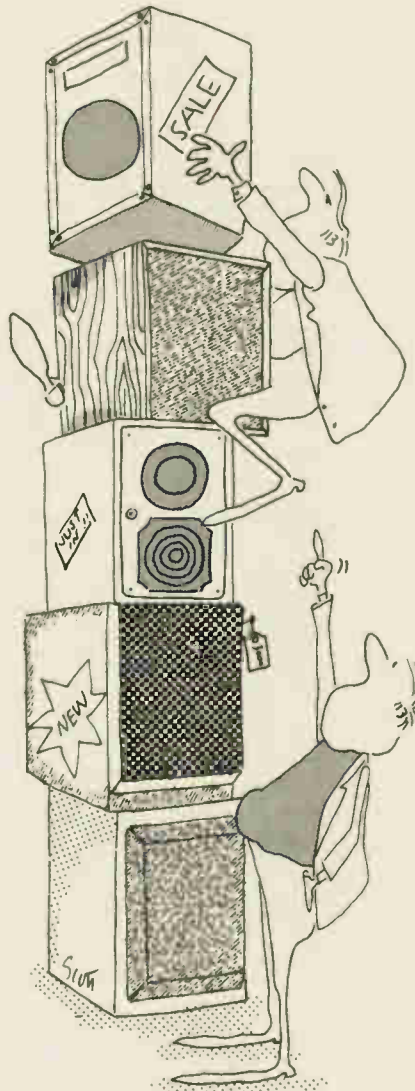
Service Department: Audio equipment is very reliable these days, but everything breaks eventually and it's reassuring to know that the dealer who sold you your equipment is capable of making routine repairs.

Store Warranty: When you buy from an authorized dealer you get the manufacturer's warranty protection; but many retailers offer a guarantee of their own that extends the period of protection or covers damage to one component of the system caused by another.

Pricing Policy: Is this a razzle-dazzle discount operation or are most of the prices close to full list. The savings you make by buying from a discounter you generally pay for in other ways. Services like store warranty, delivery, installation, and a charge plan often cost more or are not offered.

Choice of Brands: The wider the selection in your price category the better. But there is such a thing as too much choice. Also, if they haven't got the lines you're interested in, it won't matter how many they carry.

Adequate Listening Facilities Beware of the dealer who has nowhere for you to listen to his merchandise except on the open store floor. His listening room should be as similar as possible to your own living room—comparable in size, furnishings, carpet, and so on. It should also have a system that enables you to switch back and forth among at least three sets of speakers, receivers, or cartridges the only way you can accurately compare the sound they produce.



Knowledgeable and Friendly Staff: You are more likely to run into someone who knows audio in a specialist store or department. If it's the only product they sell, they will have more time to train the staff—in many cases audio enthusiasts who have turned a hobby into a career. You're going to spend a lot of bucks in this store, so don't settle for less than politeness and simple, easily understood answers to your questions.

Fingerprints: Is the store neat and well-organized? Or does the equipment on display look shopworn and gummy? It may say something about the business practices you can't see.

Reputation: Your friends can help you here. If you exhaust all other leads, the Better Business Bureau may be able to assist you.

Extra Services: Give bonus points for free delivery and installation and a returns policy that allows you to replace components for a reasonable period after purchase. You won't really know how your system sounds until you get it set up in your listening room. This is especially true for the speakers.

**TOTAL
DEALER
RANKINGS**

13 Gird your loins for the great speaker search. There is one component that will determine how your system will sound, and the overall amount of money you'll have left for the rest of the system—the speakers. These, therefore, should be looked at first; and even if you don't come up with a final choice immediately, it's a good idea to have a pretty clear idea of what you want before you look at electronics and things.

14 Make a preliminary elimination of obvious unsuitables. There are literally hundreds of hi-fi speaker systems out there, but many of them can be written off right at the start as far as your system is concerned. Speakers that are out of your price range, for example, can be eliminated, as well as ones that do more (or less) than you require. There'll be lots left in your technical and price range, so be ruthless.

15 Do a lot of listening. Eventually, you will want to do some careful critical comparisons; but at this stage, you can get a good idea of the sort of thing you want by haunting the hi-fi stores and listening to a lot of speakers in your range. This rough "narrowing" process will be much easier if you take your own records along, as you'll be able to judge better with material you know.

16 Boil it down to a few. The rough listening, plus discussions with audio dealers, should help you to come up with a short list of speaker candidates. These should ideally be available from the same dealer, so that you can do valid listening com-

CITATION X-11

It'll put one heck of a grin on your face!

The Citation X-11 is a remarkable package of performance and practicality. Because underneath that well ordered exterior beats the heart of a performer. Its heart and soul is a high-output version of the 2.8 litre 60 degree V6. Which means 135 h.p. at 5400 rpm. And with front-wheel drive, rack-and-pinion steering and MacPherson strut front suspension, this car has the ability and agility to put one heck of a grin on your face. All this plus room for five (with luggage) puts the X-11 in a class of its own. If you admire the look of order and feel of precision, this is definitely your kind of car.

Some Chevrolets are equipped with engines produced by other GM divisions, subsidiaries, or affiliated companies worldwide. See your dealer for details. Some of the equipment shown is available at extra cost.



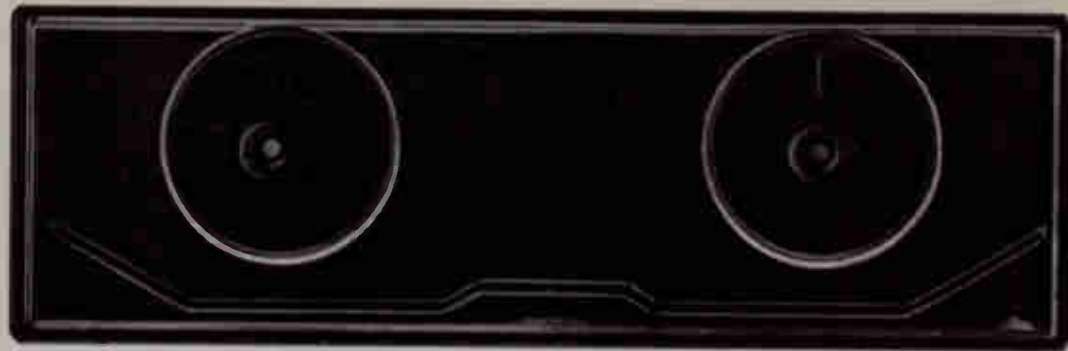
Chevy makes good things happen.



Lease or buy a new Citation X-11 at your Chevrolet dealer today.



Betamax



Beta II/III

▼ OPEN

This is the actual size of the Sony Beta-Pack, the world's first truly portable portable VCR.

The Beta-Pack SL2000. SONY's newest innovation in home video technology. It's light. Weighing in at a mere nine pounds, four ounces. Which means it's the first truly portable portable Betamax video cassette recorder... ever.

So, instead of struggling with bulky VCR units that restrict and constrict, the Beta-Pack allows you to do your videotaping just about anywhere you care to do it. Put it together with the SONY colour video camera and the SONY TT-2000 tuner-timer and you've got the complete home video system. (By the way, you can play back your tapes through any television.)

Of course, the Beta-Pack has all the features of its big brother, the Betamax. BetaScan II gives you full search capabilities at fast, normal and slow speeds in both directions, plus Videola continuous search on both forward and reverse at normal speed, slow motion, frame-by-frame advance and freeze frame for pin-point search accuracy. And a wireless remote control unit. Which makes it pure state-of-the-art SONY.

The Beta-Pack SL2000. SONY's portable Betamax VCR. And when we say portable, we mean portable.



SONY

PORTABLE VIDEOCASSETTE - RECORDER

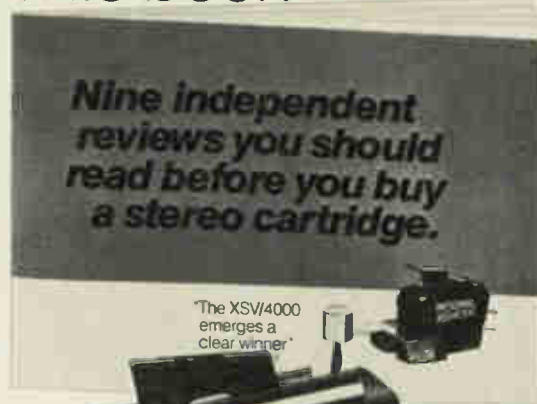
SONY
OF CANADA LTD.
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Listen to the critics.

A manufacturer's enthusiasm about a new cartridge is only natural — the real judgement is made by the experts — the independent critics who evaluate cartridge performance day after day. Listen to what they say about the Pickering **XSV/4000**. "Superb tracking ability." "Excellent channel separation."

"From the price, the **XSV/4000** emerges a clear winner." It's impossible to tell all of the **XSV/4000** story here so we've produced a 16-page book of complete reviews from Stereo Review, High Fidelity, Stereo and other highly regarded publications. Their experience is convincing testimony to the new excitement now available in the **XSV/4000**. This book

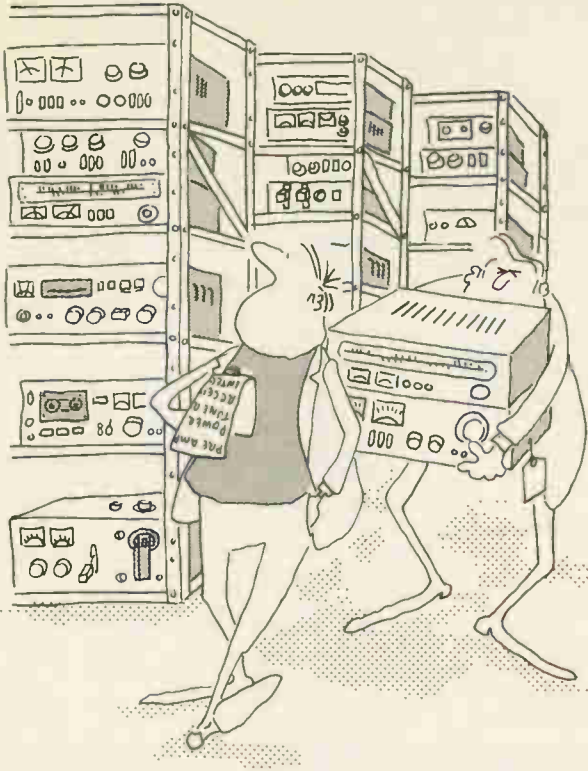
is yours for the asking at your local audio dealer...



THE SOURCE OF PERFECTION



"for those who can hear the difference"



"YOU MAY FIND THAT THE JUNKIER THE EQUIPMENT LOOKS THE BETTER, BUT YOU WILL PROBABLY NOT BE THE ONLY ONE WHO HAS TO LOOK AT IT ALL THE TIME"



parisons. Now comes the time to do a detailed analysis of this selection. The next few points will help you to rate the speakers you select. Simply total the point scores, to get a rough idea which speaker is closest to what you want.

1	
2	
3	

How does each speaker sound? Whatever else may influence your decision, the actual sound of the speaker has to be the ultimate test. For this, you will have to do a lot of listening to your final few, preferably two at a time. All good dealers are set up for this, and should allow you to take as much time as you need to make a final choice. Use your own records, where possible, and see that the speakers are set up in the listening room in an environment as close as possible physically to the way you will set them up at home. Then rate the speakers in rank order.

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How much power will it take to drive each? While not something that has any direct influence on a speaker's sound, its efficiency will determine how much power you will need from your amplifier, particularly if you like high levels, or if your room is very large or very dead acoustically. Unfortunately, speaker manufacturers rate efficiency in different ways, so this test may be tricky. A lot specify the number of

decibels produced by one watt of power, measured at a distance of 1 meter, 90 being about average (remember that an extra 3 dB will take *twice* the power for the same loudness, while a measurement 3 dB lower will need *half* the power). Rank the speakers according to their relative efficiencies, but remember that you shouldn't go for high efficiency at the expense of good sound.

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How much do they cost? You will have already eliminated speakers that are way out of line in this respect, but there will still be considerable variation. Unfortunately, with speakers, price is really no indicator of quality, so if you find a speaker you like, don't reject it just because it may be cheaper than another. Still, price is important, and a ranking of your choices by price will be at least one factor in your final decision.

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Consider looks, brand name, size, and so forth. None of this is really important in a technical sense, but other factors do exist, and should not be ignored. You will have to live with the speakers you choose, so appearance and size do have some importance. A particular brand name can also be a good indicator of a speaker's reliability, depending on the reputation of the manufacturer. If this is important to you, rank the speakers; otherwise, leave the spaces blank.

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Check out the speaker's impedance. Again, this will have little effect on a speaker's sound, but if you have any intention of adding a second pair of speakers (now or later), choosing speakers with too low an impedance could damage your amplifier when you switch in both pairs. Eight ohms is typical, but 4 ohm speakers do exist, and even some nominally 8 ohm units dip to lower impedance over some parts of the spectrum. If you have no intention of adding speakers, ignore this question; otherwise, rank the speakers here.

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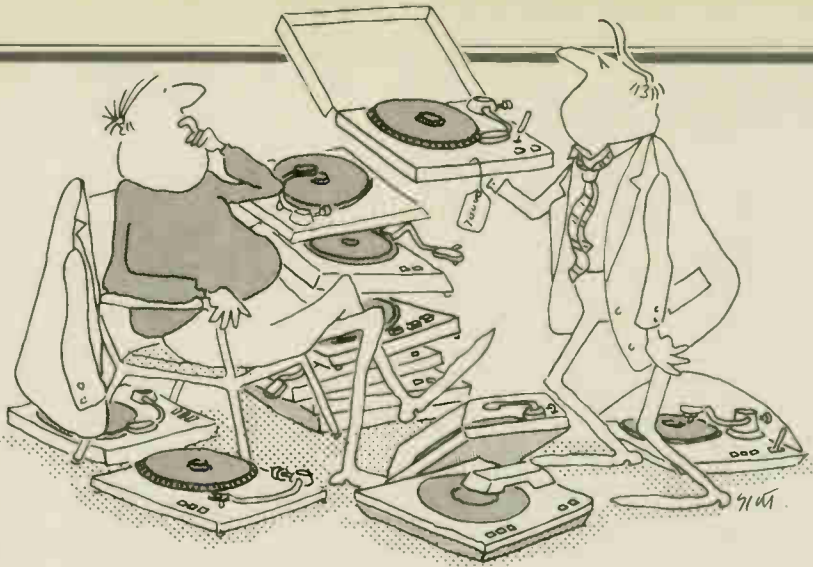
What if they break, or you don't like them? Speakers are pretty hardy, but things go wrong sometimes, so it's a good idea to check out the manufacturer's warranty to make sure you can get them fixed even after a reasonably long period of time. The policy of the store in allowing you to switch to other speakers if the ones you choose don't like your room (it happens) is important too.

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TOTAL SPEAKER RANKINGS

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17 Find something to drive the speakers. The electronics form the heart of the system, and should be chosen with care, whether you want an all-in-one receiver, or separate components. Fortunately, with electronics, price and quality correlate a lot better than they do with, say, speakers. Your peregrinations through the audio shops should



let you narrow it down to a small number of eligible units, which you can evaluate in the next questions.

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2
3

Do a tour of the buttons. Without even turning a piece of electronics on, you can perform a useful evaluation of *what* it will do, if not how well it will do it. Today's equipment is very flexible, but there's no use paying for features you will never use, although they may not add huge amounts to the price. On the other hand, if a unit is missing just one thing that you want, then it's not a good candidate. Things like tape-to-tape dubbing, or pre-out/main-in connections, or multiple speaker outputs should be considered. At right, score each unit a -1 for each feature you will never use.

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Check the power. The single most important thing to consider with an amplifier, whether it's on its own or incorporated into a receiver, is the amount of power it has to drive the speakers. This will depend a lot on the speakers chosen—the more efficient the speakers, the fewer the watts the amp will have to supply. Once you find out the general range of power you need (your dealer should be able to help), then price becomes the main consideration. A "dollars-per-watt" rating can be useful here. Simply divide the number of watts the unit is rated to put out into the price you will have to pay, and enter the result here.

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How convenient is it to use? All those knobs and buttons may be impressive, but if they are not set out logically then the unit may end up driving you nuts. Take the time to play with the equipment in the store, putting it through

all its paces. Rank your final selection in terms of ease of operation.

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Don't ignore how it looks. You may find that the junkier or more "technical" the equipment looks, the better, but you will probably not be the only one who has to look at it all the time, so bear this in mind. Also, things like a well known brand name can be important to some, both for purposes of impressing your friends and (more importantly) as an assurance of reliability. In most cases, you will have made these decisions when coming up with your short list, but if there is still any lingering doubt, rank the units according to preference.

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What happens if things go wrong? Electronics are remarkably reliable these days, but sometimes they do break. Check things like the manufacturer's warranty—score one point for each year that it exceeds the dealer's own warranty, if any. Find out if the manufacturer has service facilities in your city; if not, you could be in for a long wait if anything goes wrong. Score a point if you can get it fixed locally. Score another if the unit has built-in speaker protection—there's no point in blowing the speakers as well.

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TOTAL ELECTRONICS RANKINGS

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18 Pick a turntable. Most audiophiles use records as the major source of program material, so this component should be chosen with care. Fortunately, it is possible to get some very good record-playing equipment for very little money with a little care. Most of the real variation from turntable to turntable exists in the high-price bracket, so you may be able to eliminate this factor at the outset. The main consideration will thus be on

the basis of the features offered: consider your requirements, and decide whether you need a fully-automatic table, a semi-auto, or a pure manual.

19 Check out the cartridge. Many turntables come supplied with a phono cartridge already mounted, either by the manufacturer or the dealer. This may be a good bargain, but it may also be a liability if the cartridge is of less than top quality. First find out what it is, and then consider replacing it with a better model. Within reason, you can't have too good a cartridge, and you should consider over-buying in this area. You may eventually upgrade your system, and the records you preserve today by use of a good cartridge will repay your investment then.

20 Is it convenient to operate? The turntable is the part of your system that you will actively operate most often, so it's worth making sure that your fumble-fingers are not going to end up destroying your records. Front panel-controls, efficient cueing devices, and the like are worth considering.

21 Listen for squawks, thumps, and other noises. Even modest turntables boast very respectable performance in the areas of speed stability (wow and flutter) and mechanical noise (rumble), but that doesn't mean you should ignore these factors altogether. Piano records are particularly good for checking speed regularity—if a classical piano sounds a touch on the honky-tonk side, you've got flutter. Rumble can often be heard in the silent grooves of a record, although this may depend on the speakers you are using. Also, if you must put your turntable near your speakers, or if you intend to do a lot of dancing close to your system, make sure the turntable you choose has sufficient mechanical isolation.

22 What about warranty? Turntables are mechanical devices, and they can break. As with the other components, therefore, check out your remedies for a broken unit, in terms of provisions by both the manufacturer and dealer.

23 Do your records a favour. Make sure you purchase an adequate means of record care along with your turntable, and *always* use it. There are a lot of such products on the market, but you should have some sort of record-cleaning brush, and something to remove static if budget permits. As a general rule, so-called anti-static cloths, and anything else that leaves a deposit on the record, should be avoided. A brush that tracks the record and cleans it as it plays is also a good idea.

24 What about tape? More and more first-time systems are including some means of tape recording, and this usually means a cassette deck. The first thing to do is to decide whether or not you want tape capability or not, but bear in mind that even if you

"RESISTING AN IMPULSE PURCHASE MAY BE HARDER THAN YOU THINK—AUDIO SALESMEN ARE A PERSISTENT BREED"

decide not to include it now, you may want to in the future, so your system should accommodate it.

25 **Buttons and knobs.** Today's cassette decks offer a bewildering variety of features so, as with other components, you should make sure that the one you choose will do all you want, and not much more—all those functions cost money. Things like input mixing, extra noise reduction systems, off-the-tape monitoring, and so forth are useful in their place, but not everybody needs them. Some features, like metal tape capability, are now almost standard, so you may have no choice in the matter. But don't necessarily reject a unit with such a feature simply because you have no need for it now—think of what you might want in the future.

26 **What tape should you use?** The biggest single hazard in using a tape deck is a mismatch between the machine and the tape. This has very little to do with the real quality of either, but any machine is adjusted for one particular type of tape, and that is what should be used. If you can find out exactly what tape the unit is set up for, or if the store will adjust the machine for the tape you want to use, fine. Otherwise, you should consider buying a machine that allows you to fine-tune it to any tape. This may cost a few extra bucks, but it will improve your recordings immeasurably, especially if you already have a lot of tape that you will want to re-record in the future.

27 **How does it perform.** Even quite inexpensive recorders perform well these days, but you should still be sensitive to the possible problem areas. Wow and flutter can be checked in the same way as with turntables, and noise (hiss) can usually be evaluated simply by listening in quiet passages for that "rushing water" sound. Within a given price range, however, you are unlikely to find a great deal of variation from machine to machine.

28 **How do you make it work?** As important as the choice of machine is the technique you will use when you get it home. It is distressingly easy to make lousy recordings on very good machines; it is also simple to make good recordings on modest machines, if you know what you are doing. The owner's manual can give some valuable tips on making good recordings, and several of the tape companies have put out useful guides as well. The main ingredient, however, is *practice*. Do a lot of recording at first, to find out the particular wrinkles of your machine.

By now, you will have made your choices, held your breath, and shelled out the cash for *your* audio system. You don't need any encouragement to get it all home right away and set it up. Don't rush it though. You'll thank us if you follow these steps.

29 **Read the instruction manuals.** It's not all that complicated a job, but doing it the right way requires care and attention. The manufacturers go to a lot of trouble to make it as foolproof and straightforward as possible. Don't short-circuit their efforts by plunging in unadvised. The finickiest part of the process is setting up the cartridge. If you're a novice, you should let the dealer do that bit for you. When you're finished, put the manuals away carefully. You *will* need to refer to them again.

30 **Unpack the components and save all packaging materials and boxes.** If you ever move, this will save you endless frustration and possible damage to your system.

31 **Make all the connections.** Start with the speakers and work backwards to the receiver (or preamp, amp, and tuner), leaving the turntable until last, and following the instructions explicitly. Check the connections before you plug in the amp.

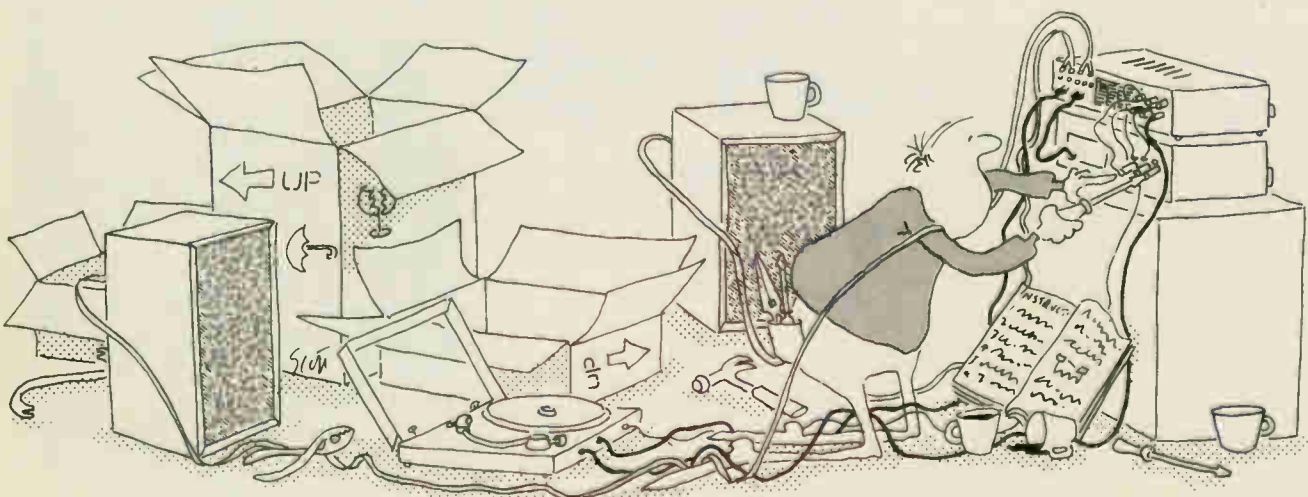
32 **Hook up the FM antenna.** Don't be satisfied with the first place you put it (this goes for the speakers and other components too). There may be a better spot, so move it around and experiment with the results.

33 **Try all the functions.** There are some you may not use for some time—perhaps not until it's too late for the store to pick up the faulty unit and fix or replace it. So find out early whether your system will deliver all the talents you've paid for.

34 **Listen for gremlins.** Incorrect speaker phasing, hum, and acoustic feedback are pretty obvious problems you should solve right away. Inadequate bass and a vague centre image in stereo may indicate that you have hooked up your speakers out of phase. Reverse one set of wires at the terminals on one speaker and see if the sound improves. Hum may be the result of an insecure connection. Make sure they're tight. Move the turntable to see if you can eliminate the howling of acoustic feedback.

35 **Use a record cleaner.** It really pays to protect your record collection with the modest investment for a brush, or roller, or other device and the time and effort required to keep up the habit every time you play a disc.

36 **Send in the warranty cards.** You may think this is it. Well, it's only the beginning. If you get bitten by the audio bug you will find yourself haunting audio stores, reading magazines like this one avidly, buying accessories from simple headphones to complex signal processors to enhance your system, and trading up to better and better components in the pursuit of the ultimate system. If audio keeps improving at its recent rate you may never attain that goal. But the glory is in the chase and the enjoyment of audio brings its own rewards. ■



GILMOUR'S ALBUMS

CLYDE GILMOUR

Bach: *Magnificat* Also Mozart: "Coronation" Mass in C, K. 317—Berlin Philharmonic Orchestra under Herbert von Karajan, with soloists, Berlin Opera Chorus or Wiener Singverein (*Deutsche Grammophon 2531 342*).

Christmas is by no means the only appropriate season for this superb album of sacred music from the 18th century. Each performance was previously available in another coupling; but the sound is, if anything, even richer and clearer in this new manifestation. Both sessions were engineered by the estimable Günter Hermanns, whose name is one of DG's many high-quality trademarks. Maestro Karajan pays full homage to each work's spiritual message without ever falling back into the Victorian sanctimony that used to surround such music.

The excellent soloists are soprano Anna Tomowa-Sintow and alto Agnes Baltsa in both pieces, tenor Peter Schreier and baritone Benjamin Luxon in the Bach, and tenor Werner Krenn and bass José van Dam in the Mozart.

Rimsky-Korsakov: *Scheherazade*—Winnipeg Symphony Orchestra under Piero Gamba with Arthur Polson, solo violin (*CBC SM 5005*).

Over-exposure never seems to diminish the popularity of dear old Rimsky's package of Arabian Nights fables for orchestra. *Scheherazade* always has between twenty and thirty entries in the Schwann catalogue. Now comes a splendid Canadian competitor, a souvenir of the controversial Gamba's era as Winnipeg's resident maestro before he left abruptly in 1980.

This is one of the Canadian Broadcasting Corporation's second series of SM 5000 albums utilizing quality-control procedures far beyond the earlier CBC standard. The others are Dvorák's *New World Symphony* by the Toronto Symphony under Andrew Davis (SM 5007), Beethoven's *Pastoral Symphony* by the National Arts Centre Orchestra under

Mario Bernardi (SM 5008), and Tchaikovsky's *Fourth Symphony* by the Vancouver Symphony under Kazuyoshi Akiyama (SM 5006). A bit of surface noise on Side Two of the Tchaikovsky is the only flaw on my review copies.

Chopin: *Piano Concerto No. 1* in E minor—Emanuel Ax, piano, with the Philadelphia Orchestra under Eugene Ormandy (*RCA digital ATC 1-4097*). **Beethoven:** "Appassionata" Sonata No. 23 in F minor, "Les Adieux" Sonata No. 26 in E-flat, *Polonaise in C*—Emanuel Ax (*RCA ARL 1-2752*).

These are the two newest demonstrations of the formidable talent of a 32-year-old Ukrainian-born pianist who took his first formal lessons in Winnipeg before the family moved to New York in 1961. There he studied at Juilliard and made the headlines as a competition winner in Israel in '73. Technical hazards are no problem to him; moreover, Ax is a musician with real poetry in his soul.

The analog Beethoven disc is almost as sonically impressive as the digital Chopin. On the latter, a wisp of initial-groove messiness detracts for a few seconds from the otherwise immaculate processing.



Bizet: *L'Arlésienne Suites No. 1 and No. 2*, also *Jeux d'Enfants*—Toronto Symphony under Andrew Davis (*CBS digital IM 36713*).

God knows there's nothing highbrow about the charming music in these grooves, but for some unimaginable reason the deep thinkers at CBS have made it look off-putting by offering an untypical front-cover photo of conductor Davis

that makes him seem prim, pompous, and fussily academic. Inasmuch as the 37-year-old Englishman is well known to be a good-humoured fellow who often jokes with his musicians, a jollier portrait would have been a wiser merchandising choice.

Photographic matters aside, this fine-sounding digital disc is an enjoyable traversal of orchestral pieces by the composer of *Carmen*. Davis and the TS are both in fine form.

Berlioz: *Requiem*—Choir and Orchestra of Paris under Daniel Barenboim, with tenor solo by Plácido Domingo in the Sanctus (*DG 2707 119, two-record set*).

Giuseppe di Stefano

NEAPOLITAN SERENADE
22 favorite songs

Orchestra conducted by
Dino Olivieri



Andrew Davis

It takes an hour and a half to absorb the many wonders of this remarkable score. Conductor Barenboim's choral and orchestral forces nobly meet the challenge, and the reproduction is so lifelike that we keep expecting to see the word "digital" on the front cover. (We don't.) Although the work is renowned for its occasional thunderations, some of its finest moments are filled with a spellbound hush.

Domingo is in sovereign voice in the "Sanctus", even if at times he sounds more like a man giving orders than praising the Lord of Hosts.

Among rival versions still available, one of the best is the old RCA set with Charles Münch and the Canadian tenor Léopold Simoneau. The catalogue number is VICS-6043.

decline, a matter of deep regret to his admirers on several continents. The fact is that the impetuous Sicilian was in top voice not much more than ten years before strain and roughness marred the silken beauty of his sound. His age is sixty this year and he is still singing, but the glory is gone.

Let me hastily add, however, that di Stefano could still suavely handle heart-felt Italian ballads when these reissued recordings were made. The singer and his material are well matched. The familiar titles range from "O Sole Mio" to "Santa Lucia", from "Torna a Surriento" to "Maria, Mari". The sound is juicy all the way.

Double-Bass Concertos: Ludwig Streicher in music by Bottesini, Dragonetti, and Dittersdorf—with Munich Chamber Orchestra under Hans Stadlmair (*Telefunken 6.42621 AW*).

Ludwig Streicher, 60, is a big beefy man but the instrument he plays is even bigger than he is, although he can carry it on one shoulder through his home-town Vienna streets. Despite its size, however, the double-bass in his hands becomes an agile and lyrical music-maker, not merely the sonorous "grandfather" of orchestral strings.

The soloist displays effortless virtuosity in well-varied pieces by three 18th- and 19th-century composers who honoured the double-bass and knew how to write for it. I'm especially captivated by a sixteen-minute concerto composed by Italy's Giovanni Bottesini, a Parma worthy who conducted the first performance of Verdi's "Aida". The disc's sonics are fine, and Stadlmair and his Munich ensemble make a substantial contribution. Highly recommended for collectors with a taste for the unusual.

Rich Little Narrates: Peter and the Wolf and Babar the Elephant, with the Toronto Symphony under Boris Brott (*CBC CH-001*).

Hollywood's Ottawa-born king of the comic impersonators puts his own stamp on Prokofiev's orchestral fairy-tale by spinning the yarn in the drawling voice of Jimmy Stewart. In addition, the voices of supporting characters are supplied by Little's adroit simulations of Paul Lynde, Carol Channing, Kirk Douglas, Walter

Brennan, Jackie Gleason, and Johnny Carson. This English version was written by Nelly Rieu.

Overaside, Little-as-Cary-Grant narrates *Babar the Elephant*, not quite so convincingly as the Stewart job. The other voices are the Little sound-alikes of Jack Benny, Jonathan Winters, and George Burns. The amiable disc seems to be aimed mostly at the kiddie market, and bids fair to prosper in that field.

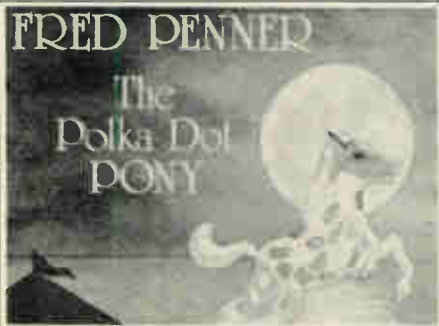
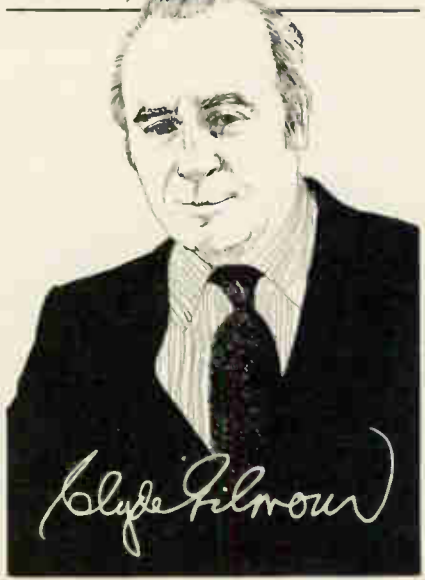
The Polka Dot Pony: Fred Penner in 12 songs for children (*Troubadour TR-0020*). Junior Jug Band!: Chris & Ken Whiteley in a joyful collection of songs for children (*Troubadour TR-0018*).

With any luck, both these Canadian albums will be opened on Christmas morning by a lot of gift-rapt youngsters, and my hunch is that few of them will be disappointed.

Winnipeg's Fred Penner is a youngish old hand at entertaining children. Chris and Ken Whiteley, American-born, grew up in Toronto. They all applaudably refrain from cutesie condescension in dealing with juveniles, and as a result their work can be enjoyed by grown-ups too. My own favorites are the Whiteleys' "Barn Yard Dance" and Penner's "Li'l Liza Jane".

Both albums are sturdily bound to stand up under rough handling, and all the words are provided. Jolly Noël!

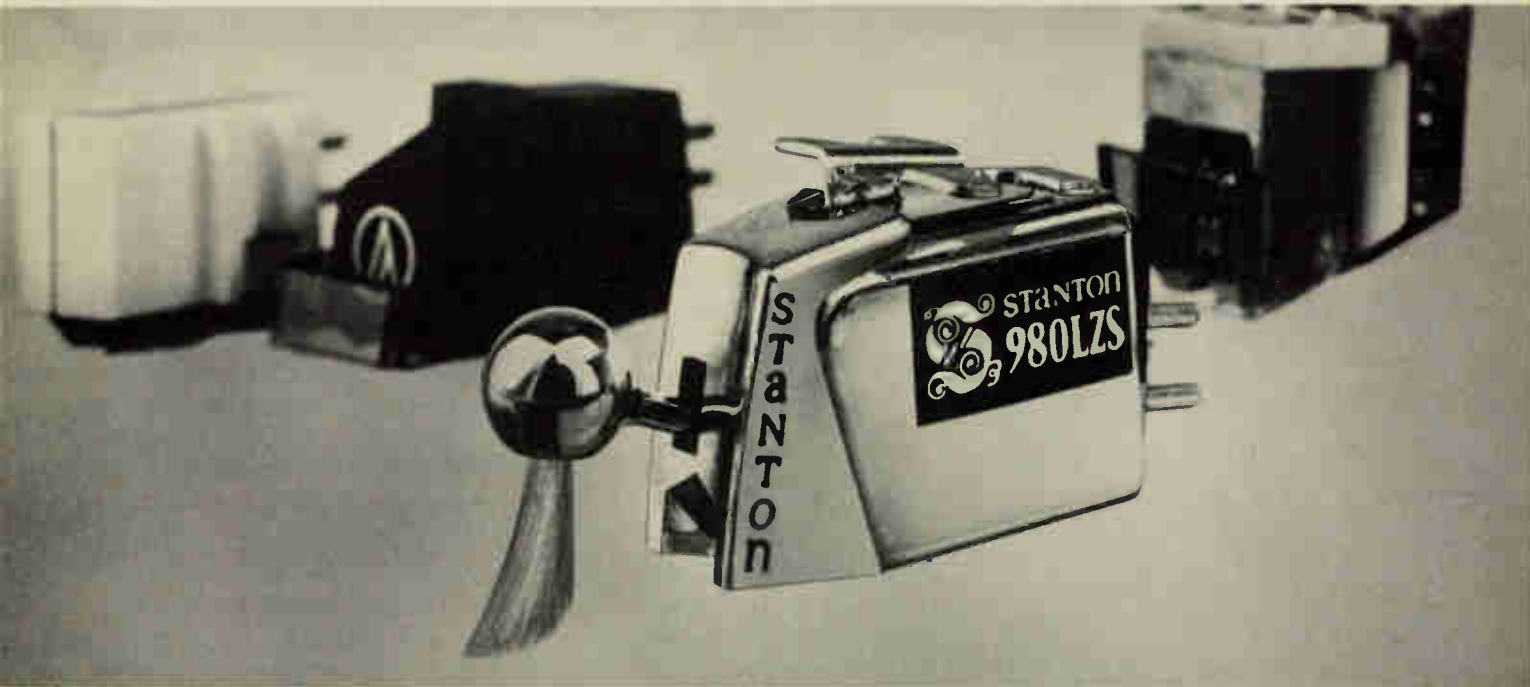
(Clyde Gilmour is a columnist for The Toronto Star. His record program, Gilmour's Albums, is heard every week on CBC radio, both AM and FM.)



Giuseppe di Stefano: Neapolitan Serenade—22 Italian songs with orchestra under Dino Olivieri (*EMI Angel ZB-3913, two-record set*).

The ecstatic but anonymous liner notes are tactfully silent on the well-known subject of tenor di Stefano's early vocal

The moving coil replacement from Stanton Magnetics... the revolutionary 980LZS!



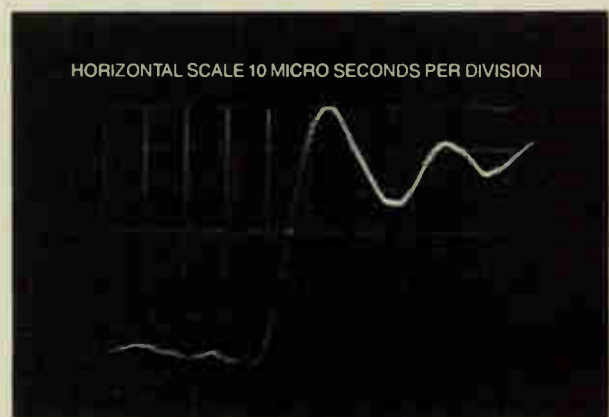
Now from the company to whom the professionals look for setting standards in audio equipment comes a spectacular new cartridge concept. A low impedance pickup that offers all the advantages of a moving magnet cartridge without the disadvantages of the moving coil pickup. At the same time it offers exceedingly fast rise time—less than 10 micro seconds—resulting in dramatic new crispness in sound reproduction—a new "openness" surpassing that of even the best of moving coil designs. The 980LZS incorporates very low dynamic tip mass (0.2 mg.) with extremely high compliance for superb tracking. It tracks the most demanding of the new so called "test" digitally mastered and direct cut recordings with ease and smoothness at 1 gram.

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the great sound characteristics of cleanliness and frequency response long associated with fine moving magnet assemblies.

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Actual unretouched oscilloscope photograph showing rise time of 980LZS using CBS STR112 record.



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POP ROCK

JIM SMITH MUSIC EDITOR

This month we find that Bob Dylan's journey to Damascus continues. Like a modern-day Paul, Dylan continues his pursuit of Jesus in the face of formidable opposition. *Slow Train Coming*, his first flirtation with the word of the Lord, managed to alienate even those previously steadfast, hard-core fans who had remained loyal during the dreariest moments of *Dylan*, *Self Portrait*, and *Planet Waves*. You may also recall that when we left the former Mr. Zimmerman, he was busily buying back all copies of *Saved*, his second recorded excursion into born-again Christian evangelism and one of the few artistic disasters of our time to rival his own filmic Waterloo, *Renaldo and Clara*. Indeed, one began to suspect the man of glorying in his own martyrdom.

The Christian road is not easily trav-



elled in the popular music business, even for an icon such as Dylan. Perhaps, in this era of power-hungry evangelism of the Moral Majority type, the journey poses insurmountable barriers to understanding. Certainly the initial critical response to Dylan's third collection of Jesus songs, *Shot of Love*, has been more savage than anything I've encountered since the debut of the Sex Pistols. The reviewers' hostility, coupled with unhappy memories of the *Saved* fiasco, almost convinced me that *Shot* should not cross my turntable.

Well, one man's Big Mac is another man's filet mignon and, to my ears, *Shot of Love* is the strongest Dylan since *Desire*—and a full notch above *Street Legal*, a recording that received respectable marks from the critical fraternity. It is, in particular, an album that makes a potent personal statement expressed with total integrity—exactly the sort of passion that won Dylan his initial following. Moreover, it is a technically accomplished album that finds Dylan working with musicians of a stellar quality not heard on his sessions since the Woodstock days.

Integrity is the key issue here. Dylan, after all, is no charlatan. Regardless of whether one agrees with his views (and I have disagreed equally with his far-left political dissent of the Sixties and his current "Jesus saves" singlemindedness), he has always had the courage to go with his convictions. Rock-and-roll lyrics have seldom mattered much to me (with few exceptions, they are merely overwrought philosophies expressed by people with limited experience of the world). I seek out well-crafted melodies and regard the voice as nothing more (or less) than a highly personalized instrument. And the melodies on *Shot of Love*, while well shy of vintage Dylan, competently cover the gamut from heartfelt gospel to solid rock and hard-edged ballads.

The problem with the younger critics, perhaps, is their failure to appreciate the cultural environment that Dylan emerged from. Religious music has long been an accepted medium for rock-and-rollers, bluesmen, and country singers. Elvis regularly recorded gospel albums with the Jordanaires, as did (and does) Dylan's friend and inspiration Johnny Cash and almost every other musician who ever made camp in Nashville. The attraction for Dylan—his Jewish heritage notwithstanding—should be obvious.

Dylan once spoke to a generation that would have walked barefoot across hot coals to hear his work. But times and Dylan have changed. Perhaps he will never again have a socio-political philosophy as in tune with the times as "Blowin' in the Wind" was with the Sixties. But anyone who fails to recognize and respect the new fires that burn within Dylan lacks appreciation of honest human emotion.

Dylan's influence on contemporary music remains strong, despite his personal lack of commercial power. So, coinciding with the spiritual *Shot of Love*, along comes an album influenced by a totally secular side of Dylan. This more worldly bit of Dylan, *1234*, was created by Ron Wood, newest of the Rolling Stones, by way of the Faces.

Wood has long been an artist on the fringe of public acceptance. Despite his significant roles in bands of no small consequence, his personal popularity has never begun to rival that of the communal projects in which his talents have been employed. The reason, as *1234* demonstrates, would seem to be Wood's own lack of distinctive character.

Wood looks rather like Keith Richard. He arranges like the Rolling Stones. And he sings, on Side One, like Dylan, and, on

Side Two, like his old partner in the Faces, Rod Stewart.

1234 finds Wood working with such long-standing associates as Nicky Hopkins, Bobby Womack, Jim Keltner, Bobby Keys, Ian McLagan, and Charlie Watts. Not surprisingly, then, the sound is attractively brash, energetic, and raw, not unlike the best of the Stones or the Faces. What separates it from greatness, then, is the vocal focus that Mick Jagger or Rod Stewart could have contributed.

I led off with analysis of Dylan and Wood this month, not because either album can claim to be of special interest, but rather because examination of the failings in each makes it easier to appreciate the craftsmanship behind *Time*, the latest from Jeff Lynne's Electric Light Orchestra.

ELO owns all the ingredients of success, not the least being tradition. Some years after the Beatles moved away from grandly orchestrated cosmic statements after the mixed success of *Magical Mystery Tour*, the void was filled by the Jeff Lynne, Bev Bevan, Roy Wood ELO trio that evolved out of the Move. As Wood, the leading force, had realized right from the start, the concept was commercially viable. But Wood was not able to realize his dream, and a disappointing debut album resulted in his departure. Lynne took over and the pieces fell into place. By *ELO II*, the pattern of recurring orchestral themes tying together alternating lavishly-produced ballads and equally lavish rockers had been established. Subsequent albums would contain regular instrumental cross-references to previous works, a trick that allowed new efforts to carry an instant sense of satisfying familiarity to the listener.

Time finds ELO up to the same old tricks: lushly overwrought ballads, flashy

Bob Dylan, *Shot of Love* (Columbia TCX 37496)

Ron Wood, *1234* (Epic FC 37473)

ELO, *Time* (Jet FZX 37371)

Jon and Vangelis, *The Friends of Mr. Cairo* (Polydor PID-1-6326)

The Kings, *Amazon Beach* (Elektra XSE-543)

Pablo Cruise, *Reflector* (A & M SP-3726)

Little Feat, *Hoy-Hoy* (Warner Bros. 2BSK 3538; double record set)

Jim Byrnes, *Burning* (Polydor PDS-1-6321)

Matchbox, *Midnight Dynamos* (MCA 5246)

The Shakin' Pyramids, *Skin 'Em Up* (Virgin VL2217)

rockers, wall-to-wall sound, and vast amounts of electronic gimmickry—Lynne rolls out every cheap production technique from the Phil Spector handbook. Munich's Musicland Studios evidently offered special rates on echo, allowing Lynne the economic freedom to throw good taste to the winds. As in previous ELO releases, the grooves are filled with a string session that would make Mantovani jealous.

It is generally assumed that a Spectorish wall of sound is easily achieved. Not true. The trick is to ensure that the music itself survives the onslaught of technology. Todd Rundgren, for example, successfully employed the Spector approach with Meatloaf's *Bat Out of Hell*, but has failed miserably when applying the same techniques to his own recordings. And one should never forget that Spector himself was responsible for the least attractive of the Beatles albums, the jumbled *Let It Be*. Thus, Lynne's continuing ability to walk the line between aural sensationalism and orchestral clutter testifies to his underlying musical strengths.

Among those strengths, one finds an impeccable sense of melody. *Time* is one of the few albums of recent years that sends the listener away humming melodies. The melodies are augmented by skillful harmonies and intricate instrumental arrangements that lay surprise over surprise. This is an album that offers new experiences on each play. And, as in preceding ELO sessions, the use of interwoven themes and variations results in a sense of unity that has not been apparent since New Wave made ambition a pejorative word in modern music. In sum, no other group endeavour has ever boasted such unswerving sense of direction.

Time has not yet yielded a hit single for Lynne and company. If anyone is looking for a hit, however, I recommend the final vocal track, a no-holds-barred rocker titled "Hold On Tight" which features the best Johnny Burnett imitation these ears have ever heard.

Since the departure of Roy Wood, ELO has undergone numerous personnel changes that have brought the group to its current four-man complement: guitars, drums, bass, and synthesizers. The studio is the fifth member of that quartet. In the case of Jon Anderson and Vangelis, however, the studio is the entire act.

Anderson, former singer with Yes, went from the group environment to record solo albums. Solo in the purest sense: he alone contributed all vocals and instrumentals. The Greek-born Vangelis was

involved in similar pursuits. Although I found their individual efforts sterile and the multi-textured layering no compensation for the absence of any outstanding performances, both artists achieved a small measure of commercial acceptance. This, in turn, led them to record together.

The Friends of Mr. Cairo the latest joint effort from the duo (who now label themselves "Jon and Vangelis"), shows that the outcome of any union may be the magnification of the partners' limitations rather than the emergence of new strengths. Under the terms of their partnership, Anderson handles the vocals while Vangelis appropriates the instrumentals. Each strives to be more important to the project than the other—Anderson by spewing out interminable verbiage, Vangelis by cranking his keyboards up to full throttle. *Mr. Cairo*, which features some of the wordiest songs



ever committed to vinyl, is yet another series of synthesized doodlings that meander without obvious sense of purpose or direction. Vangelis's repetitive synthesizer programming—first cousin to the infamous Rhythm Ace—is most offensive. By the end of Side One, the absence of humanity, spontaneity, or impact in his work was almost too much to bear. By the end of Side Two, it was too much to bear. Even the interesting vocal work on the title track can't salvage this project.

I had been anticipating with high hopes the Kings' *Amazon Beach*, the follow-up to their impressive debut release, *The Kings Are Here*. The wonderful "This Beat Goes On/Switching to Glide" track on the first album led me to hope Canada would at last have a first rate rock-and-roll band to fill the gap left by the Guess Who almost a decade ago.

On that first album, the Kings displayed a formidable list of strengths, including an ingratiating and distinctive vo-

cal manner; enough energy to replace a hydro-electric generating station; an effectively upretentious instrumental style (are you paying attention to this, Vangelis?); a brilliant producer—Toronto's Bob Ezrin; and a collection of excellent songs.

Amazon Beach retains all the strengths listed above except the strong songs. Thus, while the material may be a notch above much of what is found on vinyl today, it is not good enough or original enough to fill the Guess Who's shoes. The all-important hooks are missing, forcing Ezrin to attempt to compensate with studio games. Maybe the only producer extant who is always better than his artists, Ezrin does his best to compensate for these compositional shortcomings by serving up an encyclopaedia of studio tricks, but never manages to overcome the limpness in the material.

Much the same sort of problem afflicts California's Pablo Cruise. Originally a quartet, the group is now a quintet with bassist John Pierce replacing Bud Cockrell and the addition of second guitarist Angelo Rossi. After three sturdy but unspectacular efforts, the band scored a hit single in 1978 with "Love Will Find a Way" and seemed—like the Kings—ready to make a quantum leap forward. Instead it has floundered.

Reflector, an astounding technical accomplishment, once again reveals the band as a pedestrian group of writers kept afloat by superior instrumental abilities, particularly on the part of guitarist/lead vocalist David Jenkins.

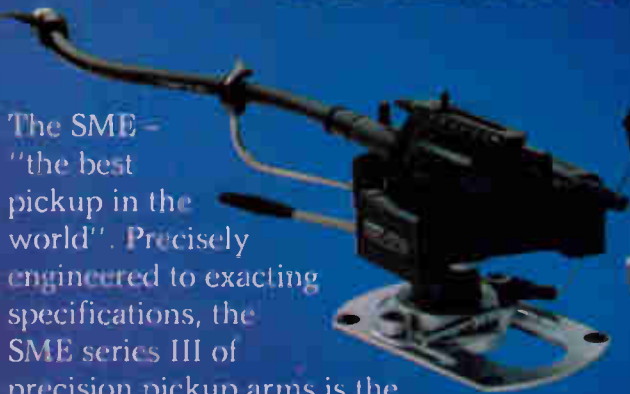
The man behind *Reflector* is veteran producer Tom Dowd, now in his thirty-third year at the console after starting in 1948 with Joe Turner and subsequently handling Ray Charles's finest efforts. Faced with the problem of making a silk purse out of a sow's ear, Dowd has truly outdone himself with Pablo Cruise. Every note comes surging through and the dynamics are nothing short of exquisite. The entire album has been arranged around Jenkin's guitar and he doesn't let the side down. Just as with the Kings, stronger material would have brought about a memorable album. Instead, it's just another waste of the record company's money.

A record that hits the bullseye is *Hoy Hoy*, yet another retrospective from the late Lowell George's group, Little Feat. An unusual collection, this one consists of three previously-released songs ("Forty-Four Blues", "Strawberry Feats", and "Easy to Slip", all from the band's early

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days); some live tracks; some unreleased tracks; and two new songs, recorded earlier this year at a Lowell George memorial concert. But the uniqueness of the repertoire serves the band well.

The live tracks, for example, are so strong that one can only wonder why there have been few Little Feat live albums. The studio sessions could have been released at the time they were recorded and served the band well. But the most interesting parts of the repertoire are the two new tracks. Bill Payne's "Gringo" is a sensational, jazzy rocker

featuring spellbinding sax work by David Sanborn. And "Over the Edge", a Paul Barrère song, is a heavy rocker more in tune with Lowell George's own taste. On a scale of ten, I would give this album an eleven.

Finally, a few words about the continuing fascination with the past for the new generation of musicians. Jim Byrnes has put together a solid, driving all-Canadian rhythm-and-blues band that would do credit to the Stax-Volt tradition. Indeed, *Burning*, Byrnes's first release, is one of the best-recorded soul albums in years. The limiting factor, unfortunately, is Byrnes himself. Though he tries hard and clearly relates well to the material, he doesn't have the vocal power that rhythm-and-blues demands—a limitation that becomes evident on a remake of Sam and Dave's "You Don't Know" that kicks off the first side. The album has a happy feel and the session is much more than competent, but it never meets the expectations created by the material.

While soul revivalists such as Byrnes remain relatively rare, a veritable flood of rockabilly resurrectionists has descended on us. These are all young artists (generally from the U K) possessing almost slavish devotion to recreating the exact sound of early rock-and-roll. The problem is that, unlike Ry Cooder, who provides a contemporary finish to old songs, these are imitators rather than innovators. Matchbox's *Midnight Dynamos* and the Shakin' Pyramids *Skin 'Em Up* are technically competent and true to their chosen genre but good intentions are not necessarily the equivalent of good listening. ■

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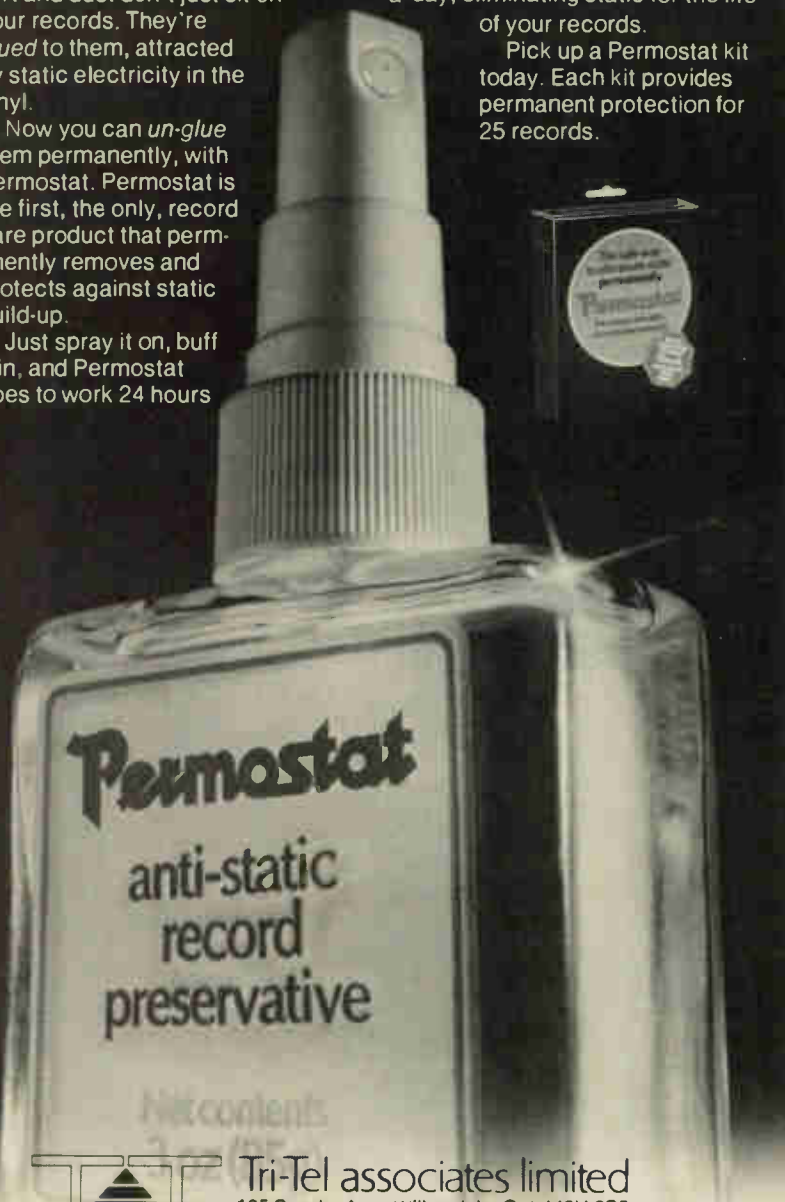
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(Stereo Review July, 1981)

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WARREN SORENSEN

Observance of Béla Bartók's centenary this year, after getting off to a slow start so far as record releases are concerned, is ending with an embarrassment of riches that threatens to spill over into 1982—the commemorative territory of Stravinsky, Kodály, Grainger, and others. All aspects of Bartók's work are represented this month, from piano to chamber music to symphonic pieces, and with a number of fine record-

of 153 piano pieces, arranged in order of progressively greater difficulty from simple melodies suitable for children to virtuoso puzzles of the utmost sophistication and complexity. The influence of Hungarian folk music, as in so much of Bartók, is never absent for long—especially in the strong rhythmic pulse. This complete recording by Homero Francesch is a fascinating experience, but both the scale of the work and the size of the investment required for this album will serve to limit interest to those especially committed to Bartók or the piano.

An item of more general appeal—except to those looking for good, modern

lence—all those qualities that some still claim to be the exclusive preserve of musicians of the Western World. The emotional contrasts inherent in, for example, the *2nd Quartet* are memorably presented, the lyric beauty of the outer movements closing and heightening the violence of the highly percussive *scherzo*. In every aspect of engineering and manufacture this is a model production, ideally matching the musical contents. All in all, this has to be one of the treasures of Bartók year.

Until this month I'd have said that Bartók's orchestral works hadn't received their due. Early in the year there were some welcome appearances and reappearances of recordings by Antal Dorati, but little since. Now, London Records have announced a digital recording by Sir Georg Solti and the Chicago Symphony. But even before the appearance of that project, it appears to have been effectively scooped by the release of a whole series of digital recordings of Bartók from a surprising new source: Toronto-based Sefel Records and the young Hungarian *émigré* conductor, Arpad Joó. A total of five albums are involved, surveying almost all of Bartók's symphonic output, from the Straussian *Kossuth* of 1903 to the brilliant *Concerto for Orchestra* of 1943. I am very impressed with the results, especially with the lovely naturalness of orchestral sound which producer Brian Culverhouse captured with his digital machinery. The warm, rather resonant acoustic is very consistent from disc to disc—perhaps too consistent, for while this is a very sympathetic ambience for the lush scores of the young Bartók, I think a slightly dryer sound suits the sharper focus and concentration of, say, the *Concerto for Orchestra*.

That is but a tiny quibble in the face of

Rimsky-Korsakov, *Scheherazade Op. 35*, conducted by Piero Gamba, Winnipeg Symphony (CBC SM-5005 available by mail from CBC Merchandising, Box 500, Station A, Toronto, Ontario, M5W 1E6)

Tchaikovsky, *Symphony No. 4 in F minor Op. 36*, conducted by Kazuyoshi Akiyama, Vancouver Symphony (CBC SM-5006)

Beethoven, *Symphony No. 6 in F major Op. 68 "Pastorale"*, conducted by Mario Bernardi, National Arts Centre Orchestra (CBC SM-5008)

Dvorák, *Symphony No. 9 in E minor Op. 95 "From the New World"*, conducted by Andrew Davis, Toronto Symphony (CBC SM-5007)

Bizet, *L'Arlésienne Suites Nos. 1 and 2, Jeux d'enfants Op. 22*, conducted by Andrew Davis, Toronto Symphony (CBC Mastersound digital IM-36713)



ings released earlier in the year, are more than enough to declare Bartók year a success.

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Bartók, *Mikrokosmos*, Homero Francesch, piano (Deutsche Grammophon 3 LPs 2740239)

String Quartets Nos. 1-6, Tokyo String Quartet (DG 3 LPs 2740240)

Sonata No. 1 for Violin and Piano (1921), Fifteen Hungarian Peasant Songs for Piano (1917), Sviatoslav Richter, piano; David Oistrakh, violin (CBS Masterworks M-36712)

Kossuth Symphonic Poem (1903), Four Pieces for Orchestra Op. 12, conducted by Arpad Joó, Budapest Symphony and Budapest Philharmonic (Sefel digital SEFD-5005)

Concerto for Orchestra (1943), conducted by Arpad Joó, Budapest Symphony (Sefel digital SEFD-5009)

Suite No. 2 Op. 4, Two Pictures Op. 10, conducted by Arpad Joó, Budapest Philharmonic (Sefel digital SEFD-5007)

The Miraculous Mandarin Concert Suite (1919), Dance Suite (1923), conducted by Arpad Joó, Budapest Philharmonic (Sefel digital SEFD-5008)

reproduction—is the Bartók *Violin and Piano Sonata No. 1*. This is a passionate work, played with extraordinary intensity by David Oistrakh and Sviatoslav Richter in a 1972 live recording from Russia. On other occasions I've suggested that such Melodiya material doesn't merit more than a budget price because of its sonic limitations. For musical reasons, and for the extra measure provided by Richter's inclusion of the *Hungarian Peasant Songs*, this is one instance when I hope that the full price demanded by CBS proves not to be a deterrent.

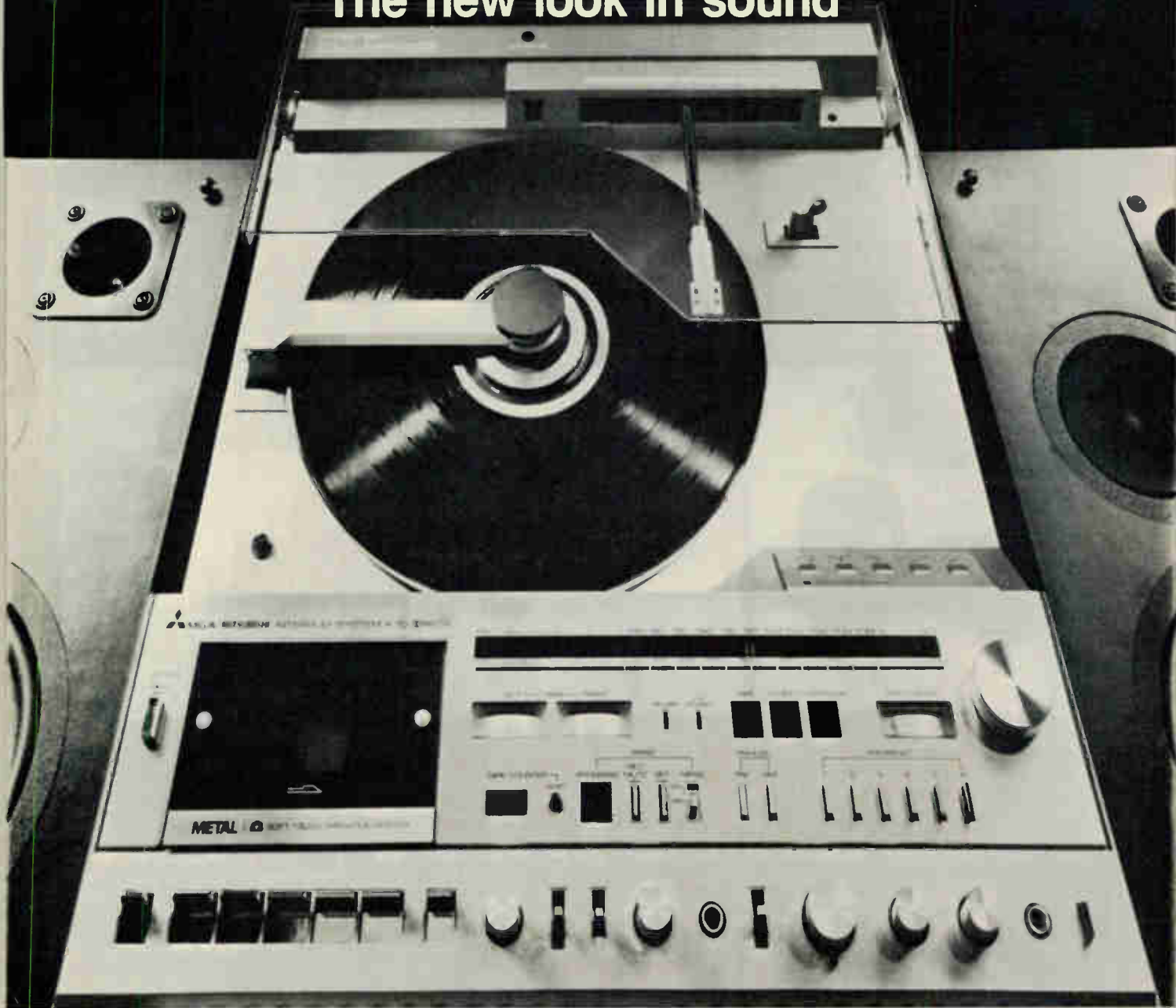
Bartók's most important chamber works are his *String Quartets*. Indeed, there have been no more important quartets written since the Romantic Period. They cover a tremendous range of emotional, musical, and stylistic factors, corresponding to the thirty or so years of Bartók's life that separate the first from the last. I've heard no finer performances than those offered by the Tokyo String Quartet on a new, and highly desirable album from Deutsche Grammophon.

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such vivid reproduction. But while I'm quibbling, two other little points that detract from this inaugural Sefel offering and from my overwhelming assessment that this is a genuine prestige product. A little more care is needed in writing or translating the album notes. These are neither so bad as to be a source of unintended humour nor good enough to avoid awkwardness and some ambiguity in information. More than ambiguous, what are marked as "Imported Records" in one spot are elsewhere said to be "Manufactured in Canada". As it turns out, what we have are European vinyls, pressed in the US and packaged in Canada. However it happened, the final product is impressive.

ducts the London Symphony in music by Kodály, Janáček, Brahms, Tchaikovsky, and Ravel. The Calgary Philharmonic, which currently boasts Joó as its Music Director, had better took to its laurels. If the Calgary music critics are to be believed, the discrepancy between the orchestra's competence and its conductor's capacity for music-making has already become far too obvious.

A number of other Canadian orchestras get a chance to demonstrate their wares for prospective record buyers this month, and impressive they are. In the case of the Winnipeg Symphony, however, it might be a case of remembering happier days. Rimsky-Korsakov's *Scheherazade* was recorded before the acri-

Kwiatkowski has improved the recorded sound out of all resemblance to earlier NACO Beethoven recordings. They were either dry as dust or so reverberant that clarity suffered. Now there's an ideal match between the classical elegance and lightness of Mario Bernardi's celebrated orchestra and the warmth and moderate resonance of the CBC recorded sound. Bernardi's inherent joviality spills over into this sunniest of Beethoven scores, and makes this performance an absolutely irresistible charmer.

The Toronto Symphony, under Andrew Davis, adds two new items to their discography this month—one for CBC, and one for CBS. The CBC issue, Dvorák *New World Symphony*, is the first case of



Orchestral duties are about evenly split between the Budapest Philharmonic and the Budapest Symphony, and on the evidence of these performances it is the Philharmonic which is the finer instrument, if by a narrow margin. I greatly enjoyed their playing, under the assured direction of conductor Joó, of the *2nd Suite* and *Two Pictures, Op. 10*. That would be a good choice for collectors who'd like to expand their library with some lesser-known Bartók but are unwilling to invest in this entire series. Another good choice would be the coupling of *Kossuth* and the *Op. 12 Pieces for Orchestra*. Competition is toughest in the *Miraculous Mandarin Suite*, the *Dance Suite* and, of course, the *Concerto for Orchestra*, with a number of truly outstanding issues already in the catalogues. These are (pending the Solti recording, at least) the only digital productions, a considerable advantage in music of such precision and complexity.

I don't remember a young conductor being given a debut of quite this quality before. Arpád Joó is clearly a musician to watch. Sefel has four further albums scheduled for release, in which Joó con-

Arpád Joó

monious departure of long-time conductor Piero Gamba and the near-fatal administrative and financial woes that continue to plague the orchestra. This is an unusually langorous *Scheherazade*, devoid of the cheap fireworks that many conductors emphasize. But it also puts a bit of a strain on solo violinist Arthur Polson that less deliberate *tempi* would have avoided. On its own terms, this performance lacks neither vitality nor colour and is, above all, musically sensible.

Kazuyoshi Akiyama and the Vancouver Symphony offer an excellent account of Tchaikovsky's *Fourth Symphony*, one which makes a convincing case for the structural merits of this work, as well as for the beauty and energy of its very familiar parts. This is the best string playing I've heard from the Vancouver orchestra, captured in ideal stereo perspective by the CBC in the famous *pizzicato scherzo*.

Outstanding engineering is also a major asset of the National Arts Centre Orchestra's recording of Beethoven's *Pastorale Symphony, No. 6*. Producer Anton

direct competition with an existing Davis CBS release. His recording with the Philharmonia, part of a complete Dvorák cycle with that orchestra, was released in the spring of this year. It gathered much favourable notice, including my own in this space in April. Now Davis repeats the work with his Toronto orchestra, very consistent of *tempo* and just a shade bolder in interpretation. The news, which will surprise some, is that the Toronto players yield nothing to their more illustrious British counterparts. Accepting the more "open" playing style, especially of the Toronto strings, that quality is nicely enhanced by reproduction so clear that the CBS issue seems hazy by comparison.

CBS's Toronto productions of late have been among the best that CBS digital engineering can offer. The latest, Bizet's *L'Arlésienne Suites* and *Jeux d'enfants*, in stylish and fully competitive performances, may not be the interpretive or engineering breakthrough that the recent Respighi album was, but it is a fine accomplishment and deserves to become a major success. ■

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JAZZ

TED O'REILLY

Big band fans have reason to rejoice this month: there are five albums now available that will command your attention, and two of them are by Rob McConnell and the Boss Brass, the Canadian group that has to rank in anyone's top three in the world.

Rob McConnell and the Boss Brass Live in Digital, the band's first "in performance" recording, captures the twenty-two piece orchestra in full flight at Toronto's El Mocambo in a wide-ranging program of standards and originals. The opener is a piece of which I'm proud,

bridge of the tune. It winds up with a half-tempo theme restatement in which the power seems to be doubled.

It's a Boss theme, and I thank Rob for it, as well as the incredible power-house, flexible drumming by Terry Clarke. His work on this tune is all the proof one needs to rate him at the top of the pile of great drummers.

"Groovin' High", Dizzy Gillespie's prototypical bop theme on "Whispering" features Sam Noto on trumpet and Moe Koffman on alto in McConnell's arrangement. It's a joyful romp that effectively uses the orchestra to punch up the small group feeling so necessary for bop music. Sam and Moe are most comfortable in this idiom, and contribute lease-breaking solos.

Side Two opens with a chart that's been in the band's book for a while, the timeless "Louisiana", a joyful romp with Rob and Rick Wilkins setting each other off. The leader's boisterous 'bone and the tenorman's dry, sunny style offer a nice contrast of approaches.

The wind up tune is Ian McDougall's arrangement of "I Love You", the Cole Porter opus, complete with verse. Though it's not mentioned on the album, this was a brand new chart, played only one or two times before it was recorded, proving the craftsmanlike qualities of this exciting orchestra. The band is as comfortable with this difficult arrangement as they are with an old favourite, and trumpet soloist Sam Noto gets a chance to show his ballad side in a *rubato* reading of the verse, joined by the other brass in a choir section that past masters of the baroque would be proud of. This album is an exciting one, and should be on your list of must-haves.

The second Boss Brass offering is *Tribute*, an album consisting entirely of works by composers who "were taken from us in the prime of their lives and careers", as McConnell notes on the jacket. The issue I have is an American release on Pausa, but it was done for Germany's MPS Records, and will no doubt be showing up in Canada on that label as well—probably with superior pressings, though the Pausa discs are acceptable. *Tribute* is a studio recording done at the same time (early December 1980) as the live album. Much as I like the live one, I think this one is better. (Horrors! O'Reilly has a reputation for always preferring live performances. Isn't that what jazz is? Music improvised before an audience for that edge of danger?)

Yes, but . . . when the members of an orchestra are as comfortable in the studio as these players are (they all freelance,

and make the largest part of their incomes performing for microphones) the perfection that a studio situation offers is taken advantage of, and the polishing shows.

Cannonball Adderley's "Things Are Getting Better" is a Moe Koffman alto sax feature, and the Swingin' Shepherd has a ball with it. "Blue Hodge" is a Gary McFarland tune for Johnny Hodges, with the blues warmly essayed by Eugene Amaro on tenor and guitarist Ed Bickert.

The late Frank Rosolino's waltz "Blue Daniel" is played in four/four, a humorous touch that madman Rosolino would have loved. He also would have loved the work of fellow trombonists McConnell and McDougall. Trumpeter Blue Mitchell used Horace Silver's "Peace" as the basis for his "Blue Silver", and Rob's arrangement, featuring trumpeters Guido Basso and Sam Noto, uses the first for a *rubato* opening shared by the trumpeters, and the newer theme for the full orchestra. A highlight is the note-for-note transcription for full band of Mitchell's own solo on the version he did for Concord with Harold Land. The band's reading of the devilishly hard arrangement is masterful.

The late pianist Bill Evans recorded "My Bells", a gorgeous melody, with a full symphony orchestra. McConnell's woodwind scoring at the beginning and end of the Boss Brass version follows Claus Ogerman's, original closely.

McConnell's notes end: "Any attempt to measure the love, admiration & respect with which these composers/musicians are held would be inadequate. Therefore, this album is a reminder as well as a tribute." It's also an indication of the talent in Canada, musical and technical, and proof that it can match the rest of the world in every way.

Don Menza is a Buffalo-born musician, now living in Los Angeles after road time with people like Maynard Ferguson and Stan Kenton, time in Germany with a TV/Radio studio orchestra, Buddy Rich, and Louie Bellson. As a tenor sax player, he's a stomper with a big rich sound that harkens back to masters like Hawkins and Webster, but with the speed of the bebop era. As an arranger, he's self taught, and has contributed to the books of many of the bands he has worked with, and others as well.

His debut as leader of a large group is *Don Menza & His '80s Big Band: Burnin'*. It's a digitally recorded collection of six Menza arrangements, pressed on virgin vinyl by Teldec in West



"T.O.," a McConnell original written as a theme for my Toronto radio show.

It works perfectly, as Rob worked out the first minute to be a splashy sort of attention-grabber, then drop a bit for an over-announcement section, then back up to full throttle. The tune represents my programming philosophy, with the small groups I like represented by a duo section with just Rob's valve trombone and Ed Bickert's guitar; a contemporary rockish feeling for Rick Wilkins's tenor solo; a dixieland feel representing the pioneers of jazz; a swing feeling; and an open, avant-garde section that leads back to the

Rob McConnell and The Boss Brass *Live in Digital* (Dark Orchid 602-12018) and *Tribute* (Pausa PR 7106)

Don Menza & His '80s Big Band: *Burnin'* (M & K RealTime RT 301)

Gerry Mulligan's Big Band, *Walk on the Water* (DRG SL 5194)

Louis Bellson Big Band, *London Scene* (Concord CJ 157)

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Germany. Solo work is by heavies, trumpeters Bobby Shew, Don Rader, and Chuck Findley—who also plays most of the lead book; trombonist Bill Reichenbach; reedmen Menza, Joe Romano, and Jack Nimitz; pianist Frank Strazzeri; and drummer Nick Ceroli kickin' the whole thing along.

Menza's originals are the title tune, "Burnin' (Blues for Bird)", "Spanish Boots", "Tonawanda Fats", and "Dizzyland". Pianist Frank Strazzeri's "Relaxin'" and Duke Ellington's "Don't You Know I Care" were arranged by Menza. Without being gimmicky, Don uses all the tricks of the trade—and some new ones—to give as much breadth and variety to music as he can, though there's no doubt fire and flash are the *raison d'être* of this group.

It's exciting as Hell (or at least as hot), and the recording, album presentation, and pressings are superb. Audiophiles will want this one just to show off their equipment, and big band fans will have to have it to welcome a new band and bandleader to the forefront.

A band that's been around—intermittently—for more than two decades is represented on vinyl again with *Walk on the Water*. Gerry Mulligan is the leader and composer/orchestrator of most of the material, as well as the standout soloist, on baritone and soprano saxes.

Though his current orchestra hasn't the great names it had in the past (Brookmeyer, Clark Terry, Mel Lewis) Gerry's adherence to his principles makes the frame to present some wonderful, lesser-known but deserving musicians like trumpeter Tom Harrell, altoist Gerry Niewood, Gary Keller on tenor, trombonist Keith O'Quinn, and a fine pianist, Mitchel Forman.

The opening "For an Unfinished Woman" is a pretty, medium-tempo Mulligan original with a loping, dramatic quality, while "Song for Strayhorn" is a supremely beautiful melody which achieves simplicity and serenity, as well as the leader's most heartfelt solo of the album.

Side Two gets under way with "Angelica" by pianist Forman, a jaunty tune with especially nice work by Tom Harrell on trumpet (it sounds more like flugelhorn to me) and fluent alto work by Gerry Niewood—whom you might remember from his Chuck Mangione days.

This is an excellent album, offering continuing proof of Mulligan's musicality, and his belief that the small group essence of jazz should not be lost even when a big band is playing the music. His bands are never busy-sounding, always eliminating the unnecessary, and *always* swinging.

The production and recording are adequate, but with a dry quality that isolates the instruments a bit too much in the stereo spread, especially in the reed section. A better studio with a more natural live sound would be more effective for this group.

Finally, drummer Louie Bellson has our last big band release *London*, recorded in that city. With musical deference, the leader sparks his band without dominating, and presents some players we've spoken of earlier—Bobby Shew and Frank Strazzeri of the Menza band, along with Joe Romano on tenor for this aggregation, playing the featured role on the identical chart of "Don't You Know I Care" that Menza saved for himself on his own album. Bellson's compositions dominate—five of the eight being his—one by Bobby Shew, "Blue" (for Blue Mitchell, also remembered by the Boss Brass), and one by trumpeter Alan Downey.

This is a good album, well-played by the musicians as a whole, and by the soloists. Recording and pressings are up to usual Concord high standards, and I can recommend this one, too. ■

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What a duo the Kossfire/210 and Dyna*Mite M/80 loudspeakers make. Each is an explosion of sound and design innovation that sets them apart from all other speakers in their class.

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LIVE MUSIC

JOHN DONABIE

Well, I don't know whether Patti Page was ever big in Harlem, but I do know that black music never challenged Liberace on Park Avenue.

The great black artists—from B.B. King to Bobby Bland—who retained their integrity failed to get any closer than the fringe of white respectability. The vast majority of white music lovers have never even *heard* of Bland. The others fell into the Nat King Cole syndrome, trading their roots for something mellow that would keep the white folks happy. The single exception was Aretha Franklin.

A lot has been written over the years about Aretha's refusal to sell out her principles. But for six long years, Aretha tried her damndest to make her mark as a heavily-tanned Barbra Streisand. She rediscovered her roots only because the pop albums she was recording for Columbia Records sold as briskly as week-old donuts—and went down about as easily. This led to Columbia's terminating her contract, causing her to sign with the soul-oriented Atlantic Records who insisted she return to her gospel/rhythm-and-blues roots.

While the strength of her beliefs may not have measured up to Joan of Arc's, there was no doubting that, when the mood moved her, Aretha was the epitome of black emotion. Never has there been another artist—black, white, pink, or spotted—who could equal Aretha's raw energy, unbridled passion, and absolute lack of inhibition. By comparison, even the legendary, razor-voiced, hard-living Janis Joplin sounds shallow and contrived.

American black audiences, of course, shared Aretha's heritage. The vocal dexterity of Aretha's predecessors paled when compared to her brilliance, but the style itself was straight out of a gospel tabernacle. There was no reason for surprise at her dominance on the rhythm-and-blues charts.

The surprise was the fervour with which white audiences embraced Aretha's sound. For two years, starting with the astonishingly impassioned Atlantic debut *I Never Loved a Man (The Way I Love You)* and extending to *Lady Soul*, the pinnacle of her recording career two years later, Aretha was a commercial

power rivaling the Beatles. In a twenty-four month period, she racked up nine million-selling singles and three million-selling albums. And every one of those sessions is a lesson in classic soul. These were not sops to white America's traditional tastes.

Amazingly, she tore into white society without the hysterical backlash that greeted the rise of less explicit artists such as Elvis Presley and Chuck Berry some years earlier. And, just as amazingly, she disappeared from the charts almost as fast as she had arrived. The spell-binding phrasing and range, together with her clear-cut sense of purpose, evaporated as she drifted into jazz, pop, funk, and God-knows-what. Jerry Wexler, Arif Mardin, and Tom Dowd, the trio of producers who had been responsible for her four stellar Atlantic sessions—*I Never Loved a Man*, *Aretha Arrives*, *Aretha Now* and *Lady Soul*—gave way to a new generation of producers such as Curtis Mayfield and Lamont Dozier.

Aretha's time has passed. I gather that black audiences are vaguely embarrassed now by the lady's unfettered rapture. And white audiences, of course, have paid little heed to her and her milieu since that brief flirtation late in the Sixties. However, if time has passed Aretha by, she

the new album that compare favourably with anything in the Franklin files.

The evidence, then, suggested that Aretha's long-overdue Toronto appearance—at the outdoor Forum of Ontario Place—would be an occasion to cherish. Unfortunately, the legendary spark was missing and the concert undershot its potential by more than a narrow margin. Aretha brought her body and most—but certainly not all—of her voice box. But she left her heart at home.

It was a strange concert. Aretha was unmistakably putting in time, wishing she could be somewhere else. She pouted, muffed lyrics, and went through the motions with a wooden lack of enthusiasm. Most of all, however, she never approached the intricate phrasing and spontaneous expressions of joy that allow those vintage recordings to live on when virtually every other aspect of their era is dead. Worst of all, she permitted occasional flashes of genius to sneak in—never enough to satisfy, just enough to tantalize.

The band, a local horn section wedded to an imported rhythm team, was better than the voice warranted. Toronto musicians know their soul as well as any of the legendary Muscle Shoals session men and, given the chance to work with a leg-



Aretha Franklin

has once more returned to the powerful soul music that she can turn out with such deceptive ease. As one of the few—some say the only—redeeming features in *The Blues Brothers* movie disaster, she unleashed a version of "Think" that threatened to sear the theatre curtains. Now a new album, *Love All the Hurt Away* (Arista 9552) finds her reunited with producer Arif Mardin for the first time since those unforgettable Atlantic days, with glorious results. There are moments on

end of the genre, they shine. It was sad to hear playing so hot it could boil water wasted on a tepid voice.

The lesson, I suppose, is that the spark to ignite the self-styled Queen of Soul resides not in Aretha but in her studio overseer. The magic in the grooves now belongs to Mardin, a man who comes to soul by inclination rather than birth. Aretha may have the bloodlines, but the Aretha we knew doesn't live there anymore. ■



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The NR-1000, for example, is truly a magnificent instrument. Just some of its features include: quartz synthesized digital tuning, six AM & six FM preset selectors + Auto-Tune, DC power amplifier for wide frequency response, two-color LED power level displays, unique Moving Magnet & Moving Coil cartridge capability, illuminated pushbutton program selectors, full electronic protection circuitry . . . and more.

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Audio Specialists Inc, 2134 TransCanada Hwy. S., Montreal, Quebec

VIDEOLINES

DIANNE RINEHART

Scientific it wasn't, but the experiment was set up. Purpose: to test a projection TV out on three discriminating viewers. Apparatus: three former professional football players, one RCA projection TV, beer. Method: Invite them over to watch NFL, CFL, and any other FL I could get. Observations: they got very enthusiastic over the brightness and colour quality of the picture and over just how much of the action they could see. "Did you see that?" one was heard to say. "I couldn't have seen that on my TV."

Conclusion: I could easily have sold that TV three times over—except for one drawback: the price. It retails for about 4½ thousand bucks. And it's a long way from the most expensive model on the



For football and flick fans, RCA's PFR100R one-piece unit costs \$4,495. Includes wireless remote control, comb filter, and other goodies.



Projection TV is not exactly new. This prototype colour unit was made by RCA in 1946, and consisted of three separate picture tubes (for the three primary colors) rear-projected on a single screen through lenses. Up to that time, the only way to achieve colour reception was by watching the picture through coloured filters mounted on a rotating wheel that corresponded to a similar wheel in front of the camera.

market (prices range from \$3,500 to \$6,000, depending on the number of features, and whether the unit is front- or rear-projection—rear- tends to cost more).

But price was the *only* objection, and that in itself is a measure of how far the technology of projection TV has come over the last few years. No one complained about the quality of the picture,

although it's not as sharp as on a normal set, and the problem of a lack of brightness in a lighted room seems to have been overcome. We watched those games on a bright sunny afternoon, and if the picture got brighter as the day drew to a close, my eyes weren't sharp enough to notice.

For three years I've been watching projection TVs in manufacturers' showrooms and at electronics shows. These were obviously set up for the maximum in viewing pleasure, but I really did have to experience one in my own living room to see just how spectacular TV on one of these sets can be.

After football, we watched *Casablanca*, courtesy of RCA's videodisc player. Have you ever noticed how Ingrid's eyes glisten throughout the movie whenever Humphrey is around. You will on a projection TV. the drama has greater—impact too, so you're right there on the tarmac as they say their goodbyes.

Okay. You've decided to mortgage the house to buy one of these. Now what to look for.

The units come in one and two pieces, rear or front projection, and with a multitude of features. Some of the simpler units consist of an ordinary TV set pro-

jected through a lens, but the "real" projection units employ three separate colour guns that are shot through separate lenses and focussed on the screen.

There are advantages and disadvantages to both one- and two-piece models, so it's primarily a matter of looking at your room and deciding what fits best. A



A new lens system is featured in Hitachi's CT5011 one-piece unit. Non-spherical plastic lenses permit a brighter picture in a smaller cabinet, according to Hitachi. Price is \$4,499.

two-piece is separated into projector and screen, and most manufacturers have neatly disguised the projector as a coffee table, so all you have visible is a four or five foot screen. The problem with this type, however, is you have to ensure you don't move the screen or table or the focus is off.

One-piece units don't have this problem, but, with front-projection, they're bulky.

Then you come to rear-screen projection units, which I believe will be the winners simply because they look more like a TV and less like a movie screen. Manufacturers have equipped them with cabinet doors, so when they're not in use, they look a lot like a dining room hutch. Zenith has gone one step farther. Its unit looks like a normal console TV, until you push the power button on the remote control. Then the lid falls back and up rises a screen. A nifty way of getting around bulkiness.

Brightness, which was a problem with the original models only three years ago, doesn't seem to be a concern with any of the models I've looked at. But this is something you'll have to judge for yourself. While some companies are offering brightness levels measured in foot-lamberts, there isn't a standardized method for coming up with the measurement, so you can't compare one unit to another by spec sheets alone. In fact, one major corporation refuses even to play the game, and won't give out any measurement for that very reason.

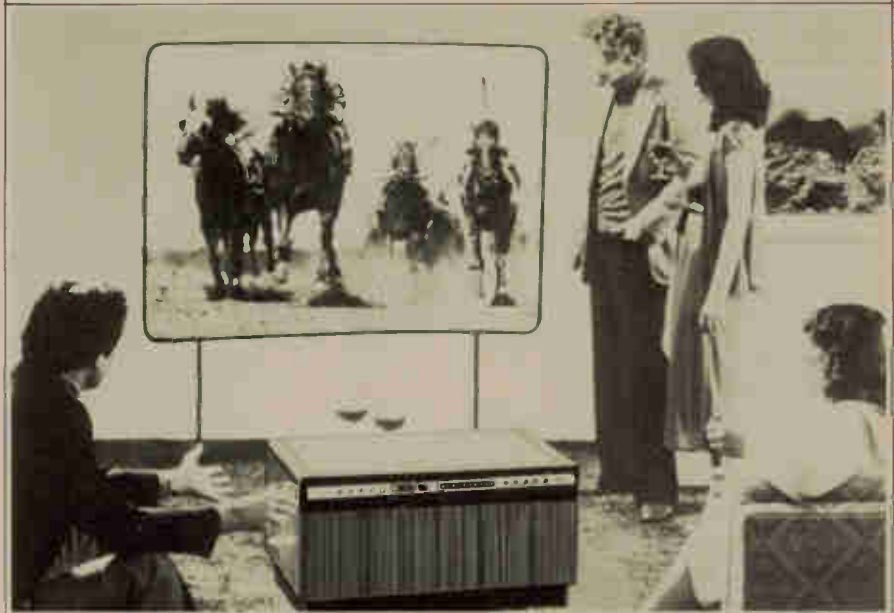
Next, look for tuning capabilities. RCA's, for instance, can receive all the VHF or UHF channels, but is only set up to select from among twelve at a time. You must choose the twelve you want and tune them in; if you want to watch a pro-



The LSA5000 from Sylvania is a rear-projection unit with 105-channel tuning, built-in stereo amplifiers, and resolution as high as 410 lines with direct video source. It will set you back \$5,249.95.



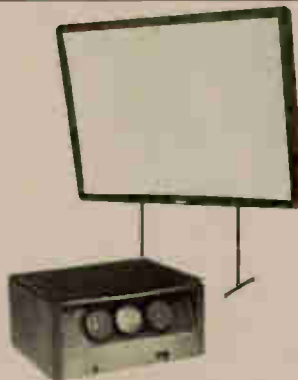
A novel approach to the rear-projection TV, by Zenith. The SN4545P masquerades as a fine piece of furniture when not in use (top), the screen popping up when needed. The price is \$5,995.



From Canada's Electrohome comes the VB 760 for \$3,995. A two-piece system, it features a slim projection console, full cable tuning, and a digital wireless remote control.



The PV 5080 is Sanyo's first projection TV. A one-piece unit, it features 105-channel tuning, synthesized "stereo" sound, comb filter, audio muting, and other features. All for \$5,000.



Sony's KP-7220 two-piece projection unit includes a 1.8 metre screen—roughly half again as large as most home units. The projector itself does extra duty as a coffee table. Together, they cost \$4,699.



Full remote control, stereo capability, and 105-channel random-access tuning are featured in the VS-520UD from Mitsubishi. The folding doors hide the screen when not in use. Price: \$6,499.95.

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A. A flat no!

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able seat? Isn't it easier to pre-program the record selections you'd like our patent-pending D-O-B arm to play? Just think of the time and nerves you save with 12 preset tuner stations activated by instant one-touch buttons — from your favorite listening chair. We'll bet you'll be a happier audiophile with all these microcomputer conveniences. After all, fiddling with controls is surely second fiddle to delighting in the subtle nuances of a violin from Sansui's Super Compo 9900.



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Sansui

gram on a station you haven't picked, you have to adjust one of the presets to bring it in. The unit does come with a little tuning instrument, and you basically just turn a knob until the station you want comes in, but for \$4,500 I have to wonder why it isn't 105-channel ready like the company's other sets. On the other hand, if you don't mind fine tuning, or you live in an area where only twelve stations are available, you could look at this as a plus. Zenith's unit is 112-channel capable and cable ready (you don't need a converter to pick up mid-band channels) but the set, at almost \$6,000, is a lot more expensive.



The Cinemavision CT-4500A from Panasonic is a rear-projection TV that takes up no more floor space than a conventional console set. Synthesized tuning, stereo amplifier, and room light sensor are included. The price is \$5,699.95.

You'll have to weigh your needs and your finances.

Features on these TVs are exceptional, and each unit has its own attractions. For instance, look at speakers — some units

have two-way speakers and some have more than two speakers. You may find, however, that you're going to hook up the set to your audio system to take advantage of stereo videodiscs and tapes when they show up on the market, so maybe you shouldn't pay for good speakers on the TV.

And then there are the extras: favourite-channel scanning with on-screen channel numbers and time displays; time control programmers that automatically turn the TV on or off; quartz controlled electronic tuning; separate audio amplifiers; video centres — shelves built into the unit to store video accessories; video audio input jacks; and full-function, wireless remote control.

One of the most interesting features, available only from Zenith, is the "Space Phone", with which you can actually receive or place telephone calls through the projection TV! The phone rings, you press a button on your remote control, and this mutes the sound and connects the phone. Talk to your TV and the caller answers back through the speakers. You can have a group call in which anyone in the room can talk to the caller.

All this and more is now available, for this looks like the year of the projection TV—the year companies that wouldn't sell the units before because they didn't meet brightness requirements, are marketing them.

But they're still a very expensive luxury. "If the price were around \$2,500, they'd sell quite well", says one video retailer. Basically, you can't go wrong choosing a unit this year with the features you want; it's just a matter of money. And that's hardly news. ■

For more information on the products featured in this issue write to:

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Onkyo: Tri-Tel Associates Limited, 105 Sparks Avenue, Willowdale, Ontario, M2H 2S5

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Sanyo Magnasonic Canada Ltd., 50 Beth Nealson Drive, Toronto, Ontario, M4H 1M6

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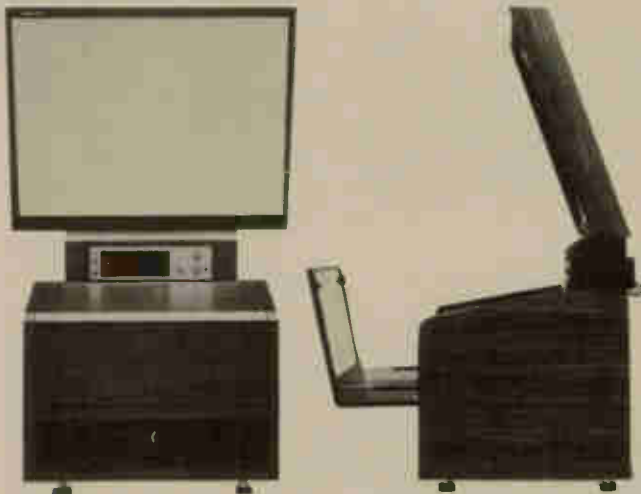
Stanton Tri-Tel Associates Limited, 105 Sparks Avenue, Willowdale, Ontario, M2H 2S5

Sylvania Canada Ltd., Consumer Electronics, 5901 Trans-Canada Highway, Pointe-Claire, Québec, H9R 1B7

Systemdek: Pro-Acoustics Inc., 6877 boul. Hy-mus, Kirkland, Québec, H9H 3L4

Toshiba of Canada Ltd., 3680 Victoria Park Avenue, Willowdale, Ontario, M2H 3K1

Zenith Radio Corp. of Canada Ltd., 1020 Is-lington Avenue, Toronto, Ontario, M8Z 5X5



This high-resolution one-piece projection unit from Toshiba, the P-4500C, carries a two-year warranty, and has free home setup included in the \$4,995 price.



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GILMOUR'S ALBUMS

Clyde Gilmour: January 30, February 36, March 34, April 38, May 34, June 28, July 34, October 34, November 34, December 38

Pop/Rock by Jim Smith, **Classical** by Warren Sorensen, **Jazz** by Ted O'Reilly, **Live Music** by John Donabie: January 32, February 39, March 37, April 40, May 37, June 30, July 37, October 37, November 36, December 41



SA-X. HIGH BIAS IS RICHER FOR IT.

The greatest honor a cassette can receive is to be held in higher esteem than the one now setting the high bias standard. SA-X has already gone beyond SA in frequency response, sensitivity, and resolution. It was intended to. With its ultra refined dual layer of Super Avilyn and the Laboratory Standard Mechanism, nothing less was possible. TDK believes sound reproduction should have no set barrier. No limit. For us, high bias was a limit to be surpassed. SA-X has won three international audio awards to date. It will no doubt win others. But we take awards philosophically. They represent our continuing effort to create the machine for your machine. In that, we could not be happier with SA-X.

 **TDK**
The Machine For Your Machine



Sound Canada, Hi-Fi Buyer's Review, Audio-electronics Digest, Stereo Review, Consumer Guide, and Complete Buyer's Guide to Stereo Hi-Fi Equipment agree...

"Audio-Technica headphones offer quality, performance, comfort, and value"



We'll let the experts speak for us...

ON THE ATH-7...

"The ATH-7 reproduces the cleanest, and most natural sounds of any stereo headphones presently available."

— Consumer Guide

"With these phones one does not have to compromise on medium listening level or wearing comfort in order to enjoy sound quality that is at least as good as anything we have ever tested up to now... considerably less expensive than any other phone... that comes even close to matching its listening quality."

— Stereo Review

ON THE ATH-1...

"As far as comfort... my listening panel was unanimous in rating the ATH-1's on A"

— Hi-Fi Buyer's Review

ON THE ATH-0.3 AND ATH-0.5...

"... very light indeed... extremely smooth throughout their range... upper bass and the midrange were well balanced and uncoloured... when passed around the office for unofficial home use tests, the phones were returned with glowing praise... very good for long periods of wear."

— Sound Canada

ON THE ATH-2...

"... certainly earns and is awarded the SAC (Society of Audio Consultants) Seal of Approval"

— Audio Electronics Digest

ON THE ATH-3...

"Sounds very similar overall to the finest"

— Complete Buyer's Guide to Stereo Hi-Fi Equipment

What more can we say!



audio-technica