DECEMBER 1981

A SIMPLE CHECKLIST FOR BUYING YOUR HI-FI SYSTEM

AUDIOLAB TESTS FEATHERWEIGHT HEADPHONES

PROJECTION TV IMPROVED FM RECEPTION
With Technics new RS-M218 you've got an automatic winner.

With less sophisticated cassette decks, unless the tape selector setting matches the tape being used for recording, poor recordings are produced. But with Technics RS-M218, the tape in use (metal, CrO₂ or normal) is automatically detected and adjusted for bias and equalization. And to confirm which tape is in use, there's a front panel LED display.

The result: a good recording every time. These features, alone, are enough to make Technics RS-M218 an automatic winner. But, typical of Technics, they are not the only features. There's also the luxury of soft-touch tape transport controls. The convenience of rewind auto play and cue/review operation.

Thanks to 3-belt drive, wow and flutter is a mere 0.05%. And with a Technics MX head, which is specially designed for metal tape, frequency response is a respectable 20 Hz to 17 kHz.

For precise recordings, Technics RS-M218 also has superb FL meters with peak hold capability. And, among the many other features are Dolby*, and a one-button timer recording/playback with an optional timer device.

Ask your Technics dealer to show you the RS-M218 cassette deck, and the complete range of matching Technics high fidelity components. They're all winners!

*Dolby is a trademark of Dolby Laboratories

Technics
The science of sound
The critics agree and Stereo Guide reports...

"... one of the better values I have come across in a long time"

Direct Drive Motor
- a 20-pole DC-servo type which is exceptionally smooth and mechanically quiet - wow and flutter checked at 0.05% WRMS and the noise component's at -80 dB - which is likely the limit of the test record rather than the machinery

Anti-Skate Control
- by a calibrated dial adjacent to the tonearm pivot

Tonearm Pivot Bearings
- for all practical purposes, frictionless

Turntable Platter
- aluminum alloy die-casting with stroke markings cast into the outside rim

Turntable Platter Mat
- pliable black rubber-like mat gone full and adequate support to the record

Front Controls
- smooth in operation and their actuation does not upset the tonearm tracking... with controls located along the front edge clear of the kid there is little reason to raise or lower it (did) during play

Cueing
- found to be extremely precise, softing the stylus back down into the same groove it was lifted from

Stop Control
- used to cut the play of any point, power is switched on to the motor as the tonearm is moved to the lead groove. At the end of play the arm is automatically lifted and returned to its rest, of which point the power is shut off

Pitch Control
- independent pitch controls for 33 and 45 RPM

Speed Selector
- a complete line of precision performance turntables

C.E.C.

What more can we say?

Audio Specialists Inc., 2134 Trans Canada Hwy. S., Montreal, Quebec
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pure Braun

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S

omething 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,
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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 programming 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 electronics, 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 Teledon 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 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 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.

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.

Audio Canada — December 1981
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?
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.

**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, 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-Elektro-Atlantic record 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 US, 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 unencoded 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 unencoded 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

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 undeoded.

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 CX 37440). At pretime, this was the only CX record available in Canadian record stores, although by the time you read this there should be more.
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

8 Channel Microphone Mixer
MX-20

Telephone Pick-Up
TP-5T

Earphone
ME-20H

6 Channel Microphone Mixer
MX-670

Open-Air-Stereo-Headphones
MDR-4L1S

Dynamic Stereo Headphones
DRS-5

Cassette Eraser
BE-9H

Cassette Eraser, Erasable Metallic Tape
BE-100

Phono Jack – Phono Jack
PC-20A

Stereo Mini Plug
PC-33

Stereo Phone Plug – Stereo Phone Jacks(2)
PC-40

Phone Jack – Phone Plugs(2)
PC-45
with Sony accessories.

TV or phone? Sure you did. And you found that the plugs didn’t match and you needed more wiring and, well, it more, so neatly and easily. Let Sony help you get it more together on the audio scene. If it’s Sony, you can’t go wrong.

Mini Stereo Microphone
ECM-939 LT

The Tie-Tac-Mic
ECM-16T

Phono Plugs (2)
RK-74A

Head Demagnetizer
HE-4

Phono Plugs (2)
RK-40C

Mini Plug with Attenuator
RK-64A

Cleaning Cassette
C-1K

For complete information on any Sony accessories, please contact your Sony Dealer or write directly to:

ACCESSORIES, Sony of Canada Ltd.,
411 Gordon Baker Road, Willowdale,
Ontario M2H 2S6.
PETER MILTON

Anniversaries 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 several 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 geometry. 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, as 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.
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.

Audio Canada — December 1981
THE QUESTIONS
ALAN LOFTT

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.

I would 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, Quebec

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 ¾ 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 ¾ of the control range.

When taping old 50s and 60s records, I notice some sound too thinny—not enough bass—for my liking. Can I hook up 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-10-5 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-
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 video-cassette 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 diagonal tracks across the surface of a very slow-moving ½-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 Stereophonic 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, PO 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.
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 spectacles and make this holiday season one worth listening to.

1/ MONSTER CABLE SPEAKER WIRE $4.50/FT. A. ALLEN PRINGLE LTD. DON MILLS, ONT.
2/ SONY HIGH BIAS EHF 90 CASSETTE GIFT PK. $52.50 SONY OF CANADA LTD. TORONTO, ONT.
3/ ALLSOP VIDEO CASSETTE RECORDER CLEANER (VHS OR BETA) $44.95 WITHERS EVANS LTD., BURNABY, B.C.
4/ LAST RECORD PRESERVATION KIT $34.95
PERSPECTIVE AUDIO INC., LORRAINE, PQ

5/ SOUND GUARD RECORD CLEANER KIT WITH SHURE MIXED CARTRIDGE $150.00
A.C. SIMMONDS & SONS LTD., PICKERING, ON

6/ HITACHI STEREO PERDISCO PORTABLE CASSETTE W/HEADPHONES $279.95
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7/ WATTS RECORD AND STYLUS CARE KIT $33.00
SMYTH SOUND EQUIPMENT LTD., LONGUEUIL, PQ

8/ MAXELL EPTAXIAL VIDEO CASSETTE (120 MINS.) $38.95
MAXELL HIGH EPTAXIAL CASSETTE C-90 XLII-S $9.95
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TDK SAK-90I HIGH BIAS CASSETTE $12.75
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10/ J1M SCOTCH RECORD CARE SYSTEM $39.95
SCOTCH VIDEO CASSETTE HEAD CLEANER (VHS) $36.99
OR BETA $33.15 SCOTCH VIDEO CASSETTE - T-120 (VHS) $33.39

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ONKYO STEREO CASSETTE TAPE DECK - DOLBY NR METAL COMPATIBLE, 2 TAPE COMPARTMENTS, HIGH SPD DUBBING $549.00 TRI-TEL ASSOCIATES LTD., WILLOWDALE, ONT.

NIKKO QUARTZ LOCK AM/FM STEREO RECEIVER NR 1000 - 65 WATTS PER CHANNEL, 6 AM & 6 FM PRESET SELECTORS & AUTO TUNE, LED POWER DISPLAY $869.95 AUDIO SPECIALISTS INC., MONTREAL, PQ
ARKES SPEAKERS, CANADIAN MADE, 100 WATT, 3-WAY SPEAKER SYSTEM $324.95 ea A.C. SIMMONDS & SON, PICKERING, ONT.
SENHEISER HD 424X STEREO HEADPHONES $125.00 TC ELECTRONICS, MONTREAL, PQ

2ND GROUP

MITSUBISHI'S INTERPLAY SYSTEM X-10 - VERTICAL LINEAR TRACKING TURNTABLE, METAL CASSETTE DECK, 25 W/CHANNEL STEREO RECEIVER WITH 3-WAY SPEAKER SYSTEM $1199.95 MELCO SALES, MARKHAM, ONT.
KOSS PRO4X STEREO PHONES - LIGHTWEIGHT CLOSED HEADPHONES W/HYBRID ELEMENT, SELF AD EARPLATE $119.00 KOSS LTD., BURLINGTON, ONT.
MERAK M3 LOUDSPEAKERS - 160 WATT HANDLING, 3-WAY SYSTEM WITH PASSIVE RADIATOR, CANADIAN MADE, $390.00 ea. MERAK ACoustics, Markham, Ont.

PEERLESS PMB 100 STEREO HEADPHONES - LIGHTWEIGHT, STATE OF THE ART EXAMPLE, $300.00 SMYTH SOUND EQUIPMENT LTD., Longueuil, P.Q.

4TH GROUP

RCA VF1P70 VIDEO CASSETTE RECORDER - VHS FORMAT, PORTABLE, 3 SPEED INCL. TUNER, SPECIAL EFFECTS, $1,949.00 RCA INC., Toronto, Ont.

SONY SL-200 PORTABLE VIDEO CASSETTE RECORDER - BETA FORMAT (PHOTOGRAPHED WITH TUNER), REMOTE CONTROL, VERY LIGHTWEIGHT, $1,900.00 SONY OF CANADA, Willowdale, Ont.

MITSUBISHI HS310U VIDEO CASSETTE RECORDER - VHS FORMAT, 3 SPEED, 14 FUNCTION WIRELESS REMOTE, $1,800.00 MELO SALES CDA LTD., Markham, Ont.

NEC 14" COLOR TELEVISION - REMOTE CONTROL, $749.95 WHARFDALE 6-7 SERIES LOUDSPEAKERS - BASS REFLEX SPEAKER SYSTEMS, DUAL MIDRANGE, PHASE CORRECTED LOUDSPEAKERS, $799.95 ea.

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ADVERTISING SPECIAL

• REALISTIC HIGH POWER PUSH BUTTON AM/FM STEREO CAR CASSETTE $269.95 RADIO SHACK, BARRIE, ON

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• CRAIG ROAD-RATED AM/FM STEREO CASSETTE PLAYER $479.95 WITHERS EVANS, BURNABY, B.C

• PIONEER KP-575 CASSETTE CAR STEREO $195.95 H. H. PARKER CO., TORONTO, ONT

• KRAKO DESIGNER SERIES - AM/FM STEREO TUNER AUTO-STOP CASSETTE TAPE DECK, POWER AMPLIFIER WITH MOUNTING BRACKET $450.00 KRAKO ENTERPRISES, REXDALE, ONT

• SONY - AUTO-SOUND AM/FM CASSETTE CAR STEREO $469.95

• HITACHI AUTO-REVERSE CAR STEREO CASSETTE PLAYER WITH FM/AM RADIO $269.95 HITACHI SALES CORP., PONTI CLAIRE, P.Q

• MITSUBISHI CASSETTE TAPE PLAYER WITH AM/FM MPX $499.95 MELCO SALES CANADA INC., MARKHAM, ONT

AUTO SOUNDS GREAT FOR GIFTS

Audio Canada — December 1981
You want an airline that makes punctuality a top priority. You can rely on KLM.

KLM wants your plane to leave on time. Because we know that your schedule has been planned just as carefully as ours. We offer you fast, punctual flights worldwide, plus fast and convenient connections at our home base. Amsterdam's International Airport Schiphol was designed to be the fastest in the world. Moving sidewalks bring gates closer together. And all your connections are well-organized under one roof.

No wonder it's been rated the "world's best airport" in a survey in Business Traveller magazine. KLM's punctual service starts at Schiphol and continues to 120 cities in 73 countries.

Flying on time is good business for you and for us. We know you want to do business with an airline that's dedicated to getting you places on time.

KLM
The reliable airline of Holland
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 ear-drum, as there is considerable acoustic modification by the ear itself. But the headphone alters this by deforming the outer ear 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 ear. 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 measurable 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...
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-

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**Beyer DT 880**

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**Headphone frequency response measured with a microphone and with added pressure on the earcup. Shaded area is the range mounted in the ear canal of a realistic replica of a human ear.**

**Measurements were made with normal pressure (lower curve) 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 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. 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 responsible 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 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,
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.
S nooner or later, the time comes actually to buy a hi-fi system—you’ve had it with the old Sea-breeze, 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 paycheck, 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 ease 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"

1. 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.)

2. 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.

3. 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 obviously 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 Chevys 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.

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

| 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.

| 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.

| 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.

| 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.

| 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.

| TOTAL SPEAKER RANKINGS

| 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.

1

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.

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), the 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.

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.

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.

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.

TOTAL ELECTRONICS RANKINGS

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 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 purer 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 actually 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 not 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 finetune 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 (hisss) 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 finest 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 head-phones 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.
ALBUMS

CHRISTMAS

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.

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.


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.

GIUSEPPE DI STEFANO

NEapolitan Serenade

22 favorite songs

Orchestra conducted by Dino Olivieri

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).

Rimsky-Korsakov: Scheherazade—Winnipeg Symphony Orchestra under Piero Gamba with Arthur Polson, solo violin (CBS 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 Dvorsk'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.


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Giuseppe di Stefano

Neapolitan Serenade

22 favorite songs

Orchestra conducted by Dino Olivieri

BIZET: L'Arlésienne Suites No. 1 and No. 2, also Jeux d'Enfants—Toronto Symphony under Andrew Davis (CBS digital 1M 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 in a costume 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.

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

Audio Canada — December 1981
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.

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 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 heartfelt 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.

Richard 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 drawing 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.

Overside, 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.


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 younger old hand at entertaining children. Chris and Ken Whiteley, American-born, grew up in Toronto. They all applaudably refrain from cutiesie condensation in dealing with juveniles, and as a result their work can be enjoyed by grown-ups too. My own favorites are the Whiteleys' "Barnyard 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 Noél!

(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.)
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 microseconds—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.

The 980LZS features the famous Stereohedron™ stylus and a lightweight samarium cobalt super magnet. The output can be connected either into the moving coil input of a modern receiver's preamps or can be used with a prepreamp, whose output is fed into the conventional phono input.

For “moving coil” audiophiles the 980LZS offers a new standard of consistency and reliability while maintaining all the sound characteristics even the most critical moving coil advocates demand. For moving magnet advocates the 980LZS provides one more level of sound experience while maintaining all the great sound characteristics of cleanliness and frequency response long associated with fine moving magnet assemblies.

From Stanton... The Choice of The Professionals.

Actual unretouched oscilloscope photograph showing rise time of 980LZS using CBS STR112 record.
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 drearier 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 traveled 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 and offers 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" singleness of mind), 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—ought to 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 fringes 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...
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 Specto- rish 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 unserving 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 vocal manner; enough energy to replace a hydro-electric generating station; an effectively unpretentious 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 ex- tant who is always better than his artists, Ezrin does his best to compensate for these compositional shortcomings by serving up an encyclopedia 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 Jenkins’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 Shak'in 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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KEF
The Speaker Engineers
O bservance of Béla Bartók’s cen-
tenary 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, Grai-
ger, 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-
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 rea-
sons, 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 quar-
tets written since the Romantic Period.
They cover a tremendous range of emo-
tional, musical, and stylistic factors, cor-
responding 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.

Wonderful technique is apparent in
these performances, but so much more than
that—warmth, drama, peace, turbu-

| **Bartók, Mikrokosmos, Homorova Frances, 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 András Józó, Budapest Symphony and Budapest Philharmonic (Sefel digital SEFD-5005) | **Concerto for Orchestra (1943), conducted by András Józó, Budapest Symphony (Sefel digital SEFD-5009) | **Suite No. 2 Op. 4, Two Pictures Op. 18, conducted by András Józó, Budapest Philharmonic (Sefel digital SEFD-5007) | **The Miraculous Mandarin Concert Suite (1919), Dance Suite (1923), conducted by András Józó, Budapest Philharmonic (Sefel digital SEFD-5007) | **Rimsky-Korsakov, Scheherazade Op. 35, conducted by Piero Gamba, Winnipeg Symphony (CBS SM-5005 available by mail from CBC Merchandising, Box 500 Station A, Toronto, Ontario, MSW 1E6) | **Tchaikovsky, Symphony No. 4 in F minor Op. 36, conducted by Kazuoshi Akiyama, Vancouver Symphony (CBS SM-5006) | **Beethoven, Symphony No. 6 in F major Op. 68 “Pastoral”, conducted by Mario Bernardi, National Arts Centre Orchestra (CBS SM-5008) | **Dvorák, Symphony No. 9 in E minor Op. 95 “From the New World”, conducted by Andrew Davis, Toronto Symphony (CBS SM-5007) | **Bizet, L’Arlesienne Suites Nos. 1 and 2, Jeux d’enfants Op. 22, conducted by Andrew Davis, Toronto Symphony (CBS Mastersound digital IM-36713) |
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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.

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 conducts 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 take 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-

Arpád Joó

monous departure of long-time conductor Piero Gamba and the near-fatal administrative and financial ills 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 Pastoral Symphony, No. 6. Producer Anton Kwiatkowski has improved the recorded sound out of all resemblence 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 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 Les Arlesiennes 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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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

“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’ tenor solo; a dixieland feel representing the pioneers of jazz; a swinging feel; and an open, avant-garde section that leads back to the 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 bluesy “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 band 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. (Horror! 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, 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 Silv,” 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 Cliff 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...
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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 pressing 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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An explosive duo from Koss.

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.

Take the 4-driver Kossfire loudspeaker, for example. Kossfire’s unique dual tweeter design doubles the power handling capability over the all-important treble range while virtually eliminating distortion. There’s a big 12-inch woofer and a 5-inch midrange. Even a built-in automatic circuit breaker. And it’s all wrapped up in a beautiful pecan-veneer, 80-liter, cabinet. No wonder the Kossfire/210 is the first loudspeaker to live up to its promise.

Or take the Koss Dyna*Mite M/80 mini speakers. Unlike other mini speakers, the Dyna*Mite M/80 features a unique 3-driver system with perfect mirror-image performance whether it’s standing up or lying down. With dual 4 1/2-inch woofers and a 1-inch dome tweeter, the Dyna*Mite M/80 will turn any music into a dynamite experience. And its natural, hand-rubbed walnut veneer cabinet make it as beautiful to look at as it is to listen to.

Ask your audio dealer to show you the explosive duo from Koss. We think you’ll find them both a dynamite experience. And that’s a promise!
Dick and Jane thought they'd heard it all

...then along came Merak Speakers!
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 folk 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 damnedest 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 doughnuts—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 have been 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 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 fervor 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-knew-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 unfeathered 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 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 tear 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 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, muffled 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-
Exciting stereo receivers!

In the tradition of their acclaimed Professional Series . . . . NIKKO AUDIO stereo receivers.

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.

NIKKO AUDIO

The NR-800, NR-700 and NR-500 share many of these features, offering superior performance where power requirements are less.

Plus, in the NIKKO AUDIO tradition, these exciting receivers are very affordable—and all are backed by a transferable three-year parts and labor limited warranty.

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

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.

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 done 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.
Q. Will wireless remote control and microcomputer memories reduce distortion by even 0.000001%?

A. A flat no!

Q. Then why should I be interested in Sansui's memorable Super Compo?

A. Because distortion-free reproduction isn't an end in itself. Enjoying that reproduction is what Sansui's system is all about.

Keep in mind that all Super Compo units were specifically designed for "in-depth matching." That means specs which easily challenge or surpass those of comparable unmatched separates. Features include Quartz PLL digital synthesizer tuning, direct-drive turntable with computerized random 7-program track selection, metal tape compatible deck with AMPS (Automatic Music Program Search), stereo graphic equalizer, and a host of other features for the finest in fidelity. Let's leave the superb specs aside for a moment. Let's be realistic. Isn't it nicer to just relax and select your music source without leaving your comfortable 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.
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.

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: feature-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, wire

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.

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

Audio-Technica Audio Specialists Inc., 2134 Trans-Canada Highway South, Montreal, Quebec, H9P 2N4

Beyer H. Roy Gray Ltd., 14 Laidlaw Blvd., Markham, Ontario, L3P 1W7

Electrohome Limited, 109 Wellington Street North, Kitchener, Ontario, N2G 4J6

Healthkit Heath Company, 1480 Dundas Highway East, Mississauga, Ontario, L4N 2R7

Hi-Tech Sales Corp. of Canada Ltd., 3300 Trans-Canada Highway, Pointe-Claire, Quebec, H9R 1B1

Koss Limited, 4112 South Service Road, Burlington, Ontario, L7L 4N5

Mitsubishi Melco Sales Canada Inc., 930C Denison Street, Markham, Ontario, L3R 3K5

Nagakura Avalon Audio Ltd., 500 Adelaide St. W., Toronto, Ontario M5V 1T2

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

Ortofon Nuresco Canada Inc., 50 Wingold Avenue, Toronto, Ontario, M6B 1P7

Panasonic Canada, 3570 Ambler Drive, Mississauga, Ontario, L4W 2T3

RCA Limited, Consumer Electronics Division, 1450 Castlefield Avenue, Toronto, Ontario, M6M 1Y6

Sanso Magnasonic Canada Ltd., 50 Beth Neison Drive, Toronto, Ontario, M4H 1A6

Sennheiser TC Electronics (Canada) Ltd., 2142 Trans-Canada, Dorval, Quebec, H9P 3N4

Sheffield Lab Audio Market Sales, Division of Climax Industries Ltd., 850 Syer Drive, Milton, Ontario, L7T 4E3

Sons of Canada Ltd., 411 Gordon Baker Road, Willowdale, Ontario, M2H 2S6

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

Sylvania Canada Ltd., Consumer Electronics, 901 Trans-Canada Highway, Pointe-Claire, Quebec, H9H 1L4

Systendek Pro Acoustics Inc., 6877 boul. Hypothèse, Kirkland, Quebec, H9H 1L4

Toshiba of Canada Ltd., 3630 Victoria Park Avenue, Willowdale, Ontario, M2H 3K1

Zenith Radio Corp. of Canada Ltd., 1020 Islington Avenue, Toronto, Ontario, M8Z 5N5

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.

60 Audio Canada — December 1981
Now you can record your hero while your wife watches hers.

Gone is the hassle of deciding which TV programme to watch at the same time. Now your wife can watch channel 5 while you record your show on channel 9. It's as simple as that!
The Mitsubishi Video Cassette Recorder HS-300U gives you more features than any other unit presently available.
Like a unique 15 function wireless remote control that lets you run the recorder from any chair in the room. Speed search forward or back at 15 times normal playback speed. Slow motion and freeze frame. A unique audio dubbing function. 6-program, 6-channel, 7-day automatic timer for recording while you're out. And a 6-hour recording capability.
But, that's not all!

The HS-300U has many more features that deserve a second look. Advanced Mitsubishi microprocessor circuitry controls the 5 motor direct-drive system (no belts to wear out!) Feather-touch push button control. And a handy pause button for easy editing.
Take a good look at the new Mitsubishi Video Cassette Recorder HS-300U. It's the new look in video.

For the name of the dealer nearest you call:
Melco Sales Canada Inc., 900C Denison St., Markham, Ontario L3R 3K5
In Toronto - 495-7728 Out-of-Town - 800-268-3107
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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.

SA-X. HIGH BIAS IS RICHER FOR IT.
“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 headphone presently available."

"With these phones one does not have to compromise on maximum 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."

ON THE ATH-1...
"As for comfort... my listening panel was unanimous in rating the ATH-1’s on A."

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."

ON THE ATH-2...
"...certainly earns and is awarded the SAC (Society of Audio Consultants) Seal of Approval."

ON THE ATH-3...
"Sounds very similar overall to the finest."

What more can we say!

A complete line of critically acclaimed headphones from $39.95.

Audio Specialists Inc., 2134 Trans Canada Hwy S., Montreal, Quebec.