

UNIVERSITY of NEW BRUNSWICK



Courses Leading to B.A., B.Sc., B.Ed., B.C.L.
B. Admin.; Graduate courses for
Master's Degrees and Ph.D. in
Chemistry

- arts
- science
- engineering
- law
- forestry
- education
- business administration

Pre-Medical and Pre-Dentistry Courses
for information write the Registrar,
Fredericton, N.B.

THE DEFENCE RESEARCH BOARD

OFFERS

SCIENTISTS AND ENGINEERS

CHALLENGING ASSIGNMENTS

and

OUTSTANDING OPPORTUNITIES

in

RESEARCH and DEVELOPMENT

SPECIALIZATIONS

SCIENCE ENGINEERING

- CHEMISTRY
- MATHEMATICS
- PHYSICS
- STATISTICS
- AERONAUTICAL
- PHYSICS
- MECHANICAL
- ELECTRICAL
- CHEMICAL
- METALLURGICAL
- ELECTRONICS
- COMMUNICATIONS

OUR REPRESENTATIVE WILL VISIT THIS UNIVERSITY
ON JANUARY 23-24 TO CONDUCT INTERVIEWS

WHAT IS HI FI? An AMERICAN HUNTER

by HAZEN MARR

By now all of us have heard more than enough of the term Hi Fi. It has been reduced to the status of the soap opera cliché. In a very few years it has come to be known universally as a description of audio reproduction with a special mystical and expensive peculiarity. The mysticism is the natural result of taking a word that was invented by engineers for their own use and using it on an uninitiated public without supplying a proper definition or any definition for that matter. High Fidelity (if you will pardon my antiquated spelling of it) can only be used relatively in the sense that fidelity can be high or low etc. So in the same manner that soaps can claim to "get white things WHITER", so a phonograph manufacturer can claim to have high fidelity and mean almost nothing. "Fidelity" as applied to audio can be defined as a faithful reproduction; thus "highest fidelity" describes a situation where the listener cannot distinguish between the reproduction and the original.

20,000 Cycles Per Second

A few words about the requirements of truly high fidelity may be helpful. To begin with, since the human ear is able to detect sounds whose frequency lies between the limits of 20 cycles or vibrations per second and 20,000 cycles per second, a reproducer claiming to have high fidelity must do a reasonably good job of reproducing sounds within this range. By "reproducer" I mean the entire system from the microphone which picks up the musical performance to the loudspeaker which eventually emits a sound which represents what the microphone "heard", regardless of whether in the interim the sound was recorded, broadcast, transmitted over telephone wires or commented on by Rawhide. While doing this the system must not introduce any sounds of its own which were not present in the original performance and it must present all frequencies with the same relative intensities they had in the original. If you read through these cleverly-worded phrases you will come to believe that the only thing that can do what is required is the original and so I must add that a reasonably close approach to this can be attained and that in its present state of development high fidelity cannot take the place of the original.

Co-axial Speakers

One of the main things which keeps commercial "Hi Fi" from being high fidelity is the speaker and its cabinet. The cabinet should considerably more than provide a foundation for expensive hand-rubbed finishes (a fact not often apparent in much of the advertising). Proper cabinet design is necessary to help the speaker reproduce the lower end of the audio spectrum. How it does this is a fit subject for a book and so will be left out here. The speaker itself must respond to all frequencies which make up the sounds to be reproduced. Coaxial or multi-unit speaker systems which divide the audio spectrum into convenient segments and provide a speaker best adapted to handle each segment are best (and, need it be added, quite expensive).

Rumble in the turntable motor (which is not noticeable in ordinary phonographs which do not reproduce rumble frequencies) is another fault that can only be cured with money in the form of accurately-built parts in the turntable which do not vibrate.

Perhaps the largest single factor which lowers the quality of reproduction in Hi Fi and all equipment is a worn stylus. This condition not only makes the music sound like old chains being dragged over a tin roof but it performs on a miniature scale the much lauded operations of the Massey-Harris disc harrow on the record.

Expensive

To sum up; Hi Fi equipment is expensive. In this field more than in most others, you get what you pay for. Excepting the valid shortcut of home construction and the use of the good equipment available in kit form, true high fidelity is in a higher price range than is television.

PUZZLES

by James Wilkinson Miller

Concocted puzzles may permit
Solution, thanks to mortal wit;
But Nature's puzzle still resists
Our suppleness of mental wrists.

Human reason labors hard:
Here a shred and there a shard
Of an answer yet to find,
Firm and sure to conscious mind;

Here a glimpse, though dim and rough,
Of the hue of Nature's stuff;
Here a semi-intimation
Of its nice reticulation.

Poetry may seek to tell
How human hearts submit, rebel,
Wonder, or grieve, confronted by
Nature's unsolved how and why;

But when the poet fabricates
New puzzles then he abdicates.

in New Brunswick . . .

by WILLUS HAMILTON

In the long afternoons in the main office of the Shino Shoe Polish Company in the heart of Manhattan, Rodney A. Bowerson often dreamed of the day when he would be able to take time off from his manifold responsibilities and go off on a hunting expedition in the frigid Canadian wilderness. Ever since he had read those stories of the Mounted Police and the Couriers de bois back in the idle thirties, he had dreamed such dreams. And whenever he heard mention of the name of Canada, shivers ran the full length of his spine and he invariably said to either himself or his wife that he was going to Canada next year for sure. But many next years came and went and Rodney never got farther than Brooklyn. But with the coming of 1955 and Rodney's unexpected promotion to third vice-president of the prosperous company, his cherished dreams suddenly became a reality.

So now on this rather dull, damp, and cold October morning, Bowerson found himself lying prostrate on a bunk in one of "Fishy Jack's" sporting camps on the upper reaches of the St. John River in the wilds of New Brunswick. Right from his New York office, Rodney had contacted Jack after leafing through the pages of an "American Sportsman" magazine and discovering, quite by accident, his singularly intriguing advertisement.

The clock by his bed struck six o'clock. Bowerson groaned and opened his eyes, a little startled to find that he was actually not in another dream. He glanced sleepily over the side of his rusty bunk. Everything was just as he had left it the night before. His trunk full of clothes sat alone in one corner of the room; his miscellaneous travelling necessities looked up at him from an open suitcase on the floor; and four high-powered rifles lay impatiently waiting on the top of the rustic dresser.

Bowerson was somewhat surprised when he staggered out to breakfast to find, as he failed to do in his tiredness on the previous evening, that the sporting camp was much more modern than he had anticipated could be possible on these outer fringes of civilization. Television itself had surely crept from the States into the remotest corners of the world.

After breakfast, Rodney was assigned a guide for his convenience and he made ready for the excitement of the big day. Outside the air looked damp and cold but Bowerson, having heard and read about the terrors of the Canadian climate, had not left New York unprepared. Over his flannel trousers he pulled a pair of flashing red wool breeches, and over his grey shirt he wore two heavy sweaters and a red bushman's jacket lined with sheepskin an inch thick, and with an attached hood also lined with sheepskin. Over his shoes he wore a pair of sheepskin boots, and finally, he put on a pair of red mitts with sheepskin linings. With all these clothes over his protruding stomach, Rodney A. Bowerson resembled a closed telescope.

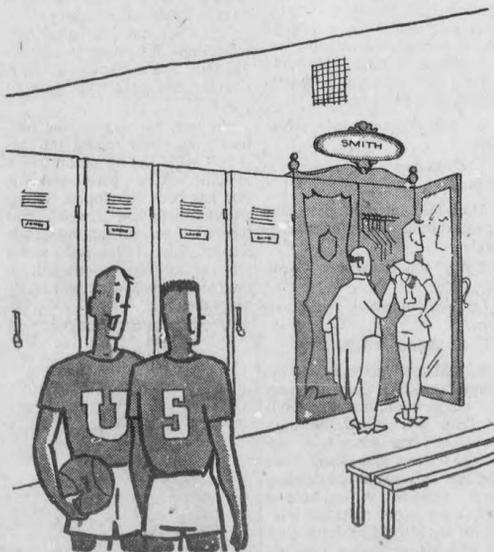
Rodney was tempted to advise his guide, a lithe, grudgingly dressed fellow, that he had better dress to suit the weather, but then his knowledge of how natives of any country can gradually condition themselves to all sorts of irregularities and discomforts, prevented him from saying anything.

A feeling of importance swelled up within Rodney when he took his first step into the woods. So quiet and peaceful was the wilderness that, except for the occasional smashing of a twig beneath his two hundred and fifty pounds, no sound was heard. He sincerely felt that he was embarking on a tremendous struggle with nature. To break the monotony of the hike Bowerson asked: "How many deer can we expect to see in a herd?" "What?" answered the guide. Bowerson sensed his mistake. "I said how many deer have you seen this season?" "Oh!" replied his partner. "I've seen two already and I've only been in the woods for three weeks". Bowerson made no answer and didn't ask any more questions.

At noon the sun escaped the mist that hid it in the morning hours and glared down brightly on Bowerson and his guide. Rodney found his body perspiring most avidly and this, coupled with his growing fatigue, compelled him to start back for camp early in the afternoon.

The trip back was almost unbearable to Rodney. His perspiration-soaked clothing clung to his aching body and irritated him in a dreadful manner. As the pair neared the camp, he groaned to his guide to go on ahead and leave him to stroll back in his own time.

When the guide had disappeared from view, Rodney's eyes and ears suddenly became alert in an instinctive way when he sensed a rustling in the bushes off to the right of his path. He stopped dead in his tracks, released the lock on his rifle, and peered into the woods, his eyes bulging out of his fat face like two golf balls. Then he saw it. It was a deer. He could decipher the golden brown of its flank as clearly as the green of the trees around its sleek body. He leveled his rifle in the direction of the animal and reached for the trigger with shaking fingers. He pulled. The rifle cashed and forced his shoulder backward with such violence that he nearly lost his balance. He looked up. The bushes suddenly parted and his target came crashing towards him. He elevated the rifle again and then let it fall to the ground with a sigh, as the brown cow walked contentedly out into the open.



He says he does it by Steady Saving
at the Bank of Montreal*

*The Bank where Students' accounts are warmly welcomed.

Fredericton Branch
Queen & Carleton Streets
DOUGLAS TROTTER, Manager

WORKING WITH CANADIANS IN EVERY WALK OF LIFE SINCE 1817

GRADUATES AND UNDERGRADUATES

— VARIOUS FACULTIES —

1000 CAREER OPPORTUNITIES
AND
1400 SUMMER POSITIONS
IN THE
PUBLIC SERVICE OF CANADA

Representatives of the Civil Service Commission will be on the campus to interview interested graduates and undergraduates.

The Place: CONFERENCE ROOM, STUDENT CENTRE.

The Dates: JANUARY 18 TO 20

The Time: 9:00 A.M. TO 5:00 P.M.

You are invited to see these representatives

OPPORTUNITIES

IN ONE OF CANADA'S
FASTEST-GROWING
RETAIL ORGANISATIONS

LEADING TO FUTURE RESPONSIBILITIES

We are planning to employ a number of university graduates who are interested in achieving a stimulating career. They should possess energy, resourcefulness, initiative, good health and a willingness to work.

Suitable academic background would be successful work in commerce, business administration, social sciences or general arts.

Suitable applicants will find challenging positions in the Mail Order and Retail sections of our growing Company.

Those invited to join our organization will find opportunities in sales . . . merchandising . . . accounting . . . credit . . . advertising . . . or any one of a dozen or more interesting activities leading in time to positions of responsibility.

A representative of our Company will be at the University on Monday, January 23, in order to interview interested members of the graduating class. Details available from the Public Relations office

SIMPSON-SEARS