

## ADVANCED ELECTRONICS

Equipped with the latest electronic devices, a team of Department of Transport radio engineers and technicians, working in a fine new laboratory on Ottawa's outskirts, is providing valuable service to business, industry and communications. Their work was reviewed by Transport Minister George Hees recently, when he toured the new laboratory, accompanied by top officials of the department's Air Services.

The laboratory staff performs a number of tasks, including type approval of new electronic and radio equipment, evaluation of new techniques of communications, calibration of field equipment, combatting radio interference, repairing, maintaining and, in some cases, fabricating departmental equipment.

Their type-approval work includes the testing of prototype units of electronic and radio devices, against departmental specifications to determine their suitability for licensing and marketing. In this field they examine such items as land, sea and air mobile gear, including radio receivers and transmitters, and point-to-point communications units.

New developments in communications are studied and carefully tested in order to assess their value accurately and fairly and to determine their possible worth in the departmental operations.

Calibration of field equipment is an important part of the laboratory's work, for the complicated electronic precision measuring devices used by field men must be kept at the highest possible pitch of accuracy.

### STUDYING INTERFERENCE

About a quarter of the laboratory work involves the testing of new radio, electronic and other devices to determine their potential for radio interference and to find means of reducing or eliminating such interference. For this purpose, the staff co-operates with manufacturers and importers of such equipment, so that their products, when put on the Canadian market, will be free of interference. Many devices fall into this category, from electrically-controlled garage doors to everyday household appliances.

The laboratory is also used for training staff in measurement techniques and the use of the equipment of the Radio Regulations Division.

In the workshop and garage, engineers and technicians check and install the special equipment used in the 72 radio interference-tracking cars operated by the field inspection offices of the department's Telecommunications and Electronics Branch. These cars are kept at various points across Canada and serve as electronic "watchdogs", by tracing radio interference from many common sources, ranging from faulty telephone or hydro installations to the worn out motor on a floor polisher.

Features of special interest in the laboratory include an environmental-test chamber and three "screened rooms". The former looks to the layman like an oversized refrigerator with a window in the door. Conditions inside can be adjusted to simulate any atmospheric change to which equipment might be subjected during normal use. Atmospheric pressure can be changed to duplicate conditions at altitudes up to 80,000 feet, a necessary factor in checking, for instance, airborne radio devices. The temperature can be dropped to 50° Fahrenheit and the humidity range runs from bone-dry to sopping wet.

The "screened rooms" are so designed that radio equipment can be taken into them and tested, with the certain knowledge that no outside electrical interference is possible. No unwanted signals will enter the cage. One room is enclosed by two layers of fine copper screen. The other two have double-walls of steel. All have to be air-conditioned so that engineers can work inside them with all the doors closed to provide complete "shielding" of the equipment being tested.

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## ESKIMO GRAMMAR

When an Eskimo says "Kuyanamik" he means "Thank you", but, literally translated, his word means "Oh, the cause for gratitude". This is one of the simpler idioms taught in "A Grammar of the East and West Coasts of Hudson Bay", just published by the Department of Northern Affairs.

"Many people working in the north must learn to speak Eskimo fluently" Northern Affairs Minister Alvin Hamilton said in announcing the new book. "As the north opens up, knowledge of the language is important not only for administration and business but also as a bridge between the culture of southern Canada and that of our Eskimo citizens". The result of twelve years' work by Alex E. Spalding, a Winnipeg lexicography student, the new publication is the first adequate grammar in English of central and eastern Arctic dialects. Eskimo grammars have been published in Danish and German, but they were based on the Greenland and Labrador dialects. Recent translating dictionaries are available in Eskimo-English and Eskimo-French, but they deal primarily with the vocabulary of the language, rather than its structure.

Mr. Spalding's work illustrates the grammatical points with a running commentary of idiomatic dialogue in the dialect of the west coast of Hudson Bay. Footnotes give the east-coast equivalents. Besides being a text-book, the study makes a valuable contribution to knowledge of the language and to the development of a standard way of writing and spelling it in Roman script.

The 250-page book, distributed (at \$1.00 a copy) by the Queen's Printer in Ottawa, con-