

RADIO TELETYPE

By Ken Creelman E. E. '50 and Bert Cosman E. E. '50

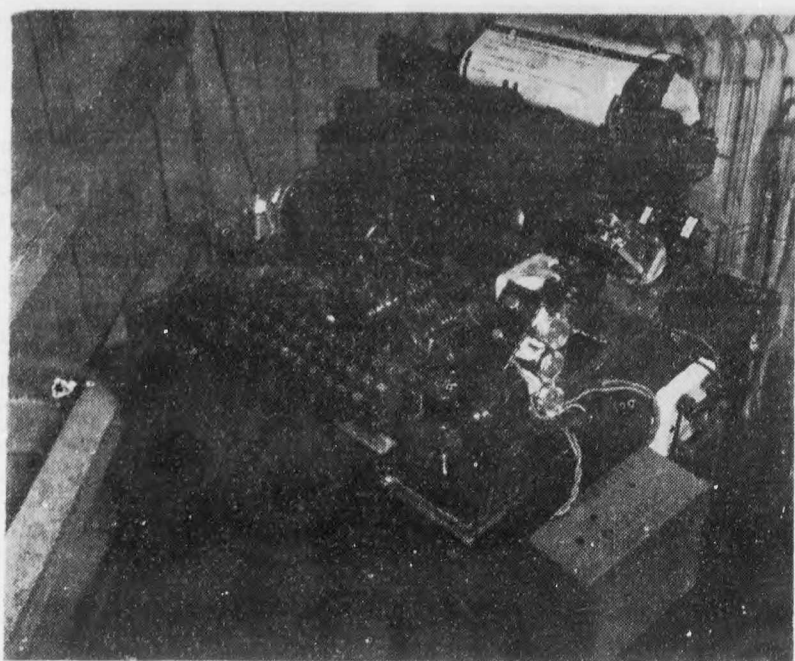
If you have tuned over the short wave bands of your radio and heard some wierd noises that didn't seem to make any sense, they may have been teletype signals or possibly telephoto signals. Many of these are trans-Atlantic news stations. Others send private radiograms overseas and to ships at sea. The military services of Canada and the United States are using radio teletype to an increasingly great extent for their signals traffic. It is somewhat amazing to see news printed out in front of you after tuning in one of the teletype stations.

For our thesis work in our senior year of Electrical Engineering a unit to receive radio teletype signals was constructed. The Electrical Engineering department had two obsolete Model 12 page printers. These teleprinters were of the type used in news offices of radio stations and newspapers a number of years ago. They normally operated from the telegraph lines which are connected to the central newsrooms of Canadian Press and British United Press. While these lines were not available to us there are a number of radio stations transmitting news with the same telegraphic code as the Model 12, but in the form of two radio frequencies. This code, called Baudot, it not like Morse code but is made up of "spaces" and "marks" rather than "dots" and "dashes". The problem for us was to receive these radio signals and convert them into marks and spaces to operate our teleprinter.

The first thing that had to be done was to change the speed of our printer from 40 words per minute to 60 words per minute to correspond to the standard speed of the stations we wished to receive. Special gears were obtained through the kindness of Canadian Pacific telegraphs in Montreal to convert our machine to the 60 word speed.

A communications receiver was a necessity also and luckily one was available in our laboratory. The main item to construct was a discriminator unit consisting of tuned amplifiers, detectors, and D. C. amplifiers. The tube complement of the unit was 4-6J5's, 2-6H6's and 2-6V6's. Four special transformers were obtained from a manufacturer who designed them especially for this use. A power supply delivering 250 volts at 100 milliamperes was also constructed to operate the discriminator unit.

After the procedure of tuning, obtaining frequency response curves and measuring teletype distortion, the equipment was tried out. Tuning the receiver to the radio teletype signals was critical at first but this adjustment was mastered



—Duke
Teletype Printer in the Electrical Lab. used in the Cosman-Creelman Radio-Teletype Project.

ODE TO A FORESTER . . .

I think that I shall never see,
A clod so dumb as you seem to be;
When from my lofty perch I see
You staring fondly at a tree,
A tree which dogs would fain go near,
But which to you seems Oh so dear.
And how the citizens do shout,
To see you, great big sodden lout,
Chase the sexy coeds, slim,
From tree to tree, and limb to limb—
You never seem to get the dame,
For coeds play a subtler game.
Like a homing pigeon back to roost,
When for some clues you need a boost,
Who is it that you come to see?
But the Engineers from U. N. B.

With abject apologies to Joyce Kilmer and our coeds for even associating them with (Ugh!) Foresters.

with a little practice. So far we have copied about a dozen different teletype stations transmitting news, stockmarket quotations, radiograms and military traffic. Some of the traffic is in cypher form for secrecy purposes. The results of our work have been gratifying and worth our many hours of work since October.

TICKETS FOR
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Red 'N Black Revue Telephone Building Toured By Radio Club

Once again, as in the two past years, the Senior Class Up the Hill is presenting the Red 'n Black Revue. Originated by the Class of '48, the Revue is a community effort under the direction of the Graduating Class. Bringing forth all the available acting talent at UNB it affords to the students as well as to the citizens of Fredericton an event which may be looked forward to. For three evenings—this year March 1, 2 and 3—the auditorium of Teacher's College will be the scene of a stage show which has no competition in the Maritime Provinces. A Revue which presents skits, songs, chorus lines and feature soloists, it is unique in this part of the country.

The thrill of producing such a show belongs to the marvellous cast which includes students from the Freshman to the Senior Class. Many hours of gruelling work in rehearsal are put in by these budding stage aspirants but they enjoy doing it.

Time given by these young actors and actresses is free. Proceeds from the show go to the Senior Class which uses them in order to sponsor the Senior Dance during Encaenia week. The remainder of the funds is handed over to the Life Executive of the Graduating class to be used to defray any future correspondence costs or expenses which the class as a whole might incur.

Tickets for the show of the year will be available shortly. The critics who have had a preview of the production highly recommend it and hope that every one will be present on March 1, 2 and 3 to enjoy it.

What well-known Senior Electrical Disc Jockey leaned against the doorbell at 1 A. M. Friday morning when bidding his girl friend good night? We hear that the landlady was very annoyed.

Wednesday, Feb. 1—The U.N.B. Radio Club met at the office of the New Brunswick Telephone Co. on King Street and were met by Mr. Ralph Williams who conducted them on a tour of the building, showing them how the exchange in Fredericton is run. Some of the luckier fellows were taken upstairs where they were allowed to watch the long distance operators at their work. Mr. Williams and two assistants explained the workings of the automatic dialing system and also showed the group a teletype machine in operation. They were then taken to the room containing the emergency power supplies and equipment used in producing the dial tone and the busy signals etc. The functions of this equipment were also explained to the interested groups.

Finally the groups arrived in the testing room and were shown how the various instruments are used to keep the communication lines in working condition.

All questions were answered very ably by the group's hosts.

Red 'n Black Revue

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Thurs. 16 — Engineering Bld.
Fri. 17 — Arts Bld.

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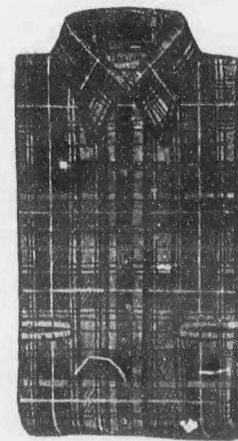
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