

Wireless Workshop at Esquimalt Busy Place

Repairs Gear From Various Government Stations Along Coast and Carries on Research Work—Varied Stores Are Kept on Premises

A squat brick building bordered by fir trees and surmounted by two 180-foot white painted masts, the Dominion Government wireless workshop, situated on a rocky perch just above the Esquimalt graving dock, gives one but a small conception of what is housed within, and what work is carried on by the only institution of its kind in Western Canada.

The workshop was established in 1917 for the purpose of repairing gear from Government stations on the coast, and for research work along the lines of short-wave transmission, reception, calibration of instruments and development of efficient radio receivers. The fifty-watt continuous wave transmitter which is used as an auxiliary to the big set at Gonzales Hill, was made at the shop, as was the 200-watt outfit used at Digby Island, near Prince Rupert. The short-wave outfits are used for interstation communications when traffic is bad on the higher wavelengths, or when weather conditions affect the more powerful transmitters, and so far have proved invaluable at times.

Other apparatus made at the workshop includes the main receiving set used at Gonzales Hill, which is at the present time one of the most modern and efficient types of receivers for commercial work yet evolved. Quartz crystals, used to keep the wavelength of Government transmitters constant, are also ground to specifications on the premises. The machine shop contains everything from a bandsaw to automatic milling machines and is fully equipped to repair both machinery and radio apparatus used in all stations.

RADIO STATIONS

Radiophone stations are at present located at Merry Island, Cape Beale, Bamfield, Pachena and Carmanah, the principal work being carried on with tugboats and other craft equipped with radiophones, which are rapidly increasing in number on the coast. Alert Bay, Cape Lazo and Point Grey also have telephonic apparatus, while Government code transmitters are located at Pachena, used for direction finding work, Gonzales Hill, Estevan, Bull Harbor, Dead Tree Point, Digby Island, Alert Bay, Cape Lazo, Point Grey and Merchants' Exchange at Vancouver. All these stations are served by the wireless workshop, in charge of Mr. L.W. Stephenson and Mr. J.D. Taylor with a staff of nine helpers.

Two elaborate battery charging outfits are maintained at the workshop, one capable of charging twenty accumulators on a double circuit system and the other a small motor generator set for taper charging individual batteries. A special tube rejuvenator working off the 110-volt circuit is used to revive tubes possessing thoriated filaments which have given up the ghost before their time. Distilled battery water is made instantly by an automatic electric still connected directly to the water tap.

STORES ARE KEPT

Stores are kept on the premises, from aerial mast equipment, tubes, condensers and testing apparatus, to parts for gasoline engines used to drive generators for power in the stations far from cities and power houses. Panels of all sets and apparatus constructed at the workshop are engraved by a special machine giving the finished article a necessary commercial appearance. All cabinets used are also made in the woodworking part of the machine shop.

The testing room in the front part of the building has the appearance of a large wireless cabin on some ship. Here there is a half-kilowatt spark transmitter used for emergencies, such as a break in the telephone service. About a year ago the set was used to communicate with Gonzales Hill when the telephone was out of order for three days and proved very efficient for the purpose of handing out no "wrong numbers".

A special two-tube short wave receiver used at the workshop uses the Hartley circuit, and with a short aerial outside often succeeds in intercepting signals from as far as London, and radio music regularly from Schenectady.

In the testing room an Admiralty substandard wave metre is carefully kept for testing standard wave metres and is never moved from its location to ensure the utmost accuracy. Other apparatus includes a fifty-watt driver to test aerial resistance and to determine other necessary constants, and a calibrated oscillator ranging from twenty to 3,000 metres, which is used to calibrate receiving outfits.
