

# the Force

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prairie divisions were put into operation, with the exception of the one at Lethbridge, Alta., which was not ready for use until late in autumn.

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BASE stations were established in "D" Division at Winnipeg and Brandon, in "F" Division (Saskatchewan) at Regina, Saskatoon and Swift Current, and in "K" Division (Alberta) at Edmonton, Calgary and Lethbridge. Practically all police cars and detachments at points within range of these stations, where the required amount of electrical power is available, were equipped with pretuned receivers and some of the cars at strategic locations in each area were fitted both with transmitters and receivers. In addition the detachments at Selkirk and Portage la Prairie in Manitoba were fitted with two-way sets so as to permit communication with Winnipeg on F.M. (frequency modulation) radio telephone, and plans are under way to similarly equip Moose Jaw and Weyburn Detachments for communication with Regina.

The base stations, except for the one at Lethbridge, operate on an intermediate frequency which is just above the broadcast band. The very high ground conductivity in most parts of the prairies lay behind the choice of this frequency, and to illustrate the importance of this

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factor it need only be said that the range of a station similar to those in the prairies is approximately four times less in Eastern Canada during daylight hours when the ground wave predominates.

In the original "D" Division system each car was equipped with a 15-watt transmitter, and a specially-developed antenna imparted the equivalent of 225 watts over a conventional whip aerial to the transmitter. This contributed largely toward attaining the ranges of 50 to 75 miles realized under reasonably quiet conditions. The sets used A.M. (amplitude modulation) and operated on an intermediate frequency but due to low power and the fact that the car antennas were necessarily limited in height the reception and transmission of signals were affected considerably by static, especially in the summer and autumn months when consistent communication is of paramount importance.

F.M. equipment operating on a very high frequency was developed in the United States in the last decade and is capable of suppressing noise in the presence of signals, providing the signal level is about twice that of the noise; the only static picked up on these frequencies is caused by local atmospheric disturbances, as distinguished from those arising thousands of miles away, and man-made ones. Man-made interferences can be very troublesome and that, along with such other factors as that an intermediate frequency transmitting ground system takes up about four acres of land, is why as a rule stations are rurally located. The energy on F.M. frequencies

*The up-to-the-minute radio system now in use by the R.C.M.P. forges a network of invisible links that bind many of the Force's rural detachments together, and the resulting greater coordination and efficiency has given a new impetus to Canadian law-enforcement's relentless fight against crime.*