Experimental Mobile Radio Equipment at London Airport

An experimental mobile VHF radio scheme which, if generally adopted, could alleviate many difficulties in the ground operations of the world's airports, has been installed recently by the Ministry of Civil Aviation at London Airport. The General Electric Co. Ltd. supplied the equipment for the experiment at the request of the Ministry Essentially the equipment is a mobile extension of the airport telephone exchange and allows any subscriber on that exchange to keep in touch with a mobile vehicle which may be up to ten miles away from the airport centre, a range which is ample for all airport services. Although it is too early yet to say whether the scheme can be adopted in its present form, it is possible to outline the advantages which accrue from its use.

The driver of a vehicle towing an aircraft from its hangar to the loading apron preparatory to its take off may wish to inform his company's duty officer of some unforeseeable delay, or to obtain permission from the airport traffic control staff to cross an intersection or duty runway Loading apron control staff also have urgent last minute messages for the office staff of their company or for other airport staff. Passing such messages by messenger or walking to the nearest telephone entails a delay which might well involve the late departure of an aircraft.

The experimental system offers a solution to this problem. Because the radio-equipped vehicle gives immediate, direct communication through the

Fig. 1.—A mobile VHF transmitter/receiver installed in a vehicle as a mobile extension of London Airport telephone exchange.

Fig. 2.—The control unit and telephone handset of G.E.C. mobile VHF radio equipment.

airport telephone exchange with any airport service, much time is saved. The system is also invaluable for airport maintenance operations and all other ground functions.

The amplitude modulated 10/12-watt VHF duplex transmitter/receiver, which is installed in the rear of the vehicle, operates from the vehicle battery on frequencies between 70 and 180 Mc/s in certain specified bands including the frequency allocated to vehicles towing aircraft. A separate control unit conveniently sited close to the driver and passengers incorporates a loudspeaker, control switch and volume control.

In the airport building, an exchange matching unit connects an existing transmitter/receiver to the airport telephone exchange, thus allowing the extension of the exchange to a mobile subscriber Associated with this unit is an indicator unit on the telephone exchange board. As an extension to the scheme, the fixed transmitter/receiver could be sited at any distance up to five miles from the telephone exchange itself, provided a line connexion were available.