

# Railway Signaling by Wireless

THE Swedish radio firm Aga-Baltic A/B of Stockholm has developed a new system of wireless signaling for use in switching. The new arrangement is being tried out in practice at the Malmo railway depot. Electric locomotives, with an overhead distribution system, are in service in these yards.

The wayside equipment at the switching yard consists of an SW transmitter modulated by a number of different audio frequencies, each corresponding to a so-called "command impulse" operating a loud-speaker and flash signals connected with a receiver installed in the engine in front of the driver's seat. The transmitter is housed in a small house and can be operated either at that point or from a control-box out in the yard.

By pressing a certain button in the control-box the yardmaster may direct the engineman by means of audible signals in the loud-speaker and the flashing of small panes on which the command can be read. The note delivered by the loud-speaker serves to

draw the attention of the driver to the fact that a new command is coming on. A given signal stays on until it is changed by the yardmaster pressing a different button in his control-box. In that case the first flash lamp is extinguished and a new one lights up. If a special command not included in the standard range of flash signals is to be given, the yardmaster operates a special button which releases a flash message telling the driver to switch his set over to microphone reception, and a verbal order can be given.

The arrangement works equally well both with electric and steam loco-

motives. It has been found in practice that but very little interference occurs despite the fact that the arcing at the bow collectors is sometimes pretty bad. The invention is the result of co-operation between the company's engineers and the technical staff of the Swedish State Railroads. The railroad is extremely satisfied with this signaling system and similar plants are now to be installed at several larger depots in other parts of the country.

Right—the transmitter. Below—the receiver and the signal panel. The five panes contain short commands, viz. in downward order: Stop—Reverse Slowly—Reverse Faster—Ahead—Switch over to Loud-speaker.

