COSSOR D.D.4.

4 VOLT ·75 AMP. INDIRECTLY HEATED DOUBLE DIODE

The D.D.4 is a valve designed primarily for use in sets in which automatic volume control is to be provided. It consists of two diodes, one of which is intended for detection of the signal, while the other provides the voltage necessary for A.V.C. These derive their electron current from the same cathode. The D.D.4 in many cases should be followed by a stage of L.F. amplification which precedes the output valve ; for this purpose the user has a wide choice of valves (e.g. triode, variable-mu screened pentode, etc.) to suit the particular conditions imposed by the output valve. If the diode is used in combination with the high sensitivity Cossor output pentode 42 M.P./Pen, however, the L.F. stage may be dispensed with and the 42 M.P./Pen may be fed directly from the diode. This method is particularly recommended. By using a separate diode to provide the A.V.C. voltage, it becomes possible to prevent the A.V.C. System from coming into operation unless the signal would overload the output valve in its absence. In this way the sensitivity of the receiver is in no way impaired by adding automatic volume control to it. Such a system, in which A.V.C. only comes into use on a signal exceeding some pre-arranged strength, is called " delayed A.V.C.' In the D.D.4 voltage delay is arranged by a small negative voltage on the anode of the diode which is being used for A.V.C. No current will flow until the peak voltage of the signal exceeds the delay voltage, after which rectification will take place in the normal way, providing a D.C. voltage change which can be passed back to the grids of the preceding variable-mu amplifier valves to control the sensitivity of the set.

It is to be noted that automatic volume control should only be fitted to receivers having adequate H.F. or I.F. gain. No purpose is served in fitting it to receivers of low sensitivity.