

# CHOOSING AN OUTPUT VALVE

**T**O meet varying conditions of service, different types of Mullard output valves are available, the choice being governed by the following factors: types of speakers, volume required, strength of signal provided by the earlier stages of the receiver; nature and amount of high tension supply available.

**POWER VALVES.** Three-electrode power valves such as type P.M.2A should be used where moderate output is required from a small speaker operated by a 2-valve set or portable, using dry high tension batteries.

**SUPER-POWER VALVES,** such as Type P.M.202 give sufficient output to drive a large speaker at good volume, but they require a stronger input signal. Their use is thus indicated in 3 or 4 valve sets. The high tension consumption of super-power valve is naturally higher than that of power valves and an H.T. eliminator is, therefore, recommended.

**PENTODES** are extremely sensitive output valves and give their full output for comparatively small grid input signals. A pentode can, therefore, be used

in sets having no other low frequency stage. Type P.M.22A low consumption pentode should be used in small sets where economy in H.T. supply is of vital importance. Type P.M.22 is a super-power pentode capable of operating a medium size moving coil speaker at good volume.

**QUIESCENT PUSH-PULL** is a method of employing two output valves in a single stage to give double output for a high tension consumption substantially less than that of a single valve. Mullard types P.M.2A, P.M.22A, and P.M.22 can be used with remarkable success in Quiescent Push-Pull.

**CLASS "B" AMPLIFICATION** is somewhat similar to Quiescent Push-Pull in that each of two valves amplifies alternate half-cycles of every signal impulse, the total high tension consumption being substantially proportional to the audio-frequency output. In this case, however, a special output valve comprising two triodes in a single bulb is employed. Details of the Mullard Class "B" valve, type P.M.2B, are given on pages 16 and 17.