

readings the following voltages are applied, viz., (1) alternating voltage on the anode, the R.M.S. value of which is equal substantially to 1.4 times the rated D.C. voltage, and (2) grid potentials differing by an amount equal substantially to twice the difference of the normally accepted D.C. grid voltages; so that the meter reading indicates a proportion of the actual published mutual conductance figures.

2. A method as in Claim 1 wherein for the same meter conditions the current for the filament or heater is varied to the requisite amount without thereby varying the potentials applied to the grid.

3. A method of determining the mutual conductance of a radio valve according to Claim 1 or 2, wherein for the same meter conditions D.C. current is used for impressing potentials of ± 1 and -1 volts on the grid.

4. A method of determining the mutual conductance of a radio valve according to Claim 1 or 2, wherein for the same meter conditions the potentials respectively applied to the grid comprise 1 volt A.C. in phase with the alternating anode voltage and 1 volt A.C. 180° out of phase with the anode voltage.

5. A method as in any of Claims 1 to 4 wherein for the same meter conditions an alternating voltage, the R.M.S. value of which is numerically equal to the rated D.C. voltage, is applied to the screens of a H.F. screen pentode, or other H.F. screen grid valve.

6. A method as in any of Claims 1 to 4 wherein for the same meter conditions an alternating voltage, the R.M.S. value of which is 1.4 times the rated D.C. voltage, is applied to the screen of an L.F. pentode.

7. Apparatus for obtaining a reading of mutual conductance of radio valves on a meter in the anode circuit having means for feeding selected alternating voltage to the valve anode, means for feeding voltage to the valve filament or heater, an A.C. winding or D.C. voltage supply for applying equal and opposite potentials on the grid, said winding or voltage supply being separate from the filament or heater circuit, and means for varying the voltage applied to the filament or heater without appreciably affecting the voltage applied to the grid.

8. Apparatus as in Claim 7 having regulatable means for feeding unsmoothed half wave rectified current through a

resistance in a reverse direction through said meter.

9. Apparatus as claimed in Claim 7 or 8 wherein means are provided for feeding selected alternating voltage to the valve screen.

10. Apparatus as claimed in any of the preceding Claims 7 to 9 wherein means for adjusting the anode current has markings associated therewith indicating rated D.C. anode voltages but the apparatus is arranged to provide alternating voltages, the R.M.S. values of which are 1.4 times these indicated voltages.

11. Apparatus as claimed in any of Claims 7 to 10 having adjustable means for supplying alternating current to the screens of H.F. screen pentodes, screen grid valves, the R.M.S. values of which are equal to the rated D.C. voltages and are indicated on appropriate markings associated with said means.

12. Apparatus as claimed in any of Claims 7 to 11 having means for supplying to an L.F. pentode screen an alternating voltage, the R.M.S. value of is 1.4 times the rated D.C. voltage.

13. Apparatus as claimed in any of Claims 7 or 9 to 12 wherein a device is provided for "backing off" the initial anode current.

14. Apparatus as claimed in Claim 13 wherein the "backing off" device comprises a potentiometer element arranged so that the rate of change of volts increases with increase of "backing off" current, associated with an adjustable resistance arranged so that the change of resistance for degree of adjustment becomes less as the backing off current is increased.

15. Apparatus as claimed in any of Claims 7 to 14 wherein separate secondary transformer windings supply current to the grid and anode.

16. Apparatus as in any of Claims 7 to 15 having means for varying the voltage applied to any other electrode of the valve without varying the potential to the signal grid.

17. Apparatus for testing radio valves substantially as described and illustrated.

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