## Type 483 Output Meters

THE success of the TYPE 486 Output Meter introduced about two years ago by the General Radio Company has been such that it appears desirable to extend the line in order that instruments may be available for use in connection with the various types of receivers now commercially available. The TYPE 483 Output Meters as well as the TYPE 486 Output Meters are essentially alternating-current voltmeters of the copper-oxide-rectifier type. The instruments include multiplying networks so arranged that a constant load impedance is presented at the terminals. In the several meters now listed, these impedances have been chosen to have the same order of magnitude as the loads commonly employed with radio-receiving circuits. The output meter, therefore, serves both as a test load and as an instrument for measuring the voltage developed across this load.

Instruments are now available for use with four general types of receiving circuits. These may be listed under their characteristic load impedance as follows:

4000-Ohm Load: This is the correct value to use with receivers having a single 245-type vacuum tube or having an output transformer for working into 4000-ohm loudspeakers.

8000-Ohm Load: The majority of broadcast receivers now in commercial production employ push-pull 245-type tubes. These should work into a load impedance of 8000 ohms. Output meters designed for this value are, therefore, ideally suited for measurements directly across the plate circuit.

20,000-Ohm Load: The advent of the 230- and 231-type tubes has resulted in the design of improved battery-operated receivers. Circuits employing 231-type tubes in push-pull have an output impedance of approximately 18,000 ohms. There is also an ever-growing demand for an output meter to be used in connection with code receivers designed for headphone operation. Both of these above requirements will be met by an output meter having a characteristic impedance of 20,000 ohms.