The telephone circuit analyser operates over a frequency range from 75-3000 cycles and measures harmonic currents down to 0.05 microampere and voltages as small as 0.005 millivolt. It employs multi-stage valve amplifiers and two duplicate inter-stage selective circuits. Special devices for suppressing the fundamental component and for balancing out harmonics generated in the input transformers are provided.

A discussion of the desirability of ohmic potential dividers in the test room, instead of those of capacitive type or inductive couplings, leads to the remark that the first have scarcely been used in the past because of the lack of non-inductive and capacity-free resistances. The use of Loewe resistances, which with associated leads have a capacity of only 2 cms., is recommended.


The method consists essentially in charging the capacity to be measured to a known voltage and then discharging it through a resistance, one end of which is connected to the grid of a triode. This grid (in whose circuit no current was flowing previously) is suddenly subjected to a change of potential. A ballistic galvanometer in the anode circuit integrates the corresponding change of anode current over the time of the discharge and thus gives a measure of the charge of the capacity.


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