Collins Model 54-A Single Rod SOIL RESISTIVITY APPARATUS

RANGE: 0-250,000 OHMS-CC



FEATURES:

- 1) 40" Rod-Standard (50", 60", 72" Optional)
- Field Calibration Check(See Test Function on Reverse)
- 3) Pin-Point Tuning
- 4) Operates on 9 Volt Battery

HE Model 54-A soil resistivity apparatus is lightweight, accurate and simple to operate. It lends itself equally well to spot checks of soil or water resistivity, or to detailed investigations typical of pipe line survey work.

Complete apparatus consists of a 40" calibrated hexagonal steel rod with handles and insulated tip, compact A. C. resistivity bridge in leather carrying case, and earset for balancing bridge by null method. Rod is simply pushed into soil to the desired depth and connected to bridge. A. C. resistance between tip and body of rod is determined by balancing bridge and soil resistivity in OHM's - CC read direct on dial. Bridge weighs only $1 \frac{3}{4}$ pounds and is neatly assembled in a 6" x 3" x $2\frac{1}{2}$ " polished ebony bakelite case.

Soil rod is made of cold drawn hexagonal steel with hardened steel tip insulated by a nylon washer. Connecting lead from tip is brought up through the body of the rod to insulated terminal. Other terminal is grounded to body of the rod. Units furnished complete with soil bridge, rod, case, earset, connecting leads, and instructions.

Rod is lightweight yet rugged for field usage. It may be used with any standard resistivity bridge and is also very useful as a pipe locating and contact bar for taking pipe potential measurements and long line currents.



OPERATING INSTRUCTIONS FOR Model 54-A Soil Bridge

With soil rod inserted in soil to be tested connect leads to soil rod and binding posts on MODEL 54-A marked "LEADS" (#1). Plug ear set into jack marked "PHONES" (#2), flip toggle switch (#3) to "ON" position, bring tone to "NULL" by means of dial pointer (#4). The resistance of the soil will be the dial reading in OHMS per cc.

TEST FUNCTION:

- 1) Disconnect leads from soil rod.
- 2) Turn power switch (#3) to "ON".
- 3) Push & hold test switch (#5) "UP".
- 4) While holding, move dial pointer (#4) until tone "NULLS". Reading on dial should match test position value, if not, reset pointer.
- 5) Push & hold test switch (#5) "DOWN".

 6) Repeat step #4. (It is best to check the MODEL 54-A at both points.)

 #5 TEST SWITCH

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 #2 PHONES (For Ear Set)

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 *3 POWER SWITCH

