

CATALOG NO. 37008



## SOIL BOX

- FOR QUICK AND ACCURATE MEASUREMENT OF RESISTIVITY OF A SAMPLE OF SOIL, WATER OR OTHER ELECTROLYTE
- FOR FIELD OR LABORATORY USE

### FOR USE WITH:

- ANY MODEL OF M.C.M. MULTI-COMBINATION METER
- NILSSON MODEL 400 SOIL RESISTANCE METER
- MEGGER AMMETER AND VOLTMETER OR MILLI-AMMETER AND MILLI-VOLTMETER WITH EXTERNAL BATTERY.

#### MADE OF PLEXIGLAS;

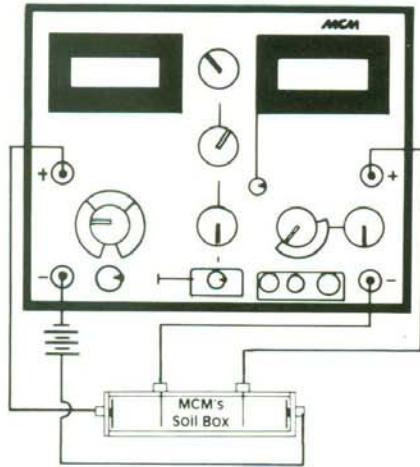
Inside dimensions are approximately 2.5" wide by 9.0" long by 1.5" deep (4cm x 22cm x 3cm). Corners are rounded for easy cleaning. Current plates are made of stainless steel. Potential pins are made of brass and are easily removed.

#### SOIL/LIQUID RESISTIVITY

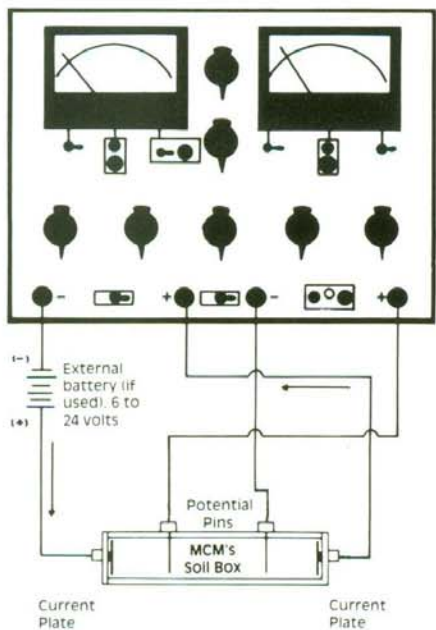
The dimensions of the box have been chosen so that the measured resistivity - when the box is filled level - can be expressed in ohm-centimeter, which is universally accepted terminology. When used with any M.C.M. multi-combination meter (or separate volt and ammeter), and external battery, the resistivity of the sample can be calculated as shown below:

$$\text{RESISTIVITY} = \frac{\text{CHANGE IN POTENTIAL BETWEEN PINS } (\Delta V)}{\text{CHANGE IN CURRENT } (\Delta I)}$$

Sketches on reverse side of this sheet show typical meter connections.



(1)



(2)

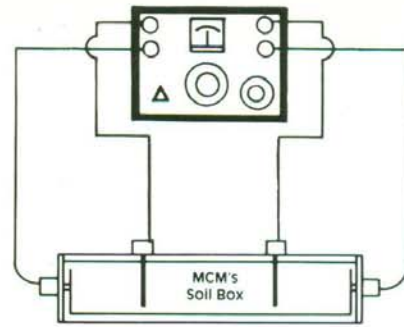
**RESISTIVITY OF SOIL OR WATER BY SOIL BOX METHOD USING:**

- (1) MCM B3D DIGITAL MULTIMETER
- (2) MCM B3A2 ANALOG MULTIMETER

**NOTE:**

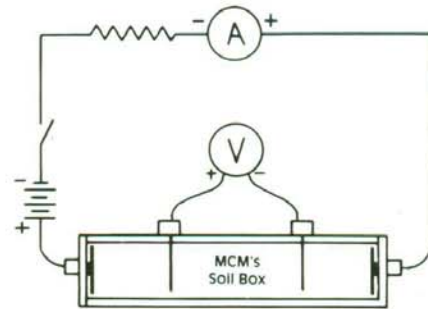
1. When using multimeters be sure readings on both meters are obtained simultaneously.
2. Potential must be in volts and current must be in amperes to obtain result in ohm-cm.
3. Multiplication factor for the M.C.M. soil box is 1.

NILSSON MODEL 400 SOIL RESISTANCE METER



RESISTIVITY (OHM-CM) = R

**RESISTIVITY OF SOIL OR WATER BY SOIL BOX METHOD USING AN EARTH RESISTIVITY MEASURING SET**



RESISTIVITY (OHM-CM) =  $\frac{V_{on} - V_{off}}{A}$

**RESISTIVITY OF SOIL OR WATER BY SOIL BOX METHOD USING A COMBINATION OF METERS AND BATTERIES**

**TYPICAL CONNECTIONS FOR USE OF SOIL BOX WITH VARIOUS TYPES OF INSTRUMENTS**

**SOIL BOX TEST LEADS**

2 Foot Long,  
2-Black, 2-Red,  
W/Banana Plug and pointed  
Plug Ends

**Catalog No. 37009**

4. When used with the Nilsson 400 Soil Resistance Meter or Megger, no calculations are necessary because the multiplication factor is 1 ohm-cm. Therefore, the resistivity value of the sample can be read directly off the meter dial. Refer to the instruction sheet included with each meter for additional information.

 송암엔지니어링(주)

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