
22 Soil Moisture Meter

☐ Talked to your houseplants recently? Well, if they could talk back, you'd hear plenty of complaints—most of them about water. Too much of the wet stuff is just as bad as too little. To assist you with the watering, try this little soil moisture meter. Note that you will need to

construct a probe assembly consisting of two metal spikes mounted in a wooden or plastic block. For the sake of uniformity, use the dimensions supplied. The spike can be nails or pieces of heavy wire (#8). Stick the probe assembly into the soil surrounding a just-watered

plant and adjust R5 for a deflection around mid-scale on M1. Thereafter you can use the meter to tell whether your plants are too wet or too dry.

Note that different plants are apt to prefer different degrees of wetness.

PARTS LIST FOR SOIL MOISTURE METER

C1, C2—0.01- μ F ceramic disc capacitor, 35 VDC

D1, D2—1N914 diode

OC1—741 op amp

M1—0-1 mA DC meter

R1—6800-ohm $\frac{1}{2}$ -watt resistor, 10%

R2—15,000-ohm $\frac{1}{2}$ -watt resistor, 10%

R3—1000-ohm $\frac{1}{2}$ -watt resistor, 10%

R4—10,000-ohm $\frac{1}{2}$ -watt resistor, 10%

R5—100,000-ohm trimmer potentiometer

R6—3300-ohms $\frac{1}{2}$ -watt resistor, 10%

