## Earth Resistivity (ρ)
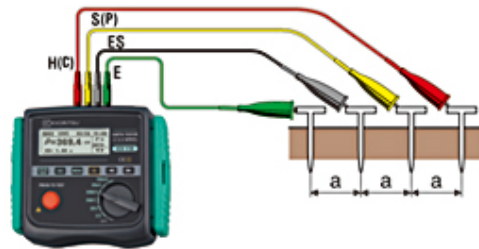### Principle of Earth Resistivity (ρ) Measurement

According to the Wenner 4-pole method, apply AC current "I" between the "E" (earth electrode) and "H(C)" (current electrode) to find out the potential difference "V" between the two potential electrodes "S(P)" and "ES".
To obtain the earth resistance "Rg (Ω)", devide the potential difference "V" by AC current "I"; where the distance between electrodes is "a" (m). Then use the formula: $\rho = 2 \cdot \pi \cdot a \cdot Rg$ ($\Omega \cdot$ m).
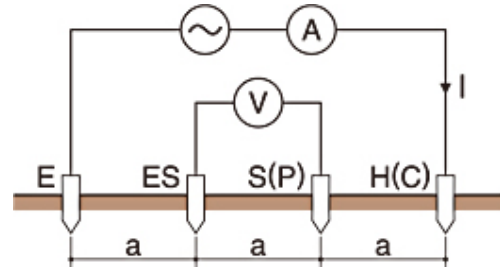

Measurement method

Stick the four Auxiliary Earth Spikes into the ground deeply. They should be aligned at an interval of 1-30m(a). The depth should be 5% or less of the interval between the spikes. The supplied Test Leads can be used for the distance between the spikes up to 20m.


Earth Resistance
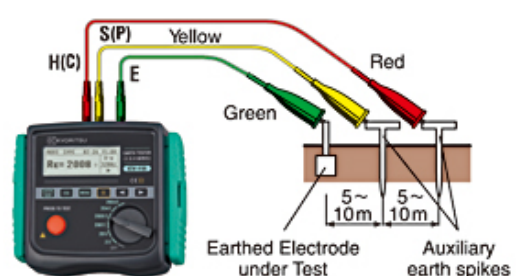### Principle of Earth Resistance Measurement

This instrument makes earth resistance measurements with fall-of-potential method, which is a method to obtain earth resistance value "Rx" by applying AC constant current "I" between the measurement object "E" (earth electrode) and "H(C)" (current electrode), and finding out the potential difference "V" between "E" (earth electrode) and "S(P)" (potential electrode).

$$Rx(\Omega) = V/I$$
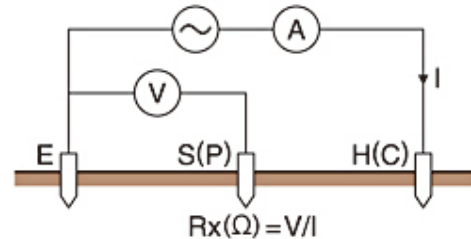
Simplified Measurement (2-Wire)
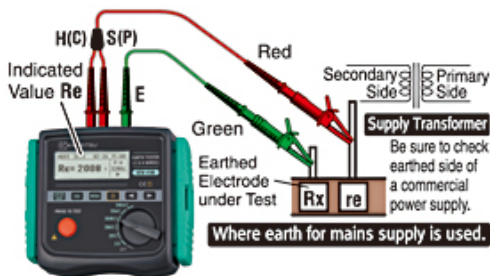
Precise Measurement (3-Wire)

Precise Measurement (4-Wire)