

EXPERIMENT #1

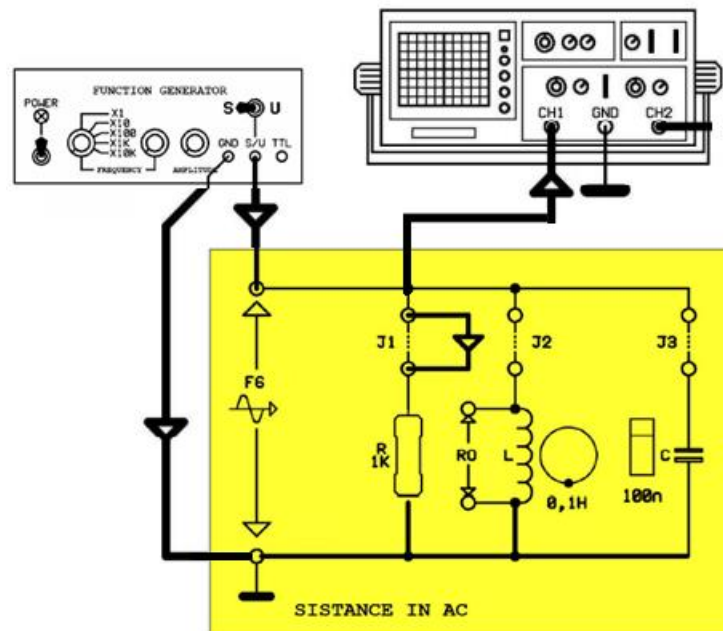
ALTERNATING CURRENT/VOLTAGE, INSTANTANEOUS, AVERAGE, RMS VALUE

REQUIRED MATERIALS:

1. Function generator
2. Oscilloscope
3. AC Voltmeter
4. Y-0016/01AC module
5. Connection cable

EXPERIMENT:

In function generator, set a sine wave with **10 volts** peak to peak and **1Khz** frequency $V_{pp} = 10V$, $f = 1Khz$. Replace the **Y-0016/01AC** module. Short circuit the **J1** nodes. Leave **J2** and **J3** open. Connect the circuit as in figure. Power the circuit.



EXPERIMENT OBSERVATIONS

1. Plot the waveform of the voltages connected to ch1 of the oscilloscope.



2. Calculate Average value?

3. Measure and observe instantenous voltage at specific time.
Calculate the RMS value. (Take $R_1 = 0$).

4. Repeat the experiment for square and triangular waveforms with different frequencies and V_{pp} .



5. What is the power consumed at the resistance "R".