Title: **Oscilloscope** Lab: 22

Course: Electrical Applications Unit: Electrical Lab CLO: 2, 3, 4

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade \_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**

1. Student shall calculate alternating current voltage quantities using the characteristics of sinusoidal waveform.
2. Student shall construct an AC series circuit, take voltage readings and analyze the results.

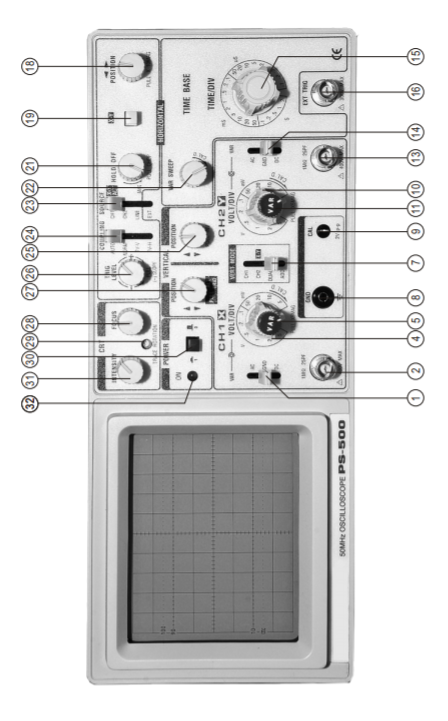
**Assessment**

Students shall demonstrate a comprehension of the objectives listed above by scoring a minimum of 75% on this Lab. Grading shall be based on instructor evaluation.

**Materials**

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| --- | --- |
| Student Provided Materials | Department Provided |
| Proto-Board | DC Power Supply |
| Multimeter | AC Generator |
| Resistor Kit | Oscilloscope |
| Speaker |  |
| Calculator |  |

**Theory**



|  |  |
| --- | --- |
| 2 | Vertical input for Channel 1 |
| 4 | Provides step adjustment for vertical sensitivity |
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**Graphic**



EP – From x axis to maximum (peak) amplitude.

EPP – From maximum (peak) amplitude to minimum (-peak) amplitude

ERMS – Root, Mean, Square of waveform

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

**Instructions**

On Signal Generator, set the following;

* RANGE to x100
* ATTENUATOR to 0dB
* AMPLITUDE to Maximum
* FORM SET to sinewave

On Oscilloscope, set the following;

* VOLTS/DIV to x
* TIME/DIV to x