

Physics 1040L LAB

LAB 6: USE OF OSCILLOSCOPE

Data Page

STUDENT _____ DATE _____ SECTION _____
 PARTNER(S) _____

1. To measure frequency:

Time/div.= _____ s/div. (Read from "Time/div" dial in the upper right corner)

Number of divisions _____ (Each division is about 1 cm wide)

Period $T = (\text{time/div.}) * (\text{no. of div}) =$ _____ (s)

Frequency from oscilloscope, $f = 1/T =$ _____ (Hz)

Frequency read from oscillator $f_o =$ _____ (Hz)

$\% \text{ error in } f = \frac{f_o - f}{f} \times 100\%$ _____

2. To measure voltage

Volt/div.= _____ V/div (Read from "Volt/div of the channel used)

Number of divisions, peak to peak	Volt/div	$V_{pp} = \text{Volt/div} * \text{no of div}$	$V_{max} = \text{Volt/div} * \text{no of div}/2$	$V_{rms} = V_{max}/\sqrt{2}$	Frequency (Hz)
					150
					600
					2400

3. To become familiar with oscilloscope

The ratio of frequencies	Sketch of Figure or description of Figure
Example 500:500 Hz	Circle ○
500:1000 Hz	
1000:500 Hz	
1500:500 Hz	
500:1500 Hz	
1000:1500 Hz	
1500:1000 Hz	