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Lab #3

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Abstract

This report presents our introdution to the oscilloscope and function generator.

1 Data and Data Tables

DATA SHEET #1

1. **From procedure, part C.**
   Amplitude value for square wave from DMM = 8.96
   Frequency value for square wave from function generator = 1.789 kHz
2. **Square wave one: from part E, measurement using oscilloscope**
   Peak-topeak: # of Divisions (vertical, to nearest 10^{th} of a division) = 3.7
   VOLTS/DIV setting = 5
   Amplitude of square wave = (0.5 * peak-to-peak voltage) = 9.85 V
   Frequency from Oscilloscope:
   # of divisions (horizontal to nearest 10th) = 5.7
   SEC/DIV setting = 0.1 ms
   Period of square wave calculated from above measurements = 0.00057 seconds
   Frequency (calculated from period) = 1.754.4 kHz
   % difference in frequency value = 0.019396
3. **Square wave two: from part G, measurement on oscilloscope**
   Amplitude value of square wave from DMM = 2.0093 V
   Frequency value for square wave from function generator = 8.99 kHz
   Peak-to-peak: # of Divisions (vertical, to the neartest 10^{th} of a division = 4.3
   VOLTS/DIV setting = 1 Amplitude of square wave = (0.5 * peak-to-peak voltage) = 2.15V
   Frequency from Oscilloscope: # of Divisions (horizontal to the nearest $^{\text{th}}$ = 5.6
   SEC/DIV setting = 20 μs
   Period of square wave (calculated) = 8.929 kHz
   % difference in frequency value = 0.006832
4. **Which signal generator are you using?** *Unknown Signal Generator*

DATA SHEEET #2

Signal #	# of DIV	Volts per DIV	Volts	DIV per period	SEC/DIV	Period	Frequency (kHz)
6	6	2	6	4.9	.5 ms	0.00245	408.163
8	4.2	5	10.5	5.1	1 ms	0.0051	196.078
14	7.1	0.5	1.775	5.0	0.2 ms	0.01	100

2 Graphs

3 Results

4 Discussion

5 Answers to Questions