

Worksheet on Operational Amplifiers

The following is an exercise on op-amps in a non-inverting configuration. Please refer to the section on op-amps on pages 53-55 in your laboratory manual for a more detailed explanation.

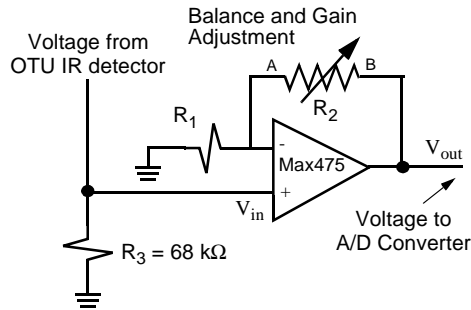


Figure 1. Typical op-amp configuration for Smart Car OTU.

Calculate the correct values for the blanks in the following table using the equation for a non-inverting amplifier found below and on page 55 of your lab manual.

$$V_{out} = V_{in} \left(1 + \frac{R_2}{R_1} \right)$$

R_1	$R_2 =$ Resistance A-B of potentiometer	Voltage in (from OTU)	Voltage out (to Port E)
1 k Ω	8 k Ω	0.25 V	2.25 V
2 k Ω	1 k Ω	0.43 V	
1.2 k Ω	10 k Ω	0.68 V	
820 Ω	6.8 k Ω		3.62 V
	7.2 k Ω	0.70 V	4.90 V
1 k Ω		1.19 V	4.75 V