

ELP LAB – Experiment 4

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Aim of the experiment: To characterize the non-inverting Operational Amplifier

Apparatus used in the experimental setup:

1. Operational Amplifier, IC number 741
2. Connecting wires
3. Breadboard
4. Function generator
5. Resistances:
 - Resistor with resistance = $1k\Omega$
 - Potentiometer , resistance variation of $0 - 20 k\Omega$
6. DSO

Circuit diagram along with proper labelling

Theoretical formulations

1. KCL: According to Kirchhoff's current law, the algebraic sum of currents entering a node is 0.

$$\sum_{n=1}^N i_n = 0$$

Measurements/Tabular columns

Sample calculations and verification

KCL at point 1

$$I_{in} + I_f = 0$$

$$\frac{V_{in}}{R_{in}} + \frac{V_o}{R_f} = 0$$

Inferences