

Watch The Red lights

Target:

Get to know:

- Op-amp (Operational amplifier)

Resources:

- [Intro to Op-Amps \(Operational Amplifiers\) | Basic Circuits](#)
- [Inverting and Non-inverting Amplifiers](#)
- [Comparator - Operational Amplifier](#)
- [How Op Amps Work \[Recommended\]](#)
- [Walid Isaa – Electronics Playlist \[Arabic - Recommended\]](#)

Problems:

- 1- Design a circuit using the op-amp as a comparator and an LDR voltage divider to control a LED (similar to the transistor as a switch)
- 2- Design a circuit that amplifies a signal ten times using op-amp as an amplifier

Submission:

Send a compressed file named “Task 4 – Your full name” with the following data:

- Your proteus simulation file for each circuit, can you do them all in one?
- A picture (screenshot of the circuit) or a pdf of the schematic of the circuit
- A three-minute or less video of you explaining all circuits and the use of each component

Note: Make sure the size of compressed file does not exceed **25Mb**.

Evaluation:

Each circuit → 4 points (total of 8)

Explanation video → 2 points

Deadline:

2 Days //Friday – Dec 8th at 23:00