

AIM: 28. Design a system for car stereo systems such that whenever the increase volume button is pressed, a Green Light is emitted for 20 ms & whenever the decrease volume button is pressed, a Red Light is emitted for 40 ms.

APPARATUS REQUIRED:

Arduino UNO, breadboard, red led, green led, switch, Connecting wires.

THEORY:

CONCEPT USED

A light-emitting diode(LED) is a two-lead semiconductor light source. It is a p–n junction diode that emits light when activated.

Arduino UNO

Breadboard

Coding

LEARNING AND OBSERVATION

When a switch is ON Arduino will receive 5V power supply but when switch is OFF it will still receive some voltage from the environment. So, the ground connection is applied after a switch in order to give 0V and a resistance greater than arduino's resistance is

connected in order to operate when switch is ON else it will also show 0V.

OBSERVATION:

When Switch is pressed Led will glow for a given period of time.

PROBLEMS AND TROUBLESHOOTING:

Wires were inserted in wrong holes which were not connected mistakenly, was checked again and was corrected.

The wrong number of digital pins were entered in code as originally inserted was checked again and was corrected.

PRECAUTIONS:

Wires should be properly inserted in Arduino and breadboard.

Breadboard circuit should be correct.

Declaration and Use of the digital pin should be the same.

LEARNING OUTCOMES:

Coding concepts used in Arduino.

Use of digitalWrite ,digitalRead, HIGH and LOW.

Use of pin mode and delay.

Use of push button

CIRCUIT DIAGRAM:

