VIT IDEAS

ANTI-THEFT ALARM FOR VEHICLES



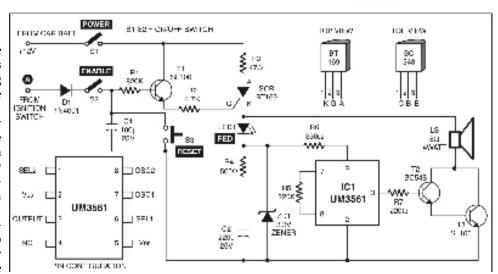
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his simple and inexpensive anti-theft circuit for vehicles sounds an alarm simulating a police siren whenever someone attempts theft of your vehicle. The alarm sounds continuously for a few seconds even when the intruder switches off the ignition key. The circuit uses only a few components and can be easily assembled and installed on a car with negative grounding.

The circuit consists of an SCR-based trigger circuit and audio alarm circuit. When the ignition key of the vehicle is switched off, base voltage of transistor T1 is low and

it remains turned off. When the ignition key is switched on for starting the vehicle, a positive voltage is applied to the base of transistor T1 through diode D1, switch S2, and resistor R1, which slowly charges capacitor C1. As a result, the base voltage of T1 rises. As soon as the biasing voltage crosses cut-in voltage, T1 turns on and SCR fires, giving 12V DC to the alarm circuit.

The alarm circuit is built around the siren-sound generator ROM UM3561 (IC1). It has a built-in oscillator, whose oscillation depends on resistor R5. Resistor R6 and



zener diode ZD1 limit the voltage to IC1 to a safer level of 3.3V. The output from IC1 is fed to a transistor amplifier built around transistors T2 and T3.

The circuit gives sufficient time delay to switch on the alarm and to leave the vehicle. The alarm, once triggered, will sound until switch S1 is pressed to switch off the power supply.

Capacitor C2 is provided to sound the alarm even when the intruder switches off the ignition key. When the ignition key is switched off immediately, C2 discharges

through R4 and keeps the alarm activated for half a minute. Reset switch S3 can be used to reset the alarm if needed.

The circuit can be assembled on a vero board. Use a small heat-sink for transistor T1. Connect point A to the ignition switch terminal that goes to the ignition coil. The hidden switch S1 is used for power on/off and switch S2 enables the circuit.

Note. Keep switches S1 and S2 on before leaving the vehicle. And don't forget to switch off S1 and S2 before starting the vehicle.

The circuit costs around Rs 50.