

# CAR-REVERSING HORN WITH FLASHER

■ **ASHOK K. DOCTOR**

Here is a simple circuit that starts playing the car horn whenever your car is in reverse gear. The circuit (refer Fig. 1) employs dual timer NE556 to generate the sound. One of the timers is wired

and D2 goes high for a few seconds depending on the time period developed through resistor R4 and capacitor C4. At this point, the astable multivibrator is enabled to start oscillating. The output of the astable multivibrator is fed to the speaker through capacitor C6. The speaker,



reverse switch through two wires such that S1 shorts when the car gear is reversed and is open otherwise. To

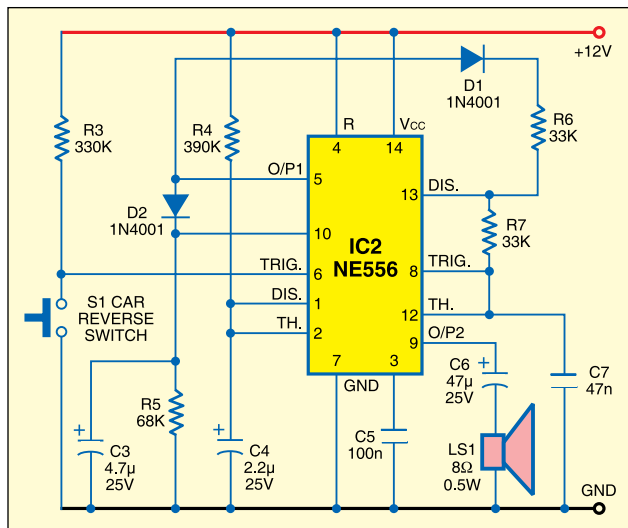


Fig. 1: Car reverse horn

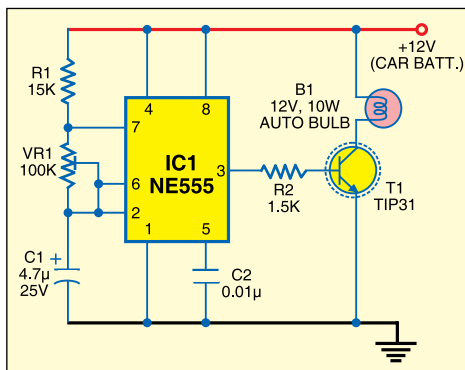
as an astable multivibrator to generate the tone and the other is wired as a monostable multivibrator.

Working of the circuit is simple. When the car is in reverse gear, reverse-gear switch S1 of the car gets shorted and the monostable timer triggers to give a high output. As a result, the junction of diodes D1

The circuit diagram shows a monostable multivibrator using a 555 timer (IC1 NE555). The circuit is powered by a +12V supply. The timer's pin 1 is connected to ground. Pin 4 is connected to the +12V supply. Pin 5 is connected to ground through a 4.7µF capacitor (C1). Pin 8 is connected to the +12V supply. The timing network consists of a 15K resistor (R1) and a 100K variable resistor (VR1) connected between pins 6 and 7. A 33K resistor (R6) is connected between pins 2 and 6. A 33K resistor (R7) is connected between pins 3 and 7. A 47µF capacitor (C6) is connected between pins 2 and 3. The output of the timer (pin 14) is connected to a speaker (LS1, 8Ω, 0.5W) through a 47nF capacitor (C7). A diode (D1, 1N4001) is connected between the +12V supply and the output of the timer. The circuit is labeled with various components and their values.

When the junction of diodes D1 and D2 is low, the astable multivibrator is disabled to stop oscillating. The output of the astable multivibrator is fed to the speaker through capacitor C6. The speaker, in turn, does not produce sound.

Assemble the circuit on a general-purpose PCB and enclose in a suitable cabinet. Connect the circuit to the car



*Fig. 2: Flasher circuit*

power the circuit, use the car battery.

The flasher circuit (shown in Fig. 2) is built around timer NE555, which is wired as an astable multi-vibrator that outputs square wave at its pin 3. A 10W auto

bulb is used for flasher. The flashing rate of the bulb is decided by preset VR1.

Assemble the circuit on a general-purpose PCB and enclose in a suitable cabinet. The flasher bulb can be mounted at the car's rear side in a reflector or a narrow painted suitable enclosure.

**EFY note.** A higher-wattage bulb may reduce the intensity of the headlight. You can enclose both the car-reversing horn and flasher circuits together or separately in a cabinet in your car. ●