

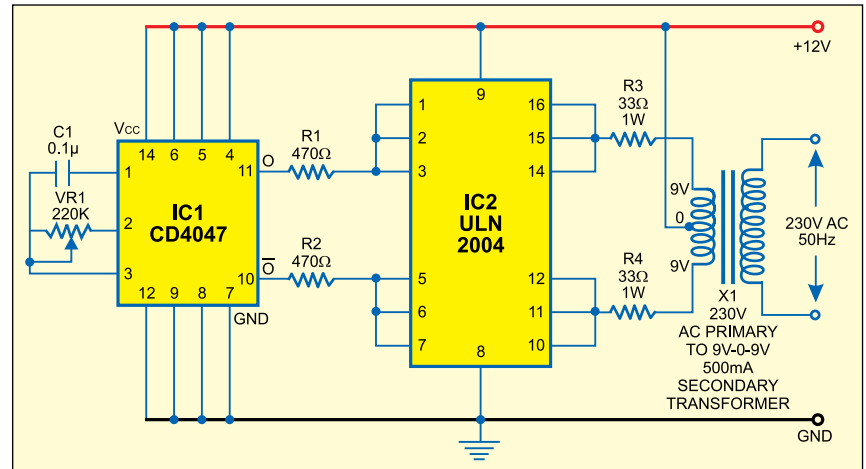
SIMPLE LOW-POWER INVERTER

■ PRADEEP G.

Here is a simple low-power inverter that converts 12V DC into 230-250V AC. It can be used to power very light loads like window chargers and night lamps, or simply give shock to keep the intruders away. The circuit is built around just two ICs, namely, IC CD4047 and IC ULN2004.

IC CD4047 (IC1) is a monostable/astable multivibrator. It is wired in astable mode and produces symmetrical pulses of 50 to 400 Hz, which are given to IC2 via resistors R1 and R2.

IC ULN2004 (IC2) is a popular 7-channel Darlington array IC. Here, the three Darlington stages are paralleled to amplify the frequencies received from IC1. The output of IC2 is fed to transformer X1 via resistors



R3 and R4.

Transformer X1 (9V-0-9V, 500mA secondary) is an ordinary step-down transformer that is used here for the reverse function, i.e., step up. That means it produces a high voltage.

Resistors R3 and R4 are used to limit the output current from the ULN to safe values. The 230-250V AC output is available across the high-impedance winding of the transformer's primary windings. ●