

MAINS-OPERATED CHRISTMAS STAR

PRINCE PHILLIPS



Here is a low-cost circuit of Christmas star that can be easily constructed even by a novice. The main

advantage of this circuit is that it doesn't require any step-down transformer or ICs. Components like resistors R1 and R2,

capacitors C1, C2, and C3, diodes D1 and D2, and zener ZD1 are used to develop a fairly steady 5V DC supply voltage that provides the required current to operate the multivibrator circuit and trigger triac BT136 via LED1.

The multivibrator circuit is constructed using two BC548 transistors (T1 and T2) and some passive components. The frequency of the multivibrator circuit is controlled by capacitors C4 and C5 and resistors R3 through R7. The output of the multivibrator circuit is connected to transistor T3, which, in turn, drives the triac via LED1. During positive half cycles of the multivibrator's output, transistor T3 energises triac BT136 and the lamp glows.

This circuit is estimated to cost Rs 75.

