

Whistler stopper for PC Birdies

The PC Birdies project described in *Electronics Australia* in May 1981 works fine, but the continuous chirping soon drove the household crazy. This circuit overcomes the problem by automatically turning on the PC Birdies circuit for a short period approximately every hour.

The controller has two modes of operation: light activated and manual. In the light-activated mode, the PC Birdies sound only during daylight hours or under artificial lighting. In the manual mode, the circuit operates regardless of lighting conditions. No

modification to the PC Birdies circuit is required, as the controller switches power only.

The light-switch consists of IC1, a FET op amp configured as a comparator. VR1 is used to set the trigger level, while an ORP12 light dependent resistor (LDR) is connected to the other input. When the comparator switches, Q1 turns on and switches the positive supply to IC2, IC3 and IC4. S1 provides manual override of the light-switch by switching the base of Q1 directly to the positive supply via a 2.7k Ω resistor.

IC3 and IC4 form a divider chain, with 10Hz clock signals supplied by IC2a and IC2b. IC3 is a 4040 12-stage counter which divides by 1024, while IC4 divides by 32 at the Q5 output. When this output goes high, Q2 turns on and supplies power to the PC Birdies' circuit.

IC2c and IC2d provide the reset function which occurs some 3.4 minutes later. What happens is that Q1 goes high two clock pulses after Q5 goes high. This in turn forces pin 10 of IC2d high, thus resetting IC4.

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