Bird Sound Generator with Timer

Most people have heard parrot bell or bird bell It produces sound as that of parrot repeatedly The circuit described here uses a timer along with the 'parrot' circuit to produce a very pleasing sound, as that of parrot or bird Repetition rate of sound is automatically varied due to the timer circuit This circuit will cost about Rs 50 only Power consumption for this circuit is 15 mA at 6 volts.

X1 AUDIO DRIVER TRANSFORMER
X2 AUDIO OUTPUT TRANSFORMER
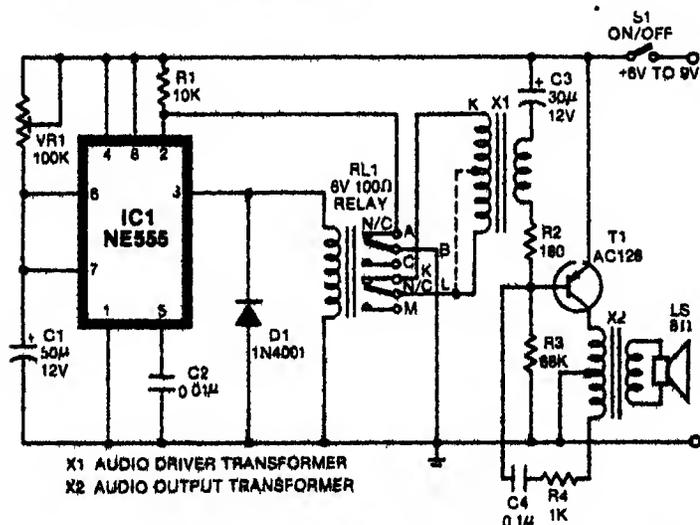
Pin 2 of IC 555 is connected to relay RL1's terminal A. Terminal B of the relay is connected to ground, and relay terminals K and L are connected to two opposite terminals of the driver transformer X1.

As soon as switch S1 is pressed, relay operates for particular time interval. This opens the opposite two terminals of the driver transformer and changes repetition rate of sound of the parrot bell After one to three seconds, the relay will be in off state and thus short the two terminals of driver transformer and again change the repetition rate of sound of the parrot bell circuit. Preset VR1 may be adjusted for a variation in the sound.

Repetition rate can be changed as per choice by replacing capacitor C3 with another value. The effect of using center terminal of driver transformer should also be observed

(During evaluation of the circuit in EFY lab, it was observed that changing the value of C3 to 100μF and connecting a 68-ohm resistor in series with the speaker produced a 'real' parrot sound. And repetition rate of the sound changes with slight variation in DC supply voltage.)

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Cost-effective 4-line to 16-line Decoder

Decoders are commonly used ICs in digital circuits. Most popular decoders in the TTL family are 7441, 7442 and
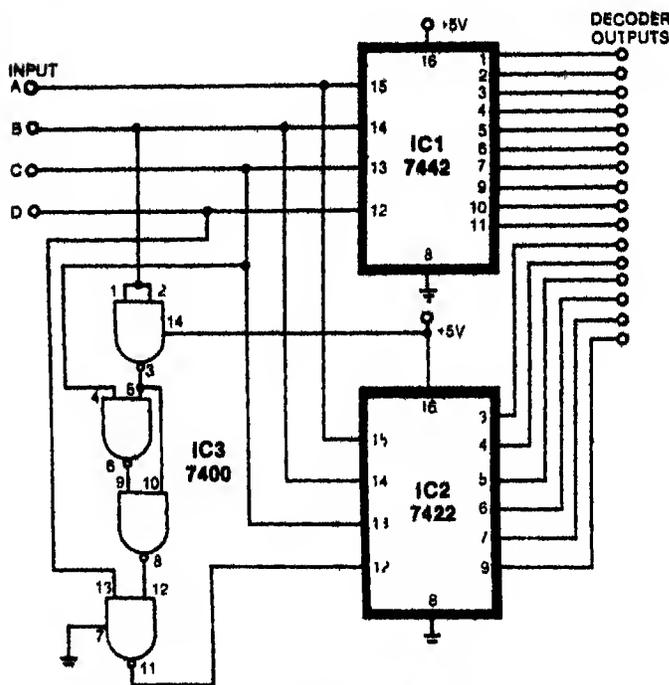
TRUTH TABLE

INPUT				OUTPUT OF IC1										OUTPUT OF IC2					
D	C	B	A	1	2	3	4	5	6	7	9	10	11	3	4	5	6	7	9
L	L	L	L	L	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
L	L	L	H	H	L	H	H	H	H	H	H	H	H	H	H	H	H	H	H
L	L	H	L	H	H	L	H	H	H	H	H	H	H	H	H	H	H	H	H
L	L	H	H	H	H	H	L	H	H	H	H	H	H	H	H	H	H	H	H
L	H	L	L	H	H	H	H	L	H	H	H	H	H	H	H	H	H	H	H
L	H	L	H	H	H	H	H	H	L	H	H	H	H	H	H	H	H	H	H
L	H	H	L	H	H	H	H	H	H	L	H	H	H	H	H	H	H	H	H
L	H	H	H	H	H	H	H	H	H	H	L	H	H	H	H	H	H	H	H
H	L	L	L	H	H	H	H	H	H	H	H	L	H	H	H	H	H	H	H
H	L	L	H	H	H	H	H	H	H	H	H	H	L	H	H	H	H	H	H
H	L	H	L	H	H	H	H	H	H	H	H	H	H	L	H	H	H	H	H
H	L	H	H	H	H	H	H	H	H	H	H	H	H	H	L	H	H	H	H
H	H	L	L	H	H	H	H	H	H	H	H	H	H	H	H	L	H	H	H
H	H	L	H	H	H	H	H	H	H	H	H	H	H	H	H	H	L	H	H
H	H	H	L	H	H	H	H	H	H	H	H	H	H	H	H	H	H	L	H
H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	L

74154. IC 7441 and IC 7442 are 4-line to 10-line decoders. IC 74154 is a 4-line to 16-line decoder/multiplexer

Whenever the design needs 4-line to 16-line decoding, the experimenter is forced to use IC 74154 as there is no other IC available in the market. The cost of IC 74154 is Rs 60 to 70, which is rather high compared to the cost of normally used