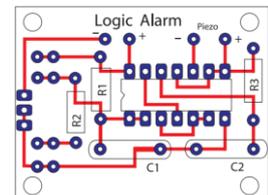
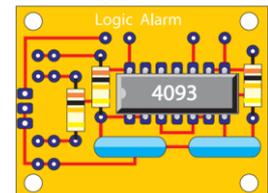
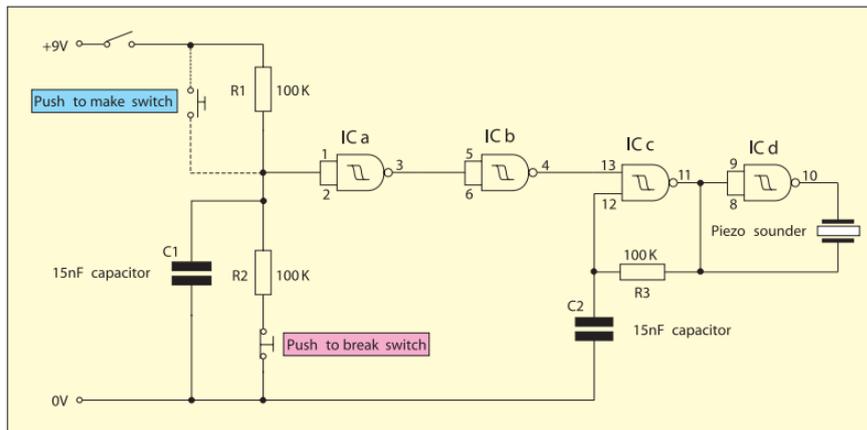


Logic Alarm

Circuit Construction

The circuit can be divided into two sections. The first section is a voltage sensitive latch. The second half is an astable multivibrator. When the power is turned on, the voltage applied to the input of the logic gate ICa rises to 4.5 Volts. This causes ICb to go high and remain at that level. When the push-to-make switch is pressed, the voltage between the resistors go high and output latches low and the astable will be activated, sounding the alarm. The alarm cannot be reset by closing the switch again. The alarm has latched on. Resetting can only be achieved by resetting the power supply. The spare NAND gates are used on the IC to produce an astable multivibrator to oscillate the piezo transducer and thus produce the alarm sound when triggered.



Equipment / Components Needed

- Soldering equipment set
- Circuit board
- Components - IC 4093, 14 pin IC holder, three 100K resistors (brown, black, yellow), ultra-miniature slide switch, two 15nF capacitors, piezo sounder
- PP3 battery clip, method of triggering alarm circuit, e.g. push-to-break switch

Procedure for Construction

1. Solder the resistors in place.
2. Solder the capacitors in place.
3. Solder the piezo sounder onto the circuit board.
4. Solder the switch onto the circuit board.
5. Solder the IC holder in place.
6. Solder the battery clip in place.



7. Connect your method of triggering the alarm to the circuit, taking care to use the correct set of pads.
8. Place the 4093 chip into the holder, making sure to insert it the correct way round.

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