

Parts list

Resistors ($\pm 5\%$):

R1 = 100K
R2 . . . R5 incl. = 10K
R6 = 15K

Capacitors:

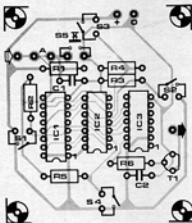
C1; C2 = 100n

Semiconductors:

T1 = BC547
IC1 = HEF40175BP (Philips Components)
IC2 = CD4030CN
IC3 = MC14072BCP (Motorola)

Miscellaneous:

S1 . . . S4 incl. = mercury contact.
S5 = push-to-make button.
PCB BB4002



switches stay in that initial state.

If only one of the mercury switches changes state, the output of N₅ goes high and T₁ switches on. This transistor may, for instance, be connected in parallel with the door switch.

The output state of the bistables may be stored via R₁-C₁ at the moment the supply is switched on. All car alarms have a certain delay after being switched on to give the occupants time to get out of the car. If a signal is available that becomes 1 after this delay, it may also be used to store the output states in the bistables. Resistor R₁ and capacitor C₁ must then be disconnected. This second method has the advantage that if a mercury switch is just about changing state, the closing of the car doors will render it stable.

The mercury switches are mounted on the PCB together with the other components. One of the terminal wires of the

switches must be kept long enough to allow the switch to be slightly tilted with respect to the board. The side of the switch in contact with the board may then be fixed into position with araldite or a similar fixative. This arrangement ensures that all switches are open when the car is horizontal.