

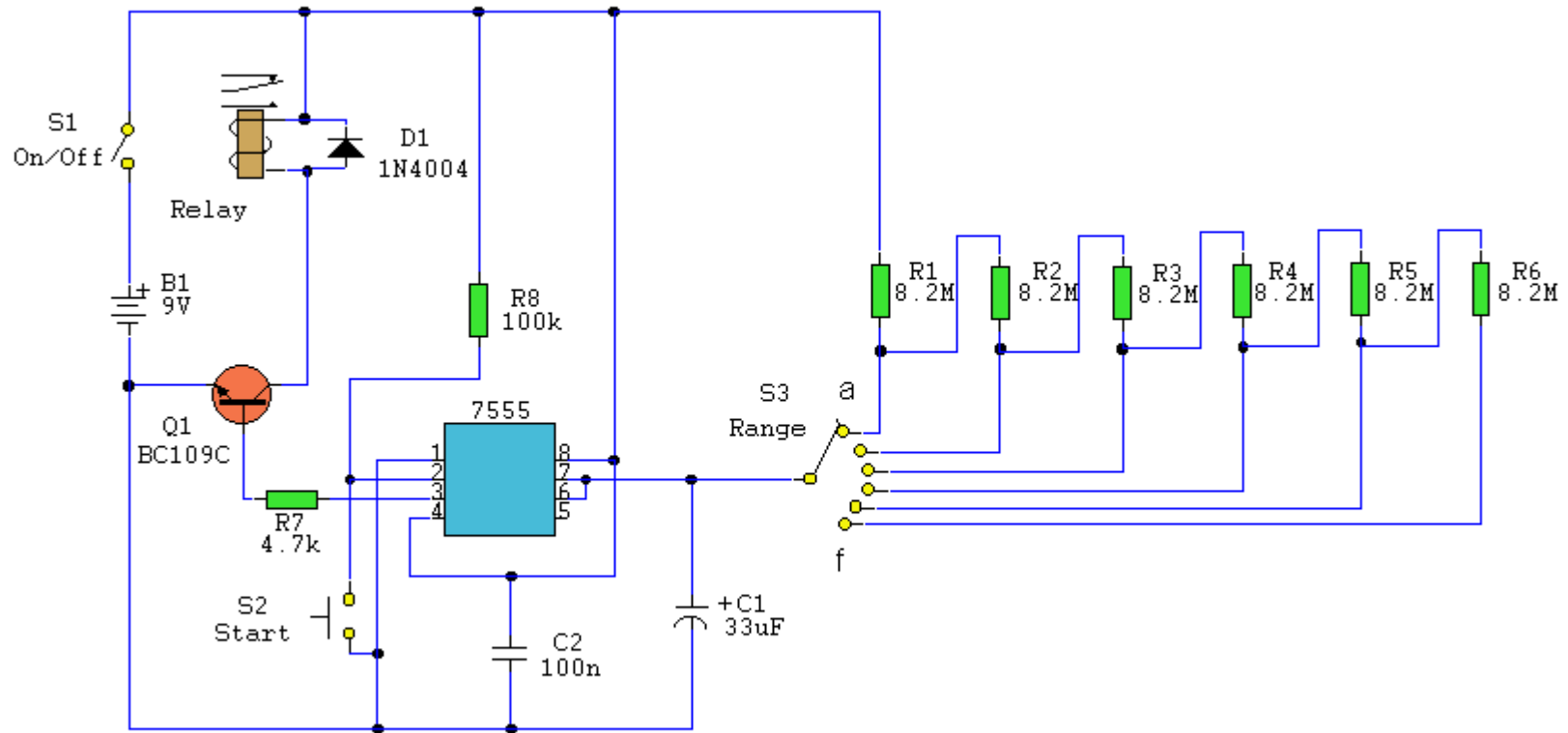
5 to 30 Minute Timer

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Description:

A switched timer for intervals of 5 to 30 minutes incremented in 5 minute steps.



Notes:

Simple to build, simple to make, nothing too complicated here. However you must use the CMOS type 555 timer designated the 7555, a normal 555 timer will not work here due to the resistor values. Also a low

leakage type capacitor must be used for C1, and I would strongly suggest a Tantalum Bead type. Switch 3 adds an extra resistor in series to the timing chain with each rotation, the timing period is defined as :-

$$\text{Timing} = 1.1 C_1 \times R_1$$

Note that R₁ has a value of 8.2M with S3 at position "a" and 49.2M at position "f". This equates to just short of 300 seconds for each position of S3. C₁ and R₁ through R₆ may be changed for different timing periods. The output current from Pin 3 of the timer, is amplified by Q1 and used to drive a relay.

Parts List:

Relay 9 volt coil with c/o contact (1)

S1: On/Off (1)

S2: Start (1)

S3: Range (1)

IC1: 7555 (1)

B1: 9V (1)

C1: 33uF CAP (1)

Q1: BC109C NPN (1)

D1: 1N4004 DIODE (1)

C2: 100n CAP (1)

R6,R5,R4,R3,R2,R1: 8.2M RESISTOR (6)

R8: 100k RESISTOR (1)

R7: 4.7k RESISTOR (1)