

Thermatic fan control

L. Lawrence of Sanderson NT has designed a thermatic fan control which is relatively universal for any vehicle.

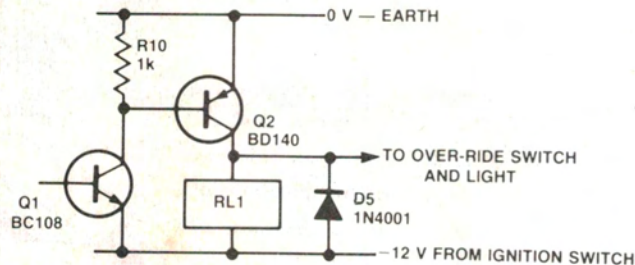
The circuit was designed because the original sensor supplied with the fan failed. The only requirement of the vehicle is that it must have electronic temperature sensing, and not 'go — no go' sensing.

D1, C1 and R1 form a sample and hold circuit for vehicles with pulsing voltage stabilisers for the instruments e.g. some Ford models. IC1 is in a voltage comparator configuration with RV1 setting the switching voltage. R2 and R3 are chosen to give

a suitable range for RV1 to operate in particular vehicles. In the prototype R2 and R3 were not used, which meant that small movements of RV1 gave large temperature variations.

C2 and R5 ensure a short trigger pulse to the 555 timer when pin 6 of IC1 goes low, while D2 prevents damage to IC2 when IC1 goes high. IC2 is connected in the monostable configuration and C2 and R4 set the delay to about one minute.

D3, D4 and R6 form an OR gate to drive the Darlington coupled Q1 and Q2 relay driver pair. D5 is to prevent damage to the relay driver Q2.



No power supply decoupling was used in the original prototype because the 741 is working in the comparator configuration. R8 and R9 were used as links to connect the 741 inputs so that the comparator switched in the correct direction.

With RV1 connected to pin 3 of IC1, the temperature sensor must go negative for correct

operation of the circuit. For sensors that go positive for higher temperatures, connect the circuit the other way around.

The circuit was designed for negatively earthed vehicles but can be adapted for positive earth vehicles by modifying the circuit as shown. The fan will run for about one minute after the engine is started.