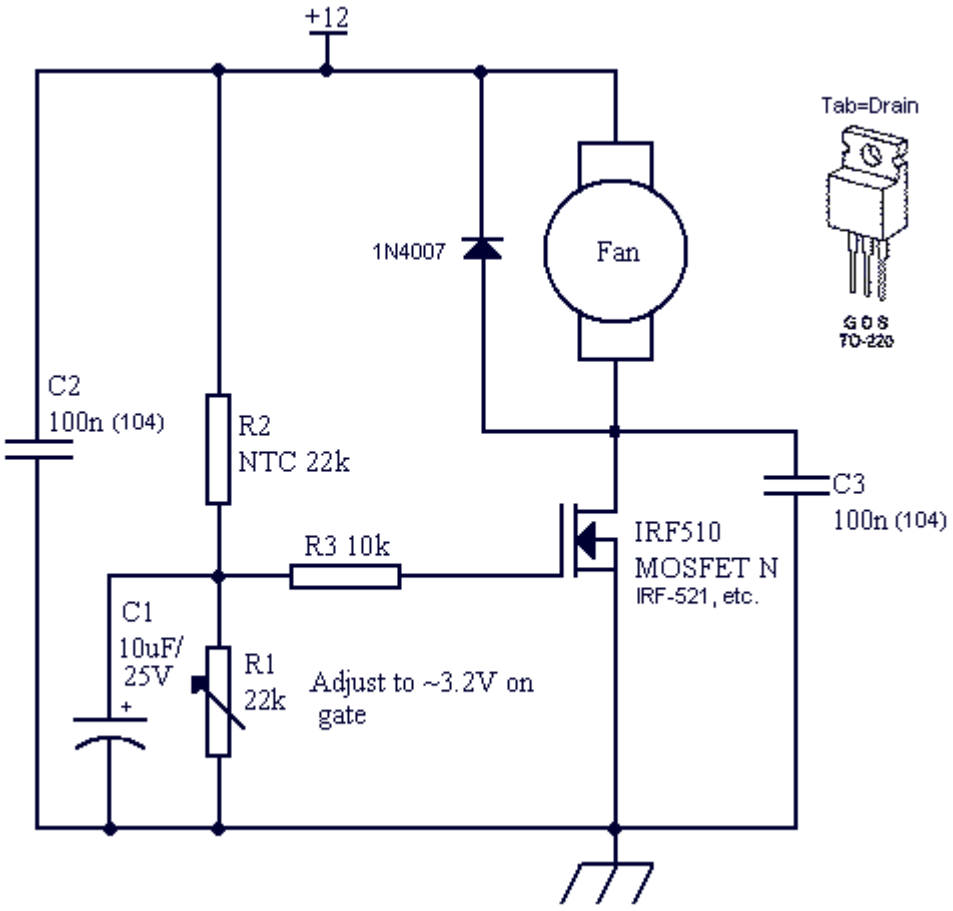
A simple temperature controller by Paul Evans, W4/VP9KF.

This little project started as a simple way to quieten down an MFJ 4525MV power supply, controlling the rear fan so that it came on only when needed. As a plus, it can also save quite a bit of un-necessary power usage.

Since then, I've also used it to control a couple of other fans (one cooling my webcam) and, with a relay instead of the fan load, it could be used to do various other heftier (AC) tasks, if needed.



It is all very non-critical and the parts came from my junk box. I simply adjust the pot so that the fan is off at room temperature and check that, when I grab the thermistor between my fingers, the fan turns on. With such a small parts count it can be made very tiny and can fit almost anywhere. With the decoupling capacitors shown it also performs well even next to very high RF fields (like right inside a PA). **Do not omit them or falsing will occur near RF fields and hysteresis may be lost during power spikes.**

From my favourite supplier, BGMicro, the parts cost is minimal:
Thermistor: 50k RES1400, $0.33; FET IRF521 $0.49; Pot: 50k RES1422 $0.15.
See, the parts really are non-critical! A tiny square of vector board (or Vero board) is all that's needed to make a handy little circuit.

If your fan needs to idle all the time, but needs a boost, then dropping a suitable resistor across the FET drain-source would work. The IRF521 can be used to switch 8A of load.

Please note: This circuit is open-hardware. Do not change these notes or remove reference to the design source. You may link to it, but do not copy to other servers or group files.