

Variable Speed Thermal Fan

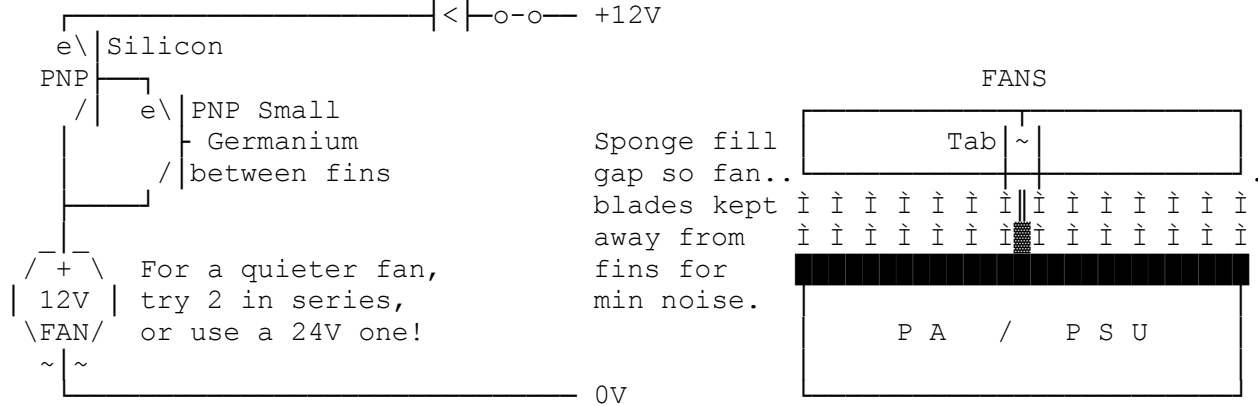
By G8MNY

(Updated Jul 15)

(8 Bit ASCII graphics use code page 437 or 850, Terminal Font)

I have often been annoyed by fan noise from over powerful fans in gear. Here is a solution I adopted for a 12V PSUs & 400W HF PAs. Small 12V fans can be found in a scrap PCs etc & draw about 70-100mA depending on speed & size.

2x PNP CIRCUIT (Germanium NPN can be used E-C reversed) use idiot diode & fuse if fan manually wired up.

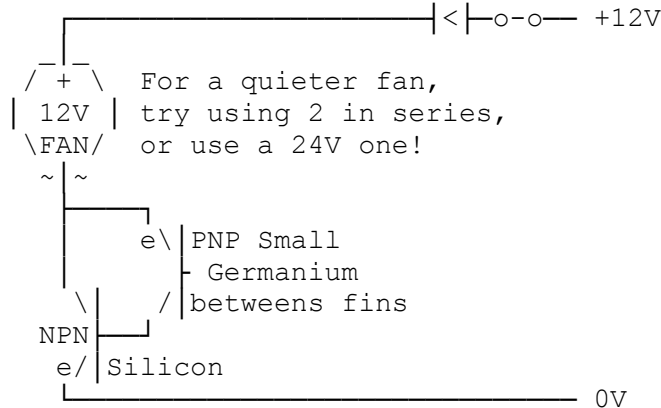


It uses a high gain (x100) tab silicon NPN or PNP controlled by a leaky Germanium PNP or NPN placed between the hot heatsink fins (test a germanium with a soldering iron for resistance change & Fans on/off). I used an all plastic Tab silicon cable tied to the fans, with the insulated germanium transistor E & C leads twisted (make sure it's case is isolated or insulate) & exposed connections in heat shrink etc.

Fan operation is typically from @ 50°C with a slow variable speed action until cool!

The fan can be in the earth path or +12V side...

Silicon NPN & Germanium PNP CIRCUIT



RESULT

In high use (waffle mode with processing on or a pile up) the fan starts up & runs very quietly from about 5V across it, & gently runs faster if the heatsink gets hotter.

See TECH bul "PA & PSU Fan Noise"

Why Don't U send an interesting bul?

73 De John, G8MNY @ GB7CIP

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