

Keep your IC-706/MKII/MKIIG Cool!  
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The ICOM IC-706 series of radios is very popular for mobile and portable operation. However, a lot of heat is generated in this small package, and with moderate-to-heavy use, the radio and heat-sink can get quite hot. The way around this is with additional air-flow around the heat-sink.

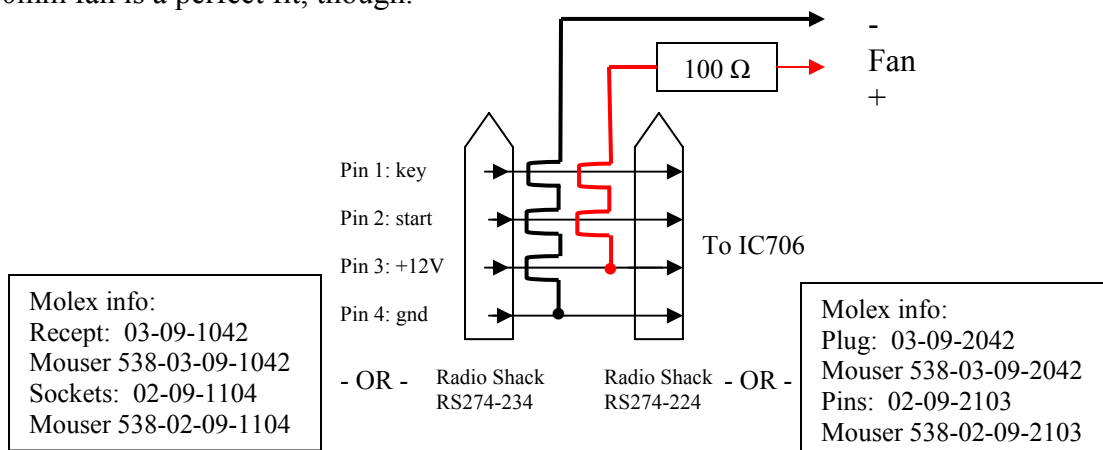
This project had three goals – 1st, solve the heat problem. 2nd, the solution should be unobtrusive. And 3rd, make no mechanical changes to my IC-706MKIIG.

There are many surplus computer fans available for very little money, so I figured that there had to be one that was perfect for adding to the IC-706G. I wound up using a 12-volt 40mm square fan available from All Electronics ([www.allelectronics.com](http://www.allelectronics.com), part number CF-181 @ \$3 each). Now, how to mount it to the IC-706G heat-sink?

The answer turned out to be pretty simple. Refer to photos “Fan & Anchors”, “Back View”, and “Top View”. I used plastic wall anchors to hold the fan in place. The wall anchors I used are 1-1/4” long and use #10 or #12 screws. I used 1-1/2” long #10 machine screws for mounting. The 40mm fan mounting holes passed #8 screws, so I had to drill them out slightly to take #10 screws. I also needed to cut off about 1/4” of the length of the wall anchors. Position the fan so that it blows air away from the IC-706 heat-sink, then tighten the screws.

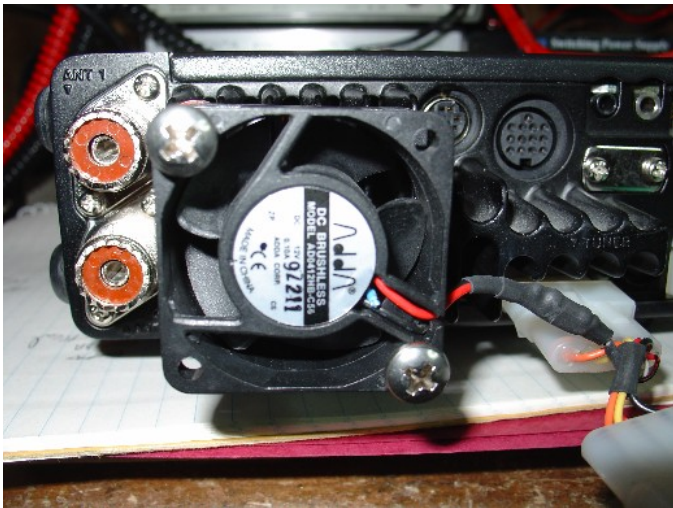
I took the 12-volts from the IC-706 antenna tuner connector. I made a cable extension to let me pick off the +12V but still permit connecting an antenna tuner if desired. The maximum current available at this connector is one-amp. To protect the radio in case of a fan short, I connected a 100-ohm 1/2-watt resistor in series with a fan lead. The resistor drops the fan voltage in half, which gives a much quieter installation, yet plenty of air is still moved. The resistor is covered with heat-shrink tubing in the photo.

How does this work? Absolutely outstanding. My IC-706MKIIG runs cool even during heavy use. Other size fans can obviously be used, though a 50mm square fan is about the largest will fit (a 50mm fan is actually shown in the “Fan & Anchors” photo). This 40mm fan is a perfect fit, though.

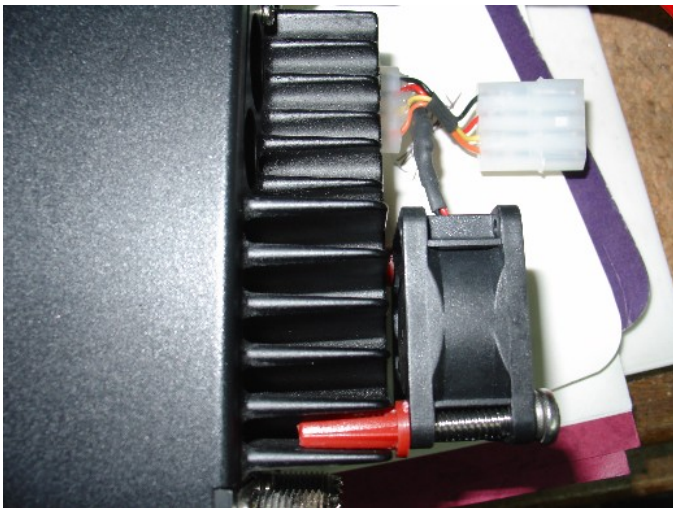




Fan (50mm) and Anchors



Back View – 40mm fan



Top View – 40mm fan