1+2+3 Aircraft Band Receiver

By Cy Tymony

Modify an AM/FM radio to pick up air traffic control communications.

You will need: AM/FM radio, small Phillips screwdriver, small flathead screwdriver

Extending the Range of Your Radio

The aircraft band, 108 to 138MHz, is directly above the FM band. But aircraft signals are broadcast in an AM format. Amazingly, it's possible to modify a typical AM/FM radio to receive aircraft signals in the proximity of an airport, without removing or adding any parts! Here's how.

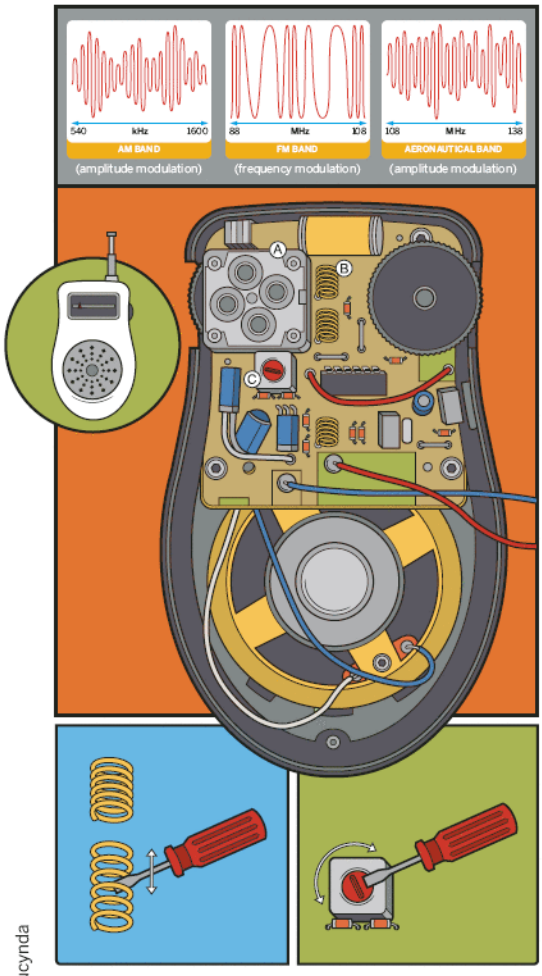

Illustration by Timmy Kucynda

1. Identify the radio parts.

Use a battery-powered, inexpensive, analog radio. Remove the back cover and locate the main tuning capacitor (A). It's easy to find — just turn the tuning dial, and you'll see its parts move through its clear case.

Near the main tuning capacitor you should see one or two small coils of copper wire (B) mounted on the PC board. These coils are used to limit the frequency range of the radio.

Next, locate the tuning transformers (C). They look like square, metallic boxes with tuning slots in the top. One of the tuning transformers may have a couple of small diodes near it mounted on the PC board. This is the tuning transformer that you'll adjust. Its function is to filter out AM noise.

2. Modify the radio.

Tune the radio to an FM station at the upper end of the FM band. Notice where the dial is positioned.

Spread apart the small coils near the main tuning capacitor using a small flathead screwdriver. When you finish, tune the dial and you'll notice that the broadcast stations have moved down the dial. The radio is now able to receive stations well above 108MHz.

Tune the radio between stations so you can hear a slight hiss. Notice the position of the slot on the top of the tuning transformer that is near the main tuning capacitor (nearest to the small diodes). Slowly turn its screw until the hiss sound is at its maximum level. Note exactly how many turns and in which direction you turn the screw, for easy repositioning later. The radio is now able to receive AM signals in its newly expanded FM band.

3. Test the modified radio.

Replace the radio's cover. Take it — and the screwdrivers — near an airport during a peak air traffic period. Turn the radio on the FM band with the volume up and slowly adjust the dial. You should be able to hear air-to-tower transmissions. If needed, make adjustments to the tuning coils and the tuning transformer.

Cy Tymony is the author of the *Sneaky Uses for Everyday Things* book series.