***Q.** Can you transmit through the Grove MiniTuner? Jennifer Day-Elgee, Moncton, NB, Canada)*

***A.** No. The MiniTuner is not an impedance matching device; it is a frequency-tunable preselector whose sole purpose is to narrow the swath of frequency spectrum being fed to the receiver. Since it is for reception only, components are much too fragile to handle transmitter-level power.*

Bob's Tip of the Month

Uniden BC890XLT Cellular Modification

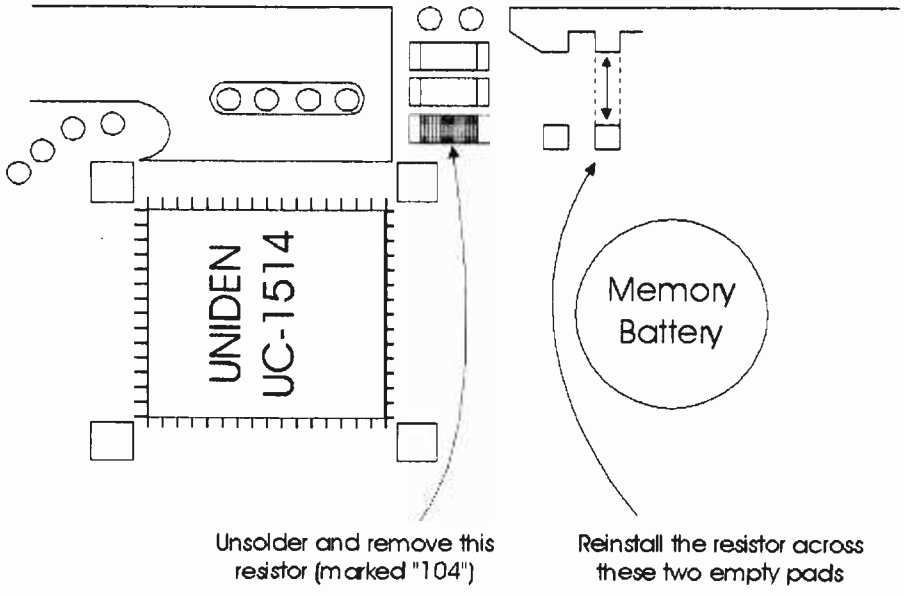
No sooner did the new Uniden BC890XLT scanner hit the streets than our intrepid scanner modifier, Larry Wiland, figured out the cellular restoration—with appropriate 30 kHz steps, to boot!

Although we have validated this procedure in our own labs, *MT* accepts no responsibility for damages resulting from attempting this modification, and we remind our readers that it is unlawful to monitor cellular telephone conversations.

The modification requires delicate manipulation of fragile components; do not attempt it if you are unfamiliar with surface-mount devices and microsoldering techniques.

TOOLS NEEDED: Philips screwdriver, small-tip soldering iron, small gauge rosin-core solder.

1. Remove all ten cabinet screws and carefully separate the halves; carefully unplug the speaker plug and set the cabinet sections aside.
2. Remove the four faceplate screws and one bracket screw at the center of the main board to loosen the faceplate. Carefully depress the outside edges of the metal faceplate shield and tilt the faceplate downward toward you, exposing the logic board.
3. Unplug connectors J4 and J5 (white and blue wires), and ribbon connectors J501, J502 and J503 (CAREFULLY nudge them loose by pulling close to the sockets). Remove the faceplate and logic board together.
4. Position the circuit board as shown below and locate the microprocessor chip (Uniden UC-1514), and the three chip resistors by the chip's upper-right-hand corner. Carefuly unsolder the closest of the three (marked "104") and reinstall it between the two empty pads closest to the memory battery as shown.
5. Reassemble the front panel and all connectors. Test the radio by entering 871.200 MHz, then reassemble the cover. This completes the cellular restoration and 30 kHz tuning step.



***Q.** One of my neighbors has installed an "invisible radio dog fence" which controls pets by transmitting signals to their collars. What frequency does it work on and will it cause interference to my receiver? (Jeffrey Zell, Walton Hills, OH)*

When I push the remote control button on my car alarm, my doors lock; I've been unable to measure anything on my frequency counter. What frequency are these devices on? (George Froberg, Mill Valley, CA)

***A.** Neither device is likely to cause interference because of rigid FCC restrictions against Part 15 (low power) radiation devices like these.*

There are several frequencies throughout the spectrum reserved for industrial, scientific and medical (ISM) radiations; these include 6.78, 13.56, 27.12, 40.68 and 902-928 MHz. Additionally, some frequency ranges near 300 MHz are used by garage door openers.

Up here in the mountains, everyone lets his dogs run loose and leaves his car unlocked, so I've never seen either of these devices up close. Any of our readers know what frequency these things are on?

***Q.** Why do AM broadcast signals fade when you drive under a bridge but FM signals don't? (Ken Greenberg, Skokie, IL)*

***A.** It all has to do with wavelength, the spacing between successive waves of a radio signal. The higher the frequency, the shorter the wavelength.*

Shorter wavelengths (the FM signal) are more easily reflected and scattered by conductive materials like metal and earth than are the longer wavelengths (AM broadcast) which are absorbed.

***Q.** How will mounting an antenna in my attic be different from mounting it at about the same height on the roof? Tom Carroll, Lee's Summit, MO)*