

*I was told that my Realistic/dio Shack scanner had been modified to pick up cell phones, but it doesn't pick up mine. How come? (Name withheld)*

Chances are that your cell phone is digital, no scanner made has cellular digital decoding. Regardless, modifying a scanner so that it picks up cell phone frequencies is unlawful. A scanner with cell-phone frequency coverage cannot be imported, sold, manufactured, or even possessed by an ordinary citizen according to

*What is the antenna impedance of a long wire? Can I trust the MCALC 75 to calculate it? Is there a mathematical model as well? (Thadde Loepfe HB9DNB, Switzerland)*

A longwire is a general reference to any wire antenna more than one-half wavelength long at a specific design frequency. Wires longer than half-wave have high impedance (generally several thousand ohms), and are inductive; wires shorter than a half wave are low impedance and capacitive.

Thus, a half-wave dipole for the 40 meter band (7 MHz) is a longwire on 20 meters (14 MHz) and a short, low-impedance antenna on 10 meters (3.5 MHz).

Antenna impedance is a complex value consisting of radiation resistance plus capacitive or inductive reactance. The desire is to cancel two reactances, leaving just the radiation resistance.

You cancel a capacitive reactance with an inductive reactance (coil), and an inductive reactance with a capacitive reactance (capacitor). In the transmatch network, the capacitor is an air variable, and the inductive reactance is either tapped or a rolling-contact antenna.

Software and mathematical models are both found in the *ARRL Antenna Book*, \$44.95 plus shipping from the ARRL Book Store, 225 Main Street, Newington, CT 06111-1494. Their software can be trusted.

*Whatever became of the shortwave publishing and equipment company Gilfer Associates? (Mark Burns, Terre Haute, IN)*

**A.** I remember them well; they published several volumes of my *Confidential Frequency List*. The name Gilfer was an acronym composed of the

last names of the owner, Oliver P(erry) Ferrell, and his wife, Jeannie Gillespie (Gil + Fer). After Perry's death, several successive editors put out the *CFL* series before it was finally turned over to a British publisher. The last volume I'm aware of was 2003.

**Q.** *I currently have a PAR EF-SWL shortwave wire antenna mounted in my attic. Would I be better off with an outdoor antenna such as the PAR or the Grove Skywire? I'm concerned about tree limbs, and wonder about angling the wire antenna. (Rich Mitchell, NC)*

**A.** Outdoor antenna locations are ALWAYS better than indoor. At shortwave, the indoor antenna is subjected to electrical wiring noise, reflective/absorptive effects of wiring and ducting; shielding from metal roofing or metalized Mylar insulation in the walls; microprocessor radiation from electronic accessories; and probably a few other things I can't think of at the moment!

A great outdoor combination consists of two horizontal dipoles at right angles with two coax lead-ins; you can switch between them for either reduction of interference or enhancement of desired signal, depending upon the compass direction.

If you mount a dipole at an angle (known as a sloper), it becomes directional toward the horizon favoring the lower end.

Tree limbs don't really have much effect on shortwave reception, so erect whatever's convenient. The Skywire is an inexpensive choice, and the PAR antennas are great, too.

For all-direction response, a vertical is a good possibility. Mount it away from the house and power pole wiring 50 feet or so to minimize electrical noise pickup.

The least expensive, best performing shortwave antenna I've ever used is our Grove Flex-Tenna; that's what I have hanging from a tree limb as my primary receiving antenna.

**Q.** *When analog TV finally goes "dark" in 2009 with the switch-over to digital, can I still use my old analog set with a digital converter? (David Kruzek, Santa Monica, CA)*

**A.** Yes. This was covered in detail in our November, 2007 issue of *MT*, page 6. (And again in this issue in the *AM Bandscan* column.)

**Q.** *I would like to mount a scanner antenna in a tree and disguise its*

*elements with paint. Will that affect its performance? (Claus Giloi, email)*

**A.** The short answer is no, just so long as you don't cover the insulators with paint. Darker colors like black often have conductive materials in them which could effectively short-circuit signals between the elements before they get to the transmission line.

Practically, however, it's doubtful that even with paint on them, the conductance of the paint when dry would be low enough to appreciably reduce signal strengths. Nevertheless, it's better to be safe than sorry.

**Q.** *My daughter just bought a home and on the roof is a horizontal antenna that consists of a coil of heavy wire about 1-1/2" D x 36" L mounted inside what looks like half a tractor trailer muffler. I've been told that it's for a better TV picture on large screens, to hear the astronauts in space, a CB antenna, a ham radio antenna, and even for listening to NASCAR drivers! What the heck is it? (Jerry Rivet, email)*

**A.** From the description and dimensions, I originally thought it was a high-gain, helical antenna for WiFi Internet access. However, seeing the picture nailed it. This is a TERK HDTV60, a receiving antenna for high-definition television. It's made by Audiovox and is often paired with a dish as your photo shows.



Questions or tips sent to Ask Bob, c/o MT are printed in this column as space permits. Mail your questions along with a self-addressed stamped envelope in care of MT, or e-mail to [bobgrove@monitoringtimes.com](mailto:bobgrove@monitoringtimes.com). (Please include your name and address.)