

Q. *My Grove Skywire runs through a nearby tree; is that likely to reduce shortwave reception? (Matt Stanley, email)*

A. It certainly is possible that a wet branch rubbing up against a high-impedance point on the antenna wire could introduce noise (static or fluctuating signal levels). It's better to have the wire clear of the tree.

Q. *You recommend low-loss RG-6/U coax for VHF/UHF reception; is it also good for shortwave listening? (James Ashe, Clearwater, FL)*

A. By all means. Transmission line losses get worse as the frequency increases, so any transmission line that works well at VHF/UHF will work even better at lower frequencies.

Q. *Why do I need to put a big receiving antenna on the roof when I can get the same gain from a small amplified antenna indoors? (Chris Oldham, Graham, NC)*

A. A preamplified antenna is not the answer if you don't have a good location for it, and inside a house with its electrically-noisy electrical wiring, and appliances, as well as shielding and reflections from metalized-Mylar insulation, aluminum siding, and heating/air conditioning ductwork is *not* a good location.

Added to that is amplifier-generated "hiss" (noise figure), intermodulation from strong-signal overload, the need for power, and general vulnerability to failure of electronic components. Any decent antenna you can put outside high and in the clear will work better than any amplified whip indoors.

Q. *I suspect that my home may be bugged by a listening device. Which is more sensitive to detect this, a scanner with "Close Call" signal response, a wideband RF detector, or a frequency counter? (Lou, email)*

A. I get this type of question frequently. The fact is, none of them is as sensitive as a receiver or scanner in its normal function, but any of them should pick up the discrete-frequency radiation from a hidden transmitter if it's close enough.

I have to point out, however, that serious

surveillance countermeasures professionals don't count on frequency counters, wideband RF detectors or scanners for their work; their number one instrument is the spectrum analyzer.

With that device you can simultaneously see all the signals on the spectrum of interest, and by carrying a small probe or receiving antenna around a room, you can watch the screen for one of the spikes to rise in amplitude as you approach the transmitter.

The limiting factor with all these instruments is that the offending device must be radiating a signal and within the frequency spectrum covered by the instrument. For it to be detected by a scanner, receiver or frequency counter, it must stay on one frequency. The spectrum analyzer, however, can even spot short bursts, spread spectrum and frequency hopping.

Q. *How would new federal ruling regarding spying on Americans affect the hobby of scanning and shortwave listening? (Pat Gonzales, email)*

A. This issue erupted when it was disclosed that the Bush administration had authorized the spying on Americans without a court order. Obviously, all Americans want to protect their right to privacy. I seriously doubt that any new legislation will impact the hobby of radio monitoring. The scanner debacle of several years ago came about through lobbying by the cellular industry, resulting in the removal of cellular telephone frequencies from scanners; it was already unlawful to listen to the contents of wireless telephone conversations.

Other forms of confidential radio transmissions are already scrambled for security.

Q. *I have installed an ANC-4 Noise Canceller on my Kenwood R5000 receiver which, in turn is connected to an outdoor antenna. I have considerable noise from neighboring residences, but the little noise-sensing whip on the top of the ANC-4 doesn't seem to be doing a thing to help reduce the noise. What am I doing wrong? (Myke, email)*

A. The ANC-4 does an excellent job, but the conditions must be right. Since the only noise-sensing antenna you are using is the attached whip, it is only hearing your own local noise. You need to attach a simple, outdoor wire as a sensing antenna so it can compare the neighbor-

ing noise with the signals coming in on your main antenna. Try several lengths and locations for best nulling.

Q. *There is a network of towers being erected around my county; the antennas are in sets of three, around the tower in a horizontal triangle pattern. Is this likely to be cellular telephone, or an 800 MHz trunking system? (Matthew Lofland, Chester County, PA)*

A. An antenna pattern consisting of a set of three short antennas evenly spaced around a tower is typical of a cellular telephone site.

Q. *Why can't scanner and shortwave antennas simply be attached directly to the radio instead of using coax as a feed line? (C. Cordell, GA)*

A. You certainly could do that, and it would work just fine except for one obstacle: It would be indoors where it would pick up electrical noise from household wiring and electrical appliances, as well as being shielded by metal lath and other constructional barriers to good reception.

Putting the antenna at some distance from the house reduces that pickup as well as makes signals more accessible, and the coax shielding prevents the intrusion of electrical noise when it runs indoors.

Q. *I own a PRO-96 digital Radio Shack scanner. There is a local agency that uses scrambling. Is it possible to unscramble it? (Steve Tripper, email)*

A. There are two kinds of scrambling: analog and digital. Analog still sounds like speech, just highly distorted and unintelligible; digital is just a "hiss." Since 1986 it has been illegal in the U.S. to own, import, manufacture or sell a descrambler to decode such private communications.

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. (Please include your name and address.)