ASK BOB

GENERAL QUESTIONS RELATED TO RADIO

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Q. *I've had radios with TV audio for years, starting with a Lafayette model in the late '60s. Currently I use a Radio Shack version of the GE Super Radio daily. Will any radios be available after the switch to digital? (George, WB2GTC)*

A. None, as yet, has even been announced as being in development. TV and FM broadcasting took many years to be included in AM/FM portable radios. I suspect it will be quite a while before digital TV audio reception will be included in our otherwise-analog portable radios.

Q. *I am using RG-174/U coax on an antenna. What do these letters mean? Can I use the coax outdoors? (Ron, email)*

A. RG stands for "Radio Guide," a reference to coaxial cables developed during WWII. U simply means "Universal," referring to its general applicability.

Yes, RG-174/U is outdoor-rated. Like any coax, however, sunlight will gradually degrade the vinyl insulation over a period of years.

Q. *A recent TV news report discussed a controversial plan by our government to intercept private phone calls from possible terrorists. In the background was a 20 foot dish antenna. Is it possible to monitor phone calls made overseas? I thought cell phones had a limited range (unless by satellite). (Alvin Dattner, email)*

A. Overhearing telephone calls is nowhere nearly as simple these days as it once was. The vast majority (if not all) of the links are now digitized, and it requires the cooperation of the common carriers (wireless telephone companies) to enable monitoring.

Cordless and cellular telephone calls are now in the UHF range, and long distance service is by digitized fiber optic networks. UHF has very limited range; chances are that dish is an attempt to intercept downlinks from satellites which carry overseas traffic as well as domestic, then decode their digitized conversations. Many of these digital systems use proprietary codes, so it's not a matter of simply "tuning in."

Q. *I am trying to receive an 800 MHz trunking system that's about 90 miles away, but can't hear a thing. I have a Grove Scanner Beam mounted outdoors. What might be the problem? (Gene Stewart, email)*

A. I generally figure that 800 MHz signals from base stations reach about 50-75 miles maximum under the best conditions. Assuming the antenna is just fine and pointed properly, here are some of the negative variables:

- Intervening buildings, hills, trees
- Losses in a long length of cheap coax cable
- Defective balun transformer
- Wet weather
- Trying to hear digital communications on an analog scanner
- Desensitization of the scanner from nearby, strong-signal overload

While the Scanner Beam is an excellent, general purpose, scanner antenna, a dedicated 800 MHz beam antenna like the WiNRADiO log periodic with the built-in preamplifier should work much better on that specific range.

For deep fringe improvement, LMR-400 coaxial cable is the best choice, but lower-cost RG-6/U coax is usually adequate for shorter runs (under 100 feet).

Q. *I am seriously considering buying an IcomR-75, but before I spend this much I would like to know how all of this digital upgrade is going to affect shortwave listening? (R.C. Moyers, email)*

A. The digital mode which you are referring to is Digital Radio Mondiale (DRM), and its slow evolution will not impede your enjoyment of normal shortwave broadcasting, nor will it have any effect on utility monitoring (SSB).

Current DRM is being sent right along with conventional AM broadcasting. Until DRM broadcasts carry unique programming, you don't even need the DRM capability to make sure you are receiving all the content that is being broadcast.

Q. *When I'm out making the rounds of thrift shops looking for electronic bargains, I often see stereo speakers. Is there a simple test that I can make to get an idea of whether they will provide decent sound?*

A. Since it's unlikely that you will be carrying a high-powered, sweep-tone generator with you, let's just do the basic tests which will give a valid indication of whether or not the speaker is worth considering.

Visually, if the speaker cone is just a few inches in diameter, it will probably serve just fine for voice, Morse and data reception; a larger speaker provides the bass for music.

Carry with you a nine-volt battery to touch briefly across the speaker terminals (it won't harm the speaker). If the sound is just a raspy click, it should work for those modes. If it provides a good, bassy "thump" as well, it should work well with music.

Now inspect it for damage. If the speaker is enclosed in a wood cabinet behind a grill, you should be able to pull the grill off; it is often on a separate frame with small plugs which detach from the cabinet. This is usually revealed by lightly prying the edges of the grill to observe movement.

Inspect the paper cone to be sure it isn't torn, and that the rubber surround which attaches the cone to the frame isn't crumbling and disintegrating; this damage is *very* common on thrift-shop speakers! While a minor paper tear on the cone can often be repaired with tape, rubber glue or contact cement, the rubber surround can't.

If the cone and surround look good, press gently in on both sides of the cone and listen for it to rub the magnet; it should move without scraping.

These easy tests should do the trick.

Q. *Does the GRE PSR-500 support narrow-band reception by switching in an additional, narrower IF filter? (Gary Kinsman, email)*

A. I don't find any reference to switching between conventional and narrow FM filters for the new narrow-band channels. It is my understanding that the radios simply employ automatic gain control (AGC) for the audio so that both standard and narrow FM deviations produce the same audio level from the speaker.

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.)