



Q. *If I had the right antennas and the correct demodulators, could I receive Free to Air (FTA) programs on a computer-hosted receiver like a WinRADIo? (Terry Murphy, Pensacola, FL)*

A. I'm afraid it's not that simple. The MPEG digitized signals are sent down on TV satellite frequencies in Ku band (12 GHz), and proprietary software is required to receive it on your computer. You can subscribe to these services over the Internet, or you could buy the dish, satellite receiver and do it yourself, but you can't kludge together your own system.

The bottom line is that it may be free to air, but it's not free to receive!

Q. *Are new digital TV sets going to be just as vulnerable to television interference (TVI) from CB linears and amateur radio transmitters as the older analog TVs, or will they have better filtering? (Richard Molentine, WAOKKC, Overland Park, KS)*

A. Filtering for TV sets has evolved as interference sources have increased over the decades. While digital TV sets will probably not have substantially better filters than current analog sets, they will respond differently to radio frequency interference (RFI).

The old analog sets showed zigzag "hash" lines through the picture, but digital reception requires all the data bits without interference; if they don't, the picture becomes "pixilated" (blocky) or disappears altogether, much like what happens when a heavy downpour interferes with satellite TV reception.

Q. *On occasion, I receive an email after considerable delay from the time it was sent, perhaps a day or more. Since electronic messages are sent at nearly the speed of light, where's the delay? (M.B., IN)*

A. Typically, when you originate an email, it first is stored (a few milliseconds) on your computer, then it is sent through your common carrier's equipment and lines (telephone company), to your Internet service provider (ISP) – Google, Yahoo, whatever – then out again through a com-

mon carrier's equipment to the ISP handling the recipient's account. That ISP determines whether it's a legitimate email and then forwards it to your recipient's computer. If any of these intermediate services is down, experiencing technical difficulties, or being choked by high traffic loads, then that message will be stored at the ISP to be resent periodically until it can be successfully transferred to the recipient.

Q. *I am disappointed in the apparent sensitivity of both a Uniden and GRE hand-held scanner connected to a 5/8 wave vertical made for train frequencies when trying to monitor those signals. Do I need a better antenna? (John Cooney, email)*

A. Since both of these scanners have good sensitivity, and assuming they are in good condition, we need to look elsewhere for the poor performance. Here are some common problems:

- A bad connection on either end of the cable;
- A poor choice of cable or too long a run;
- Desensitization from a nearby strong signal;
- An unreasonable expectation of reception at your distance;
- Trains operating on other frequencies than those you are attempting to monitor.

Try listening for signals from non-train sources near the same frequencies to compare their reception, remembering that police and fire communications using repeaters may be much stronger than trains using simplex operation.

If you still think you need another antenna, you could switch to a directional (beam) antenna like the Grove Scanner Beam or Create LPDA. Either of these antennas would provide improved train reception over an omnidirectional antenna like you now have.

Q. *I would like to operate two scanners from one Grove Scanner Beam antenna; do I need to attach two balun transformers to the antenna and run separate coax lines down to the scanners? (James Jamerson, email)*

A. While you can hook two coax lines via individual balun transformers to the Scanner Beam, the biggest problem is that the oscillator radiation from each scanner is likely to be conducted to the other, locking up channels during scan and search.

The best way to do this is by using the one balun at the antenna and one coax cable down to

a conventional, two-set, TV signal splitter. (Be sure it is marked for the correct frequency coverage (typically 5-950 MHz.) Then you attach two coax jumpers from that to your two scanners. The splitter helps isolate the two scanners from each other – and you also save a long length of coax!

Q. *I have frequent voltage fluctuations in my building and sometimes brief blackouts. To protect my computer equipment I am thinking of using a voltage regulator plugged into the wall socket, and a battery backup plugged into the regulator. Is that a good idea? (Ricardo Molinar, NY, NY)*

A. Yes, it should work just fine, but first I'd simply try the UPS (Uninterruptable Power Supply); it may provide all you need. Check the APC products like this one at NewEgg: www.newegg.com/Product/Product.aspx?Item=N82E16842101311.

Wal-Mart sells the APC brand as well. Depending on your power requirements and how many peripherals need battery backup or just voltage regulation, APC is a good power supply. I've been using them for years.

Q. *What SATCOM equipment is required on ocean-going passenger ships and freighters? (J.J. Owens, NC)*

A. The Global Maritime Distress and Safety System (GMDSS) requires all passenger ships and large freighters to use both terrestrial HF/VHF radio and satellite communications to respond to marine distress. INMARSAT C is used for data transmissions including the ship's position; INMARSAT B for radiotelephone and TELEX; INMARSAT FLEET 77 high quality voice and data for fleet service; and 406 MHz Emergency Position Indication Radio Beacons (EPIRBs) automatically transmit position data through the COSPAS/SARSAT satellites for Coast Guard rescue.

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.)