

Signal Shorts

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Winchester Reception

As part of our ongoing practice of taking measures to improve our service where possible, occasionally I have the opportunity to conduct signal strength surveys. Studies have included a foray south of Lexington, and an extensive study in Nelson, Cumberland, and Buckingham Counties.

A while back I was able to take a look at some reception complaints south of Winchester. Here's what I found:

- W233AA (94.5) does not provide a good signal south of Winchester (as designed)
- Reception of 90.7 is spotty due to a ridge about 5 miles south of town. This is the ridge to the east of Cedar Creek Grade, in the midst of the many orchards in that area.
- WETA is on 90.9, an adjacent channel. WMRA and WETA are equidistant to the Winchester area. WETA operates at a higher power level
- Most of the reception problems are due to a high WETA to WMRA ratio. The actual level of the signal is not the problem, the adjacent channel interference IS the problem.
- An inexpensive 5 element FM antenna ([Radio Shack 15-2163](#)) may be purchased for about \$20. It is about 5-1/2' long, and may fit in many attics. By rotating the antenna such that the 90.9 signal is reduced, you will most likely find your 90.7 reception significantly improved.

We are looking forward to some possible FCC rule changes which will allow us to increase the coverage of our Winchester repeater. We do appreciate our northern audience, and enjoy hearing from you.

The WMRA network is a system of transmitters covering much of the Shenandoah Valley and The Central Piedmont of Virginia. Because of the rugged terrain, some areas are not served as well as others. Do you have a question about your reception or interference?

[Submit a question](#) to our Director of Engineering for a customized signal analysis and a reply, usually within a few days. Be sure to include your STREET ADDRESS and any location description which may help him locate your house or office on a digital topographic map. Write to: fawcetwd@jmu.edu

