Foxhunting: A High-interest Activity at W8UM

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The goal of any university club is to organize activities in which their members want to participate. Foxhunting is at the top of our list at the University of Michigan, W8UM. Foxhunting is a fast-paced activity where hide and seek, radio, and competitive spirits collide. The idea is, there is a 2-meter transmitter (a "fox") hidden on campus, and it's emitting a Morse code message at specific intervals: 1 minute on, 1 minute off. Using directional antennas built out of tape measures and PVC pipe, and homemade 4 MHz crystal attenuators, the object is to find the fox before the other competitors do.

If you want to host your own foxhunt, it is easy to put together. For the fox, you can use a 2-meter radio. Our club used an Arduino microcontroller to emit the Morse code message and created a cable so we could send the beacon audio into the radio's microphone jack and turn on the vox. We used a piece of coax as the antenna. By placing all of this and a battery in a plastic container, you can then hide it on campus. Be sure to write your club's information and phone number on the fox, in case anyone else finds it.

For the antennas and the attenuators, you can find designs online that are easy to follow. The key thing for us was making sure the radios we used had S-meters (so we could tell which direction the signal was the strongest) and making sure we had all the correct adapters for the antennas and the radios.

Overall, we had a great event. Five students participated, including two who were not yet club members. It can be a great recruiting activity when members bring their friends. Everyone who participated found both hidden foxes and is eagerly looking forward to the next event. I highly suggest other college clubs hold foxhunts as part of their yearly activities. Go Blue!

ARRL Life Member Michael Fluegemann, KE8AQW, was the 2020-21 W8UM President. He enjoys CW, foxhunting, and kit building. He became licensed while attending the University of Alabama, W4UAL. Michael can be reached at ke8aqw@arrl.net. W8UM can be reached at w8um. info@umich.edu or umarc.eecs.umich.edu/.

Resources

Tape Measure Yagi Design
theleggios.net/wb2hol/projects/rdf/tape_bm.htm

Fox Radio Arduino Beacon Code
https://qsl.net/w6dps/ARDF%20Controller.html

Attenuator Circuit Schematic
homingin.com/joek0ov/offatten.html

Above: W8UM students Michael Fluegemann, KE8AQW; Steve Culp, K8QKY; Everardo Olide; Cameron Blocker, KG5LVQ; Ernesto Aparicio; and Kaleo Roberts searching for the fox on the University of Michigan campus. [John Palmisano, KB8OIS, photo]