ALACHUA COUNTY AMATEUR VOLUNTEERS TAKE MARC UNIT TRAINING

by Gordon Gibby KX4Z

Two Alachua County amateur radio emergency comms volunteers, Shannon Boal K4GLM and Gordon Gibby KX4Z, took three days of training to learn how to operate the enormous 100-foot telescoping trailered tower and duplexer systems of one of the States Mutual Assistance Radio Communications units. The course was taught by Lt. Kevin Rulapaugh of Alachua County Fire Rescue, who commanded MARC unit #3 deployed to the Panhandle during the response to Hurricane Michael. Another MARC unit tower and crew, and a search and rescue unit from Ocala also participated in the training.

The first day was air-conditioned classroom education about the capabilities of the radios and systems cached with the MARC unit. The cache includes multiple types of radios and the numbers are mind-boggling: up to 100 extremely high quality Motorola handi-talkies with batteries for many days are cached – and each radio is in the range of $5,000. That makes the radio cache alone around ½ million dollars. No wonder Lt. Rulapaugh drove it back to safe storage at the conclusion of each day of training!

Days 2 and 3 were held at San Felasco hammock in a large grassy field with a nearby covered teaching area. Multiple systems were covered on Day 2:

- unsuccessful attempt to bring up the high speed automated satellite dish internet access system (mechano-electronic failure of the control system)
- modestly successful tries of portable satellite telephone systems (managed to call regular cell phones but could not call each other)
- attaching a broad array of antennas to the top and sides of the MARC tower

- attaching galvanized steel guy cables
- lifting the tower to vertical using a hand-winch
- extending the tower using an electrical winch
- placing guy-wire points
- extending tower to full height
- taking the entire thing down and replacing all the components

On Day 3, the team was given a “final exam” that involved a deployment scenario requiring deployment of antennas, duplexers, and the tower to maximum non-guyed height (the guy wires easily add another hour to the effort) and then responding properly to “injects” that required creation of a theater-wide ICS-205, repeater adjustments, deployments of radio cache, and the use of a fascinating radio-patch-panel system, the ACU-M. That system can effectively connect two or more repeater systems using connections to hand-held radios tuned to the various repeaters. In effect, it is a computerized, multi-channel, bi-directional (half-duplex) set of Signalinks with auto-audio level, and voice operated squelch in both directions. Ham radio operators could easily make a 2-channel version using two Signalinks.

It was a grueling set of tasks for two older hams not in nearly as good shape as the younger firefighters with whom they worked, but it was a fantastic interoperability learning experience!