

Looking for a Needle in a Haystack!

By Glen Sage, W4GHS

On Sunday evening, May 22, 2005, I received word from Bill Mauldin, WG4R and Thomas Uhlman, NJ1K, about assistance needed in a weather balloon recovery. Neither Bill nor Tom was in a position at that time to launch a search for the balloon. They ask if I would put together an ARES search team and attempt to recover this balloon and associated equipment. I contacted another ARES/RACES member from the Twin County ARES group (Carroll & Grayson Counties of Virginia) to assist in the recovery operation. David Puckett, KI4AVS was the member living closest to the site of the downed weather package. David also had a GPS unit and had lots of experience in traveling over the mountains having grown up on Groundhog Mountain and I had grown up in WV, need I say more.

This balloon and weather payload had been launched from Grosse Pointe, MI on Friday, May 20th. This balloon had traveled over 500 air miles in less than one day. Robert Rochte, KC8UCH and students from the Grosse Pointe Academy launched it. The station consisted of a Pockettracker, Etek GPS and a lithium battery, housed in a styrofoam box (cooler).

The packet station on the balloon payload was continuing to transmit signals every 90 seconds on the APRS frequency of 144.39. This was being retransmitted via the Internet and Robert had a GPS reading on the payload at N36.711326 and W80.261006. This location placed the device on a very steep mountainous hillside in Patrick County Virginia. The search began Monday, May 23rd, shortly after I picked up David Puckett, KI4AVS at his home around 10:00 a.m. David's GPS unit was an older device and would not convert from a reading of degrees, minutes and seconds to degrees plus 6 places to the right of the decimal. I had printed a topographical map from my mapping software and used a hand calculator to convert the GPS reading into degrees, minutes and seconds. With these tools we went to work searching for the downed balloon.

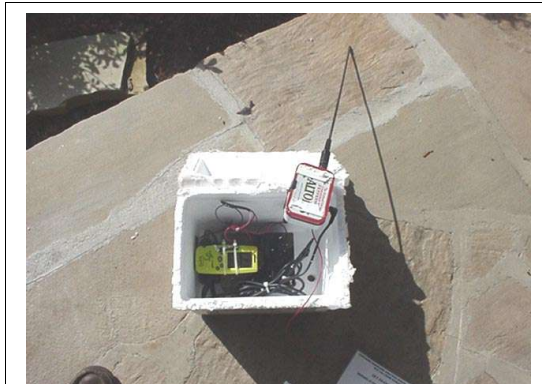
David and I traveled about two miles beyond the state maintained road to where the right-of-way became a logging road. At this point we began a 4-hour journey on foot. Our route took us from a little over 1600 feet above sea level to a little over 2000 feet then back down to 1900 feet. We were trying to travel in a straight line, to the stated coordinance. This took us through laurel thickets, over piles of logging laps, along the edges of 12 to 15-foot cliffs and dense undergrowth. At times we were down on all fours crawling. We were hopeful that we wouldn't come face to face with an eastern diamondback or timber rattler as we crawled through this dense brush. (This area is know for its heavy rattlesnake population) We did manage to pick up a few ticks and work our way through a number of patches of poison ivy and sumac. Much of the grade was steeper than 6 feet for every 20-foot traveled. We have a view of only about 20 feet, much of the way. I knew if I had made a mistake in my conversion calculations or if either of the two GPS units were off, we would be looking for a "needle in a haystack".

We were unable to work our home repeaters from this area. We did find two-meter repeaters that we could work in the event that we had an emergency. This brought home to me the need to have a list of repeaters, offsets and tones for an area that you plan to search. You need to be able to program your rig to those new frequencies without your manual or have an abbreviated copy of your manual in your packet. We used simplex to keep in touch and this was helpful at times due to being separated and unable to see each other.

We arrived at a point that was only about 1/10 of one second, of a degree from where the balloon was supposed to be located. While I was resting (I am about 10 years David's senior) David moved on to the exact coordinance that was given to us by the Grosse Pointe Academy. David was about

100 feet above me on the mountain and was shaking a sapling so that I could see his location. I could see the bush shaking, but no David. Then I saw it, the needle in the haystack. It was lodged in the undergrowth about 60 feet from me and 30 feet from David and the coordinnance listed.

The box containing the instruments was in excellent shape and I shipped it back to the owners. On its next trip it may land on your mountain or canyon so be prepared for an exciting wilderness search that will allow you the opportunity to use all the marvels of electronics that are associated with amateur radio.



Left, David Puckett, KI4AVS
Right, Glen Sage, W4GHS