

Training net – Jan 3, 2022

Training can come in many forms and cover many topics. What's the proper way to construct an Anderson PowerPole? How does radio propagation work and how does time of day impact radio reception? What's Ohm's Law? What are the basics of incident command? What is SkyWarn? What goes into a Go Box? How do you use WinLink? What can you expect during an emergency deployment? What motivates you to volunteer as a ham operator?

Some personal reflections on these last two items....

I've always had a great fascination with science, especially as it relates to the space program. On many occasions during elementary school, my teachers would wheel out a large black and white tv set in the classroom to watch the launch of manned spacecraft in the Mercury program. John Glenn, Scott Carpenter, Gordon Cooper, were our childhood heroes. Over the years, we watched Gemini launches, which eventually led to Apollo space flights to the moon. I'm sure "one giant leap for mankind..." certainly launched a multitude of professional careers in science and engineering, as did "to boldly go where no one has gone before".

Engineering was my final destination, as I couldn't pass muster in the Physics department due to my inability to learn a foreign language... although I did manage to learn Morse code well enough to get my Novice license while in college.

Over the years after graduation, I've continued to keep an eye on the sky and followed the space program. I worked for the electric power company in Houston for over 40 years, and I've had several occasions to interact with the folks at Johnson Space Center, either directly as it pertained to their electrical service or indirectly thru various professional societies or business events. On one occasion I mentioned to one of the NASA engineers in passing that I was planning a vacation trip to Orlando to see the EPCOT Center which had recently opened and hopefully I could take a side trip to Cape Kennedy while I was there. He responded with, 'let me make a few calls'...

One thing led to another, and in the wee hours of November 11, 1982 at a designated intersection, I joined a tour already in progress, and was transported to the VIP viewing area for the launch of STS-5. The VIP viewing area is only 2 miles from the launch pad. After some delays, we were treated to a spectacular sight of the Space Shuttle Columbia lifting into the sky. This was the single most impressive thing I have ever witnessed. Little did I know that our paths would cross again, on two other occasions.

About a year later, there was a lot of news stories about ham radio in space, as one of the astronauts, Dr. Owen Garriott, W5LFL, was planning to take ham radio on a shuttle mission. In November 1983, on STS-9, he made contact with over 250 hams around the world from Space Shuttle Columbia, including Barry Goldwater, and King Hussein of Jordan. I heard one of his broadcasts on a handie talkie, and although I didn't make a contact, I sent him a QSL card and actually got one back. This was the first of

many, many manned missions to include ham radio. Ham radio has been present on the International Space Station, and there are many ham satellites in orbit and operational today using voice or digital modes. If you haven't tried working one of those, I highly recommend it.

My final encounter with Columbia involved ham radio, but in a very different manner. During the launch of STS-107, Columbia sustained damage to tiles which doomed the flight. On the morning of February 1, 2003, Columbia was destroyed on re-entry over Texas, and rained tons of debris over East Texas, Arkansas, and Louisiana. Within minutes, an emergency net was established in Nacogdoches as reports of falling debris started coming in. As multiple agencies descended on East Texas, it became apparent very quickly that ham operators would be needed, as no one could communicate between agencies; County sheriffs, Fire Departments, State Police, FBI, DOD, NASA, National Guard, Search & Rescue teams, Game Wardens... if you name an agency, they were probably involved. This was probably one of the largest search and recovery operations, involving thousands of individuals. At the time, I lived in Houston and was a member of the North West Harris County ARES. The call went out from our EC for volunteers. This was something I could not not do. I was assigned to report for duty about a week after the disaster for a two-day assignment in Angelina County, a heavily wooded area of East Texas. On arrival, I was assigned to a Search and Rescue Team from Big Sandy, Texas. One of the local ham clubs had installed a portable repeater to help with the communications back to the command center, as the search area was a very remote location. We walked a search grid, six feet between each person, looking for anything on the ground, in the bushes or trees. Once an object was spotted, it was identified to be safe or not-safe, photographed, bagged and tagged with GPS coordinates, and put on a flat bed truck for transport to a warehouse. We found debris that ranged in size from about 1 inch square to several feet in diameter. We slept on the concrete floor in the Expo Center in sleeping bags. It was cold and wet. Progress was slow. Over the two days I was there, we covered maybe 3 or 4 miles in the woods. Luckily, our group did not find any human remains, but others did earlier in the week. All seven astronauts' remains were retrieved. Three of the astronauts were ham operators.

After twelve days, several thousand US Foresty employees arrived with their own communications to take over the search, and ham operations were no longer needed. Over those twelve days, about three hundred hams had participated as the only link between all agencies. It's my understanding that once recovery operations ended, approximately 84,000 pieces of debris had been recovered. These are now stored on the 16<sup>th</sup> floor of the Flight Assembly Building at Kennedy Space Center.

Over the many years working for the electric power company, I have witnessed first-hand the damage caused by severe weather. After a major storm, all non-essential employees are assigned storm duty to assist in the restoration of electric power. Duties could be mapping storm damage, delivering equipment and supplies to crews, shadowing crews as crew spokespersons to keep the public out of the linemen's hair while they did restoration work. On many occasions, mutual assistance crews from outside our service area would arrive to help, as we have done in the past. I've always thought that ham radio could play an important role in those recovery efforts, but nothing was ever organized.

My second deployment with ham radio occurred in 2005. Hurricane Katrina struck New Orleans and displaced thousands of residents. Houston was not directly impacted by the storm, but Houston was a major destination for these refugees, and many arrived with nothing except the clothes on their backs. Hams were assigned to help at the Houston Astrodome and the George R. Brown Convention Center as

bus after bus of refugees arrived. I was assigned to the Astrodome, which was setup as a staging area, with housing and medical triage. We took turns shadowing medical or fire department personnel on site as they addressed the needs of the refugees, or being net control at the command post. I commuted from home each day to the Astrodome and back. That deployment lasted for about a week before the refugees were dispersed into other communities around the country.

Whatever motivates you to volunteer, make sure that you continue to train and prepare for that day when you may need to step up. Hams are resourceful and we get the job done; but, the more you know the easier the job will be.

### **America's Quiet Warriors**

***"America's quiet warriors are the legion of ham radio operators, 700,000 of them, who are always at ready for backup duty in emergencies – amateur, unpaid, uncelebrated, civilian radio operators, during and after floods and fires and tornadoes. After the 9/11 attacks, hams were indispensable in reuniting friends and families. Most recently it was they who expedited the search for debris after the Columbia Explosion, and right now, at this moment, they are involved in homeland security to a greater degree than you would want me to make public." — Paul Harvey News and Comment, ABC Radio, March 19, 2003***