

NFARC Club

MINUTES of March 13, 2013 meeting at the Gainesville Red Cross, 1425 NW 6th St, Gainesville, FL.

ATTENDING – 12

Gordon Gibby
Jeff Capehart
Earl McDowd
Cheryl Carr
John Troupe
Gene Culbreth
David Huckstep
Vann Chesney
Leland Gallup
Chris Carr
Alvin Osmena
Mike Shaffer
Tom Gause

Meeting called to order at 18:59

Minutes from February meeting approved

Attendees roll call followed by several subjects and speakers.

1. ARRL/QST Magazine. Gordon, KX4Z, began with a “surprise,” concerning Rick Palm of ARRL. Palm is a practicing nurse; lives in High Springs and was at the February Symposium. He is a contributing editor for QST and does the public service column for QST. Palm said ours was “the best conference he'd ever been to.” 33,000 hams are in an emergency network who get materials from ARRL and through that medium received Palm’s praise on our Symposium. The news from Palm is that we should “look for the next two issues of QST.” Our exercise could be the HSEEP model for Rick's articles in QST. The section manager for south and west central FL are very interested and supportive of our efforts.

2. Background checks. COL David Huckstep and Jeff Capehart discussed the issue of ARES’ members’ background checks. According to COL Huckstep, the Alachua County Health Department is responsible for the background checks necessary for us to be deployed to County shelters during emergencies. Dr. Paul Myers is the Director and is supportive of hams being at the shelters. FBI and FDLE still charge for the checks – \$36 dollars. Dr. Meyers carries these out through the health department. COL Huckstep told Dr Myers that “20” volunteers were needed for background checks to cover absences, 24/7 coverage. Dr. Myers will pay for the first 10 volunteers, Sheriff Darnel agreed to pay for the other ten, which would bring the to 20 the total number of background checks that could be paid for by County departments to cover 20 ARES members. Five of us have already given our papers to Jeff Capehart, it was said...then additional members at this meeting raised their hands. Gordon Gibby recruited Vann Chesney to ask at GARS for additional people; by our count 10 more could put in their application for the “free” background check. As it is now clear who does it, how it's done, where we go. When we get the news and our papers are on file, we go to the designated location and they'll take care of the fingerprinting.

3. Passthroughs for schools and shelters. COL Huckstep has not spoken with Tom Cowart directly; COL Huckstep's plan is to go to the first six shelters in order. We'll do the ones that will open first. Three to five go-boxes will be made by Ryan Lee for the LEOs to deploy to the shelters. 800MHz and a 2m radio in each LEO go box for use at the shelters. Our (ARES') proposal is that ASO will provide the go boxes and ask the school board's permission so that ASO can put up VHF and 800MHz antennas as well as the coax passthroughs for these and amateur's own HF antennas. First four will be paid for by the ASO and ASO will take care of installation. The hams' antennas will be useful with the passthroughs. Easton and Waldo are the first shelters. Waldo is the designated shelter for animals so it's likely to be first to be opened. KX4Z, G. Gibby, read his list of passthroughs that he had previously discussed/pushed for. COL Huckstep reported that Rollins, Lanier, Williams, Chiles, Alachua Elementary, and since we know Santa Fe High School has pass through, it is then Talbot that is number six. The school/shelter in Newberry is different, and COL Huckstep will talk with them because it's their school. ASO will cover the costs for doing the first four this year; goal is that ham walks in, puts up his HF, and with the pass through will be able to use that and the VHF antenna the ASO will put on the roofs with and the passthrough for HF.

4. EOC interference report. The AAR for the interference party was put on a screen in front of the room. KX4Z discussed. The 80m band on HF in the EOC radio room, using the EOC's HF transceiver, has 20dB of excess noise; the equivalent of a 1 watt station. Almost "real bad" on 40m, but ok on 20m. The Yaesu transceiver puts out only ten watts on 80m and the reason is simply unknown, while a full 100 watts goes out on 40 and 20 meters. Powerpoles in the neighborhood are not the cause of the interference. Noise worse with HF antenna raised off roof. Radiated noise from somewhere – most probably inside the EOC. Shannon Boal did great work in trying to locate noise/peaks and nulls. Solution: probably the best are noise filters on the power wiring. Ryan Lee has a spectrum analyzer, we hope, that can actually tell what are the frequencies of the interference – this is better than merely hearing undifferentiated noise on any given band. We could walk around the building and find out where the noise is strongest; then, by a process of elimination, determine the actual source and with filters resolve the noise. KZ4Z, Gordon, hopes soon to have a spec analyzer, too. COL Huckstep offered that there is a day we can do the test at a time when the EOC's comms will be temporarily relocated to a duplicate comms room in the County Administration building. This would be a two week period during which we could go through the EOC and actually do the testing; COL Huckstep will find the period for the two week EOC comms shut down and let us know. KX4Z described a final and very unsatisfactory solution to the HF noise issue – a remote receiver with Internet/MESH, etc., for a remote receiver system to "act" as the EOC receiver. This would not be a good solution.

5. March for Babies. Vann Chesney thanked ARES members for supporting the Five Points of Life Marathon. On Saturday, April 13, is the annual March for Babies (formerly March of Dimes). Chesney met with GARS' Pete Winters and an official for the March for Babies. Will be at Celebration Pointe. Event is a "race," within Celebration Pointe and over the I-75 bridge. Pete Winters hopes to have 20 or so volunteers. Volunteer signup sheet passed around the room. The race is three miles. Hams will be at water stations. In the past, we have had people on the Suncoast busses. We may not have that this year. As of the date of the ARES meetings there are no maps of stations, or numbers. Time of registration is 0700, with race at 0815. Not as early as the Five Points of Light Marathon. Lots of walkers. Could go as late as noon. KX4Z will send along a 205a to Vann Chesney that will help with a lot of comms issues. COL Huckstep says this is a game day, so there will be a lot more people in town; an afternoon event is the "Orange and Blue" Gators game event. Afternoon will be an issue.

6. Work party to Beatty Towers to look at the 145.770 repeater. Vann Chesney and Susan Halbert went to Beatty Towers over two weekends. The repeater room is cramped and noisy. Could not find serious issues with the equipment. It had been reported to Chesney that the txcr worked and then stopped. The first weekend they looked at the TNC which looked good on site; Chesney took the TNC home and got it to work. The TNC doesn't appear bad but just needs adjustment. The second weekend Chesney and Halbert adjusted the TNC and tested it from nearby. Chesney and Gibby can't hear 145.770 at Jonesville, but can hear the 030. Gibby said that 770 can hear/talk to Lake Butler, but Lake City is "dead." Gibby suggested that we use the Amazon gift card to buy a battery LifePo4 for use at the Beatty site; this was agreed to by the present members.

7. Citizens Academy. Troupe reported on the Citizens Academy, as a follow on to CERT; Dalton with the Alachua EOC sent out an email putting out courses on a variety of courses, such as ICS documentation. KM4JTE, John, will be taking a documentation course this coming Saturday. The process is ICS intensive. Everyone is able to take the course by taking the online survey. This will register for the course. This is not for CERT; this is an update and a review for the "317" course. The whole course is 17.5 hours.

8. Internet. Jeff, W4UFL, continued his series of talks describing the workings of the Internet. Showed MS screens that detail connections and how they work/look. The connection details give the IP address. Internet v. 6 is a lot more complicated than the current v.4 and would allow many more devices. In event, v.4 allows for remembering the simple addresses. Subnet masks are about which computers you'd like to talk to on your subnet. This has to do with local networks and how they are configured. Gateways are how you get to the internet – traffic goes through them. DHCP and DNS are automatic assigners of addresses. Dynamic host configuration means that the routers automatically assign addresses. Physical address numbers/MAC numbers – this is how the network routing equipment knows where you "physically" are in the subdomain. The IP address is how the rest of the world knows your address (but it is not the actual physical address mentioned in the previous sentence). The Domain Name Server (DNS) is how you get from "Google.com" to an IP address that reads as a string of digits separated by decimal points, such as 74.124.21....etc. Gmail is 217.0 and so forth. Jeff showed ipconfig from the command line; this is the Windows IP configuration from the command line. The "Property" screen shows the numbers for the physical and IP addresses. Subnets and gateways are shown. Gateways are typically the routers. Your computer needs to know a DNS server. These are the public IP addresses, such as that for google, amazon, etc. Domain Name Service is what the computer; DNS translate to numbers. Google.com is, e.g., 172.217.10.174 will get you Google's page even if the DNS is down. But you have to know the public IP addresses to get around the DNS – this is your "Miniature phone book" if "the net is down." Just enter the actual public IP address. Capehart used Shelter A's information from Properties to show local network stuff, but since Shelter A is not connected to the Internet, it can't go outside the local network. Can't see DNS response from the Internet because it's not connected to the Internet. If you're on such a local network and you know someone else is on, you can ping them on the numbers to see if they're a live connection. This was demonstrated by pinging Vann Chesney's machine which was on the local Shelter A network. Finished up by describing the vulnerabilities of the Internet system, which was ultimately built on "trust," and how "spoofing" is done.

9. REFLECTIONS 4. Gordon, KX4Z, handed out a copy of "the Complete Smith Chart," and a REFL 4 handout. He then posed a question. Assume a Field Day transmitter putting out 150 watts. He asked what are the impedances along the coax line, and what is the SWR? 3:1 is 150 watts driving a 50 watt output. So 3:1. He then walked around the circle drawn on the example chart, demonstrating at points A, B, and C, how the voltage and currents are opposite....high current at C and low current at A; high

voltage at A and low voltage at C. Walked through the equations and analysis of all the varying points on the circle. Discussed point B. resistive 32 and reactive 43 ohms. The “j” indicates reactance. Talked about the URL on page 2 which can be used with an Internet connection to do the calculations. This showed how you get phase lag; for example, “voltage is 53 degrees out of phase with the current.” If the current and voltage are not together, are out of phase, you go from that fact to “apparent power.” (page 3). The Power Factor is the cosine of the phase offset; cosine of 53 degrees, for example, is .6. So the real power in the system at point B is only 60% of the apparent power....power companies want to add power factors maximizers to get the most real power. Finished up by showing why SWR shows “3” at always half way up the meter. And hence how to calibrate how to calibrate an SWR meter. In the days before antenna analyzers and SWR meters, the Smith Chart was used to calculate/reveal what was actually going on in a feedline system.

10. Leland, AA3YB, briefed the March 30 SET. He went through the ICS-201 and described the concept, format, and locations for the exercise. He then displayed ICS-205 and ICS-205a adapted for the exercise. Following up on a suggestion from KX4Z, COL Huckstep agreed to be Net Control at the EOC, while Alvin Osmena agreed to act as COMMS 1; Other persons agreeing to participate were, Cheryl Carr will be at the shelter, Tom Carr will be the drone operator at Santa Fe. All documents described and briefed are on the NF4RC website. Works in progress that will be updated over the two weeks before the exercise.

11. Suggestion: Ask others such as Karl Martin and Ben Henley to write next year’s Symposium exercise.

12. CERT trac. There was a brief description of how to take courses.

Meeting adjourned at 2105 hours.