Alachua ARES/NFARC/NF4AC Clubs

<u>**MINUTES**</u>

January 8, 2020

Meeting held at Gainesville Red Cross, 6th Ave NW and 16th St

Attendance: 17

Gordon Gibby
Susan Halbert
Earl McDow
Jeff Capehart
COL David Huckstep
Chris Carr
Wendell Wright
Jim Bledsoe
Leland Gallup
Bob Guertin
Tommy Boyd
Mike Shaffer
Vann Chesney
John Trites
Nita Sanders
Bob Gay
Reid Tillery

Meting called to order at 1900
Minutes for December 2019 Meeting **approved**.

Introductions

1. **Traffic NCS Training.** Saturdays at 0830 on 3950 LSB until May. Training is 20 minutes each Saturday morning. Purpose is to increase the pool of operators who can act as Net Control Statons. Hosted by Dave Davis, the Net Manager for the ARES Net

2. **Multiple ways to get on HF;** KX4Z demonstrated a number of different way that operators can get on HF. First was the uBitx V6 with case, $200, a product improved version of an HF kit produced in India. Next up was refurbished Heathkit transceivers; these can be found on eBay use for $300/$400.

3. **Project Team Signup:** KX4Z showed the responses that have been collected showing the group's interest in the projects for 2020 proposed at the Dec 2019 ARES meeting.
    - 20 responses on GOOGLE Forms

- KX4Z showed the results of voting with respect to each proposal; the results are visualized in pie graphics.
- Went through the list very briefly; summarized the ones that the group seems to be

excited about it; distributed sign up lists for people to indicate interest in individual projects. The sign up sheets allow a person to say whether he/she is interested in a project as a project leader, a "follower," or both.to lead or just follow in the various projects.

4. **Wires X.** Jim Bledsoe delivered a presentation on Wires X. WIRES X is a combination of Internet and radio. Connections made up of local connections and root server in Japan. Root server maintains the connection to radio operator with DTMF able repeater. You access Wires X through C4FM (System Fusion) capapble radios. The Wires X "radios" (Yaesu, FT100) permit direct connection to the Internet, or through transmissions to a local WIRES X capable repeater; can also connect to a hot spot. To use WIRES X, start WIRESX software; select a call sign one wishes to call directly, or enter a "room,. Call CQ or answer a call. WIRES X permits fast transfer of data, images, etc., as well as Internet mediated voice conversations anywhere in the world that is at the "far" end of and Internet connection and is similarly WIRES X configured. Examples offered included speaking with an op mobile in Australia. Reid Tillery and Bob Guertin added input ; they both have used WIRESX on C4FM capable repeaters. Jim explained the concept of "rooms," and how they provide a location of users which can be all over the world. Used an example of a Kansas City "room,"which comprises a number of repeaters in an area. All the repeaters have to have a robust Internet connection in order to work with the Room. The advantage is that anyone "in the room" (by virtue of communication with any of the repeaters "in the room" can hear anyone else. Rather like the concept of SARNET. Discussion of the ways that you could use this kind of system with a WIRESX box to set up a network room on the fly; or radios; the radios we have at the EOC are capable of doing this connection if the radios are registered. Any Yaesu C4FM radio can do WIRESX.

5. **Trailer Tower Project**. KX4Z talked about the trailer as a Lab N Lunch project. N6NB is a ham who has developed the idea of an inexpensive trailer tower project. The idea is that a simple vehicle trailer could be used to carry a tower that is is laid down when the vehicle is underway but which can be raised when at the location from which transmissions will occur. KX4Z has the trailer, but needs to have help in constructing. The tower, when done, could be used for expedient deployment operations, for Field Day, for satellite, etc.

6. **MESH tower concept**. Jeff Capehart, W4UFL explained this project as a follow on to the earlier days of microwave investigations by the ARES group. There is a tower in Micanopy from which microwave "shots" could reach Ocala. The idea is that a MESH network might be constructed. From UF towers to Micanopy to Ocala? This is the goal.

7. **SARNET**. AA3YB described how he activates the EOC on a regular basis on Wednesdays. Is able to use the EOC's UHF Yaesu transceivers with the SW VHF/UFH antennas to "hit" the SARNET repeater in Ocala. Represents the County on the weekly SARNET EOC net at 1300 local. State EOC in Tallahasse is net control. Using Ocala's connection, the EOC is heard "loud and clear" by the State EOC. AA3YB estimates 30% of FL counties participate. Gainesville SARNET microwave connection is still not working. AA3YB tests all the facilities at the EOC; these include using VHF Winlink packet. Was able to send test message through W1GLV; updated JS8Call to newest version (after manually synching the computer clock used for HF work) and transmitted. Could not see AA3YB, but when AA3YB was at home station, which he had left operating in HB mode on 80m JS8Call, he saw NF4AC; was also able to see from the EOC that W4DFU was also visible to NF4AC; this means that there is real possibility of using JS8Call's relay capacity from the EOC – and these experiments were conducted at mid-day during bad 80m prop. Also used Winlink to send message by PACTOR on 40m. Started

both FT8 and PSK31 and say signals on 40m. Site is noisy, and AA3YB recommends rehangin the "chigger antenna" with better balun at some point.

8. **Winlink Net.** Susan Halbert, KG4VWI explained the workings of the weekly HF Winlink Net; the "new" net operators use a simplfied check in process, and allow checkins from Sunday (when the net reminder is published) through Tuesday morning. P2P problem – neither KG4VWI nor AA3YB can hit the "new" P2P HF stations. Point system explained by KX4Z. All encouraged to get on HF and use SignaLinks or home built equivalents to utilize this marvelous HF digital training tool.. Described how it works.

9. **Improved 49:1 Baluns**. Lab N Lunch future project. Tommy Boyd also showed one that he'd made and described dual core improvements. Use of the 49:1's, as improved by KX4Z and Reid Tillery, for end fed antennas, explained.

10. **Nine Lunch and Labs.** KX4Z rolled out nine possible Lab N Lunch projects for the upcoming year, including not only the trailer tower (see above), but also pulser/keyers (used to tune high power amplifiers); upgrades to EndFed half wave Baluns to lower loss configurations (refinement of a very popular earlier Lab N Lunch) using +/- FT-2430-34 core; and finally a morning park deployment exercise. Others on a list (see below for dates).

11. **Amplifier.** Gordon, KX4Z, showed old tube amplifiers and the work he is doing not only to bring them back to life, but also improve them using modern parts. These are SB-200 amplifiers, for which tubes are available new for $90 or so. These amps, as reworked, put out more or less 400 watts. Showed photos of what he's done to rework the amps and add modern protections, new power supply, new tubes. Showed measurements of the grid and plate maxima, how to read the meter. The newly refurbished amplifier is ready to install at the EOC so that the EOC NF4AC station will have higher power HF. But neither a suitable tuner nor higher capacity Balun have yet been emplaced at the EOC. Moreover, the "chigger antenna" at the EOC's adjoining woodlot needs to be rehung and the balun rebuilt to handle higher wattage made possible by the "new old" amplifier.

12. **Traffic Practice**. Gordon, KX4Z, went over the construction of the NTS and then broke the group in to a variety of ops who would handle tactical calls at sites such as fictional shelters. Included liaison assignments to higher nets. 11 messages received; and an tallied but considerable number of messages passed. Went over the check and how it works. The sessions were by some margin the most successful traffic practice ever engaged in by our group; included both formal and informal messages, radiogram practice, and use for the drill of fictive local and NTS nodes and tactical sites.

13. **Heathkit power supplies.** KX4Z showed how to install a new circuit board he designed and has manufactured in to a Heathkit power supply. Also demonstrated the concept and need for a "pulser" to tune big amplifiers. Ameritron makes such a device, which allows keying up an amp and tuning the amp without 100% key down CW which will destroy tubes rapidly. KX4Z designed a protype that does what the commercial product does. The prototype pulses with CW ID so that the EOC refurbished amps can have a tuner. Also designed one that is a pulser and an electronic keyer.

14. **MOU**. AA3YB will take on the project, approved by the EC, of drafting and getting an MOU for ARES with the County through the approval process by the height of hurricane season.

15. **Lab 'N Lunch Dates.** Possible dates for lab and lunches, and the project suggested:
    1. Jan 25 assemble trailer
    2. Mar 14 RF Baluns and Bandpass filters
    3. Apr 18 Morning Park Antenna and Rapid deployments
    4. May 23 EOC Equipment Training
    5. Jun 20 Pulse Tuner
    6. Jul 18...TBD

Meeting adjourned at 2056.