Alachua ARES/NFARC/NF4AC Clubs

MINUTES

May 13, 2020

Meeting online via ZOOM instead of in person at Gainesville Red Cross, 6th Ave NW and 16th St

Attendance: 27 (all participants not included in the names below...apologies to those not included)

Chris Carr
Brad Swartz
Jeff Capehart
Earl McDow
David Huckstep
John KJ4YPZ
Mike Ridlon
Larry Rovak
Mike KD4INH
Leland Gallup
Gordon Gibby
John Troupe
Craig Fugate
Alvin Osmena
Earl Sloan
Wendell Wright
John KJ4YPZ
Joseph DiPietro
John Trites N05X
Bob Wickham
Bob Guertin
Tom Gause
Vann Chesney
Judy Gardner
Jim Bledsoe
Susan Halbert
Rosemary Jones

Meting called to order at 1856
Minutes April Meeting **approved**.

1. **INTRODUCTIONS.** First half an hour; then used Zoom's feature to see participants. Jeff Capehart gave tutorial on how to negotiate and use Zoom's screen and its view options.

2. **ARES TASK BOOK SIGNOFFS AND COAX CONNECTOR SHOW AND TELL.** Jeff Capehart is the only one who can sign off on Level One. Bledsoe and Gibby can sign off Level Two: only the EC can sign off Level One. Discussion as to how to prove Level's done. Pictures of things done, certificates, copy of 213 if you filled it out, etc. Folder with documentation of

everything for each level along with the task book. Jeff does Level One; send him email this evening to get signed off on level one.

3. **NTS RRI RADIOGRAM.** Leland Gallup, AA3YB, demonstrated how to use WINLINK to send an RRI NTS radiogram to people...in this case to cell phone as texts. This is a task book requirement which is literally a use/skill probably unanticipated by the task book authors. A new capability which actually works. KX4Z received the radiogram by cell text that AA3YB sent by Winlink to the RRI Region 4 liaison.

4. **TRAILER**. Mike Ridlon showed diagrams of the plan for the trailer, complete with outriggers and lifts, stabilizers, and jacks. All of this can be folded in and won't go beyond the fender well. The mast has connections for guy wires. The design is nearly complete, and he is getting quotes for materials and for fabrication of things he (Ridlon) can't make. Will have a build party with hopefully no surprises.

5. **ARDUINO-LOAD THE IDE**. KX4Z, Dr Gibby showed, how to dowload the files for this software, including the URL.

6. **PROBLEMS WITH BEATTY TOWERS REPEATER.** Susan Halbert, reports that she got in to the radio room. Saw that the radios were on, but the Raspberry Pi was off; the SD card is probably not working well. Probably a bad card. This means we have to program another one right now on Raspberry Pi; appeals to someone to assist in programming the Pi...otherwise, we have no repeater at Beatty. Not having a repeater there is a bad thing. Susan has online resources to send on to someone who has some basic computer skills. Mike Ridlon asked what the Raspberry Pi is doing....collects the signals for the packet and runs the two stations as their computer.....070 and 030. Mike Ridlon offered to help Susan with this project. Discussion of copies of the SD card onsite with the Pi. Joseph DiPietro offered guidance on this as well.

7. **ARDUINO NANO OR** UNO. Earl Sloan talked KN Arduino compiling using BareMinimum 1.8.12. The "Blink" program is used to drive the compiling. Showed how to download, compile, and upload a simple Arduino file...these simple computers are used as controllers, so the scripts are very basic. Turn LED on, wait second, and turn LED off. That kind of thing.

8. **NET CONTROL TRAINING.** Wendell, KN4TWS, talked about the training that Dave Davis, the NFL Net Mgr, hosts on 3950 at 830 on Saturday mornings. Net preambles, scripts and passing traffic will be covered/rehashed. Moving traffic, moving off frequency to pass traffic, etc. Transferring control was done to show how this is done. Went over the lessons learned from the training. KN4TWS also described the net control process being used for the nightly local COVID-19 net.

9. **ARDUINO FILE ADDITIONAL DEMONSTRATION AND MANAGEMENT**. Earl Showed a mod of the BLINK program that he had done. Compiled the sketch, uploaded. This one showed a blinking LED...the blinking was a code. The code turned out to be Earl's call sign...being blinked out in LED.

10. **EOC EQUIPMENT RENEW AND SHELTER.** David Huckstep described the new buy by the County Sheriff's Office for the EOC. In January our group approached the EOC director for equipment; this was not successful for $$; could not get grant. So COL Huckstep aproached the Sheriff, who approved a buy for an IC-7300, a 1000w LDG tuner, a Rig Expert 230 analzyer,

and a power supply. That will be here in about 10 days or so. Second piece of news concerns go boxes and funding for configureing shelters....VHF and 800MHz, LMR coax, antennas, so that LEO and hams will have preconfigured radio rooms for both public safety and amateur. The first phase was done for the first seven shelters that would be done; second phase is moving to the next set of seven shelters with permanent antennas and connection boxes, pass throughs, even to include long wire pass throughs. Also go boxes being constructed. Altogether by July the goal is to have 14 shelters.

11. **LIBRARIES FOR ARDUINO SKETCHS AND BATTERY BACKUPS.** Gordon Gibby showed on the NFARC website the source for finding "libaries" that may be necessary for doing programs/sketches on ARDUINOs. Showed his battery back up script on the site; demonstrated compiling the sketch, after compiling showed how much of the program space was being used. After compiling, uploaded to an arduino in free space. A three dollar device.

12. **FIELD DAY AT EOC**. Hal Grieb has approved our using the EOC radio room for Field Day. Needs roster, two people in room max, proposed a place where a second station could be parked in relation to the EOC. Thousand meter radius from the radio room would define where the second station may be located. This will be NFARC's Field Day site. The idea is that everything should be within 1000' radius, so only one station is probably optimal. Next meeting John Trites will lead group to plan for the NFARC EOC Field Day activation. Planning committee should produce an ICS document; 201 form to start.

13. **BATTERY BACKUP BOARD**. KX4Z showed a battery backup board that he has designed and built. The board uses a display, an Arduino, and three MOSFETS to control switching...the total both charges and checks voltage, while connected to a source and to batteries. The point is that the battery backup can seamlessly switch the load between source and battery, and between charging and being used as battery power for the load. The scripts can be written so that the backup can charge SLA, gel cells,etc. Any type of battery you may want to use. Worked through the design mistakes that he made as a consequence of the "trickiness" of the zener diode and MOSFET arrangement. Heat huge issue...needs more heat sink capacity given the watts being dissipated.

14. **UF VENTILATOR UPDATE**. Ventilates better than expected, sets pressures accurately in terms of volume to the nearest 20 milliseconds. Assist ventilation needs more work. About to go to FDA...in the hands of pro-bono rep now. Showed a movie and provided a talk over. The movie and talkover completely described the venitlator and its construction. All controlled by ARDUINO-BASED methods, using common valves and fittings and pipes easily available from Home Depot. Countries all over the world are stepping up with volunteers to manufacture. Mechanical and electirical engineers, country after county are stepping up to get licenses to build all open source, free. Point is that this is inexpensive and open sourced. No profit. Will really help in the developing world. This design has had prototypes that have gone through millions of cycles; low fire potential because there is little actual voltage in the system (voltages with oxygen....bad combo). Cost to build in the low hundreds of dollars. Three quarters of the ventilator design comes from ham radio operators. Talked through how a simple on/off duty cycle lawn sprinkler valve can – using time control and pressure transducers – can be used for the extremely precise and demanding task that is ventilator valves to assist human breathing.

15. Meeting adjourned at 2103.