

Alachua ARES/NFARC/NF4AC Clubs

MINUTES

December 8, 2021

Meeting held via ZOOM

Attendance: 19 (participant count on ZOOM)

Gordon Gibby
Susan Halbert
Leland Gallup
Stewart Reissner
Craig Fugate
Barbara KO4TWS
Dean Covey KV4RL
Mike KD4INH
Lorilyn Roberts
Earl McDow
Jeff Capehart
Mike WB2FKO
Vann Chesney
George Harbour
Mike KD4INH
David Huckstep
Amy KO4IDO
Wendell KN4TWS
John Trites NO5X

Introductions. From 1830 until 1859 when the meeting commenced. Although the July 2021 meeting was held in person at the Alachua County EOC (and via Zoom), the return of COVID made an in-person meeting inadvisable. Consequently, the December 2021 meeting was solely by ZOOM.

1. UPDATES ON BADGING NEW VOLUNTEERS; RESULTS OF EOC PLANNING.

Spelling error on the “statutes” language on the reverse of the badge design, which was shown to all Zoom meeting participants. Comment invited from viewers; with the exception of a request from W4UFL to present mockup with placeholders such as photo and name filled, no comments. Will go ahead with this as the ARES proposal for EM review. Questions from Susan Halbert: Do people with old badges have to get new ones? When do we find out whether our background checks are obsolete? Two questions that AA3YB will present to Mr. Herding when he discusses status a week hence.

2. APPROVAL OF NOVEMBER 2021 MINUTES. Approved

3. GROUPS.IO SUGGESTION. This is a suggestion by Mike WB2FKO. He offers to set this up and suggests we move to this to moot the need for mass emailings. Each individual manages own account. Discussion of the pros and cons of whether IO would be something the group

would like to use. Mike will set up and do demo. By the end of the ARES meeting, he had put out an NF4RC.IO page, and email invitation to join is going out!

4. **FIELD DAY REPORT.** 513 contacts power level 2, 23 participants, 3290 points. We were number 13 of the 2F groups. We are in the top quarter of 2F entries, and doubled our point score and operators. KX4Z proud of our results, which are available on ARRL web site.
5. **NVIS NET REPORT:** Lorilyn participated in the NVIS net; but had tech issue as at first people could not hear her. Amy and Craig also participated; five or six participants altogether. Had to move net ops from one freq to another; NH had a scheduled net and we were stepping/deconflict other nets. Craig says the challenge is that going up or down 5kHz means you might be stepping on other nets. Reid proposed (not present at this meeting) a group to camp over a weekend and do radio work. KX4Z encourages folks to participate in the NVIS net as a way of improving skills that can be used in emergency communications. NVIS can be made to work with very little power and can provide almost repeater-quality comms.
6. **NOVEMBER EXTRA CLASS COURSE REPORT** 17 people involved in the class. Amy already has passed the Extra Class test so congratulations to her. 17 hours of training at the EOC. KX4Z told the new EM Deputy that we had done 17 hours of training and the Dpty Director was quite astonished. Much learning by folks building receivers, how test instruments work. Documenting success is important, and KX4Z sent out certificates for the trainers. This can be put in to SERTrac. Dates must be entered correctly in order for the trainers' work to be acknowledged and posted in SERTRAC. KX4Z thanked all participants. AA3YB recommended to other ARES members that they teach sections of the licensing courses as a way to deepen their own understanding of the subject matter.
7. **CHRISTMAS FOR RADIO AMATEURS #1** uBitx6 – a \$160 Analog 10W SSB multiband radio. Christmas “coal” is a homebrewed uSDX transceiver. There are Chinese clones of the original German designer’s work; these transceivers should be avoided! Use Arduino which is simply not fast enough to handle audio over 1500 Hz. For good audio you need to be able to go to 2500 Hz without aliasing. If interested, source from the actual developer in Germany...but even that doesn’t meet standards for quality. Contrast that with the micro Bitx6 with an already constructed circuit board, \$209 including the case. This is the sixth iteration and this is a pretty reasonable radio. Third parties have developed nice software for using this, including panadapters, etc. Straightforward radio. Not an Icom 718 but far cheaper. Versions 3 and 4 owned by Gibby and 6 is a much better version.
8. **LORA INSTALLATION REPORT.** Dan not at meeting to report, but Susan offered input as she participated in the work party. Susan got access. She believes the LoRa has been installed on the roof, and that there are first reports of success, but perhaps low power because of low solar flux on site. KX4Z reports there are 2 to 3 miles radius of a mesh data network. Faster than JS8 but not Internet speeds. No license required. Solar panel pointing at the northeast sky which is why power is low. First results are promising. Pleaded for showing up at ARES meetings to gather traction.
9. **SITE VISIT TO BEATTY TOWERS REPORT.** Earl K4ZSW reported on efforts to fix the digipeater on Beatty towers. Found an SD card was cracked and that was clearly an issue. Couldn’t get keyboard or mouse to work on the Beatty Raspberry Pi. Have to replace the old Pi with a new one. Showed slides...K4ZSW’s Pi that he would case and put at Beatty. Looking at

options for cooling and battery backup...everything depends on the Pi working in a hot location so cooling is an issue. K4ZSW showed his DIY air cannon. Offers to build for others who might be interested. Beatty towers digi offered two different frequencies, with 5000 sq miles of coverage, could link to KX4Z, K4ZSW, and K4MVR. Susan asked if Earl was ready to go back to Beatty to install the new Pi. Answer: no, but that's on his list of work during the holiday that he wants to do. Susan offered to help go back to Beatty with Earl the week after next.

- 10. CHRISTMAS FOR THE RADIO AMATEUR #2.** QDX Digital QRP transceiver. \$60 + \$20 for the case. A digital I/O Receiver with 4 bands. KX4Z thinks this is a really interesting device, developed by QRP labs, which is an organization with a good reputation. The rig uses a signal tone generator so that can be used for "single tone FKS" such as FT8, JS8 and similar. Not for Winlink, not for phone. Thinks it uses a class "E" amp which is why it is so efficient. TX portion is a single tone from a digital tone generator. This is the thing for FT8 or JS8. 5Watts. SDR kind of radio but done by quality designers.
- 11. THURSDAY ALACHUA ARES OP TRAINING NET AND NEW RADIO THINGS.** AA3YB discussed JTDX, VarAC, two modes complementing FT8 and VARA, respectively; also talked about the Alachua ARES operational training net. Showed screen shots of actual VarAC QSO. Interesting mode, but AA3YB is skeptical as to whether VarAC is superior to JS8 Call for EMCOMM purposes; VarAC supports P2P keyboard using Vara protocols, with beaconing mode and nice logging features. Worth further investigation.
- 12. CHRISTMAS FOR THE RADIO AMATEUR #3.** QRP Guys 5 watt single tone digital HF transceiver kit for \$80. Almost same idea as QDX..single tone HF transceiver kit with filters for whichever band you want. An SDR radio...demods the same as I/Q in 7300. KX4Z believes this might be a quality single tone FSK radio. Dirt cheap.
- 13. EOC WORK PARTY FOR DECEMBER 11 2021.** From 0845 folks will be at the EOC. Check in to NF ARES phone net at 0900 using the HF station/amplifier. Purpose of the work party is to connect up remaining Polarity Protectors in the EOC/Shelter Go box. Pigtails already on. So we'll solder or crimp on the polarity protectors.
- 14. CHRISTMAS FOR THE RADIO AMATEUR #4** sBitx Prototype. A hybrid SSB transceiver that is near to release. An open source SDR that is open to hacking by all. Analog/digital with a touch screen of 7" sort of like a 7300. Has a panoramic display. Not a 7300 in that it uses analog to get to a base band frequency and at that point like a 7300. Arduino 3 or 4 for the digital processing. This is Asher Farhan's attempt to get a \$250 10w or so psuedo 7300. Software already released, and KX4Z has loaded on his school's gear; believes that this will work with his stuff for receiver. KX4Z sees costs going down and quality going up.
- 15. CHRISTMAS FOR THE RADIO AMATEUR #5.** More kits and radios than KX4Z has seen before in one place. 77 kits or fully built radios available to buy! QRPtransceiver.com
- 16. CHRISTMAS FOR THE RADIO AMATEUR #6.** Inexpensive "shoes" for the QRP transceiver...a 50w amp MX-P50M. Actual decent quality amplifier for HF QRP rigs.
- 17. CUPBOARD SIDED APARTMENT LOOPS.** KX4Z built an 8' by 8' antenna that wasn't very good; then discovered that on ARRL there is a 20 year old design 3.5 by 4.5' loop. Use

biggest wire that you can. Uses three capacitors to tune. Capacitor to match or use an antenna tuner to match. May afford apartment dwellers opportunity to get on air. Use insulated if wires are close together. Notches in frame so wires don't bang together? Use bare wire. The coils are not far apart. Biggest conductor you can because of the skin effect.

- 18. CHRISTMAS FOR THE RADIO AMATEUR #7** Inexpensive VHF/UHF SWR/Watt meters on Amazon. Surecom for 44\$ digital. These are for working on VHF/UHF...good to have in the tool bag of folks deploying with UHF/VHF to see whether the antenna is ok and whether power is going out.
- 19. GIFTS FOR YOUNG RADIO ENTHUSIASTS.** Stuart has volunteered to cut wood so radios can be put in to boxes so 3-4 kids can get SW receivers...point is that they understand HF, shortwave, WWV, etc. The kids are building the radios at Cornerstone School.
- 20. GARS BBQ AND TECH DAY.** Saturday December 18. 1200-1400 tech day and then 1400 on there will be BBQ. Club will provide hotdogs, buns, etc. Sign up is on the GARS web site.
- 21. ADJOURN** at 8:35 EST.