NFARC Club

MINUTES JANUARY 9, 2019

ATTENDING – 18

Mike Jaffe
Parker Lawrence
Gordon Gibby
Larry Rovak
Jeff Capehart
Rosemary Jones
Alvin Osemea
John Troupe
Jim Bledsoe
Mike Shaffer Gilchrst County
Tom Gause
Vann Chesney
Susan Halbert
Rebecca Wolfson
Leon Couch
Leland Gallup
Rufus White
Mike Ridlon

2. Introduction & Guests – We undoubtedly broke a record with 18 present before the meeting was over. -- many thanks to all who gave up their time to get more training and participate in the direction of this group!!.

3. Announcements / upcoming opportunities, discussions of what has happened since last meeting in December 2018.

FIRST SATURDAY IN JANUARY – JAN 5 Solder Session – Building sound card isolator	Mike Ridlon discussed. Most successful soldering and building session we've ever had. Facilities support at SF excellent. Mike reported on building 12 boards and a 13th piece of gear. Started at 0900 and went to 1500. Most successful effort on this part ever, with testing and repair. Many thanks from the entire group on Mike and Alvin's work. A lot was put in and a lot was learned.
SECOND SATURDAY IN JANUARY - SATURDAY JAN 12 Georgia State ARES Convention Forsyth Ga	Expect to leave around 4:30 Several people interested, probably 2 cars: Gordon Jeff Leland Bledsoe John Troupe

FOURTH SATURDAY IN JANUARY – Jan 26 WINTER FIELD DAY (GARS) Westside Park	Discussion by the entire group as to the Winter Field Day event. L Gallup suggested that this could be an opportunity to put into practice one of NFARC's 2019 goal – low key impromptu exercises. Group agreed to have everyone who can should bring deployable equipment to WFD and set up. This would give us practice that then also could be useful run-up to the EMCOMM Symposium scheduled for 2/3 Feb.
1st Weekend in February – Feb 2/3 February Emergency Conference – update Mentorship results from SHERIFF & FIRE DEPT	Mike Ridlon will mentor at the February 2 and 3d Symposium; the mentoring is on the 13th. Mike Ridlon reported that he is working on the logistics for the EMCOMM symposium. The SFA Radio Society is co-sponsoring the event; small budget is provided by the school in support.. He is keeping the school informed. Trying to revive the SF Radio Club. Anyone can join. Doesn't know about dues. Won't charter as a student club. Reason: requirements to entirely focus funding on students is issue. Will try to recruit as many students as possible. GG gave **status** report on 2/3Feb Symposium preparations. GG has ordered 15 new boards with a capacitor already in place. **ICS201**. GG showed us the 201 for the conference. The Symposium 201 is on NFARC website. He noted that a 201 forces organizing by listing who, what, where, why. Won't be really rigorous on the presentations and who attends. **Books.** Two books will be put out at conference, and there will be a 5$ charge for both. **Symposium meeting room**. Ridlon agreed to make sure that the climate control is OK. **Food**. GG asked for volunteer to pick up food at Publix. This is food for 40 people. Rosemary agreed to do that. **AV suport**. GG asked for volunteer to do audio visual. Ridlon agreed to do that, and Capehart and GG will bring equipment. **Registration.** Halbert will do registration. **Safety Officer.** Must have safety officer, so GG asked VC to be safety officer for the deployment. **Resources.** The 201 lists the resources (e.g., projectors). Ridlon said he'd be able to get a projector. HF antenna by GG at R1 will set up before the conference. LG will haul books. Other volunteers/resources covered. Bring powerpole crimpers if you have them. Clean up crew volunteers listed.

	Attendees. 36 signed up so far. Karl Martin will come. SC, GA, Escambia County, Monroe County in FL. Not as many as last year, but we expect more to show up.

4. 2019 Goals and Progress.

ARES Connect: "Great guns by Jeff". 38 or 39 are registered in ARES connect. Next step is getting folks trained in the EMCOMM Course. EC001 discussed, as ARRL's listing for the course specifies that it requires 45 hours over 9 weeks; a lot for getting to ARES Connect level 2?

RACES: Jeff has collected five forms so far. IS 100, 700, and EC-001 must be completed, as well as backround check, are necessary to be RACES registered. See above for the EC-001 issue. Background checks. Gabby at Alachua County Fire and Rescue does it. Location 913 Vetch St (?). Fingerprint and pay $$. Can't deploy to a Marion County shelter without these steps. As few in the Alachua County ARES Group have completed EC-001 as run by ARRL, this is an issue! Forms online for RACES registration.

INFORMAL EXERCISES: Did that in December. GG suggested portable repeater placement or YAPP file transfer. Email GG with ideas. Winter Field Day will be this month's informatl exercise. Come as you are to operate!

CHECKLISTS: List in GG's textbook. Need volunteer to work on a checklist draft for deployments. This is item four on the checklist.

GO BOX. Stuart has agreed to set up sawing and cutting at the 2d Feb EMCOMM conference.

GO STUFF FOR TRUNK: 26th is Winter Field Day. Bring rapidly deployable kits and throw in trunk to show up at Winter Field Day. See above discussion of informal exercises.

COML/COMT. We may be doing some training. Phil Royce is no longer with the State's EOC. Phil is not happy, but will find a way through it; we invited him to join us/train us. We may have better connections with the State as a consequence of Phil's departure.

ACCESS TO LOCAL TRAINING: In the works. Discussion (Jim Bledsoe) of a county orientation program for citizens; tours of ASO, jail, etc. Jim Bledso will provide us information on the citizens tour group. ASO/elections/tax collectors, etc. These courses are 1 or 2x year. Bledsoe will ask about next date. Rovak has done the course. ????

CONTEXT. We are kind of in front of most of the state, so we'll see if we can improve our knowledge base.

ICS COURSES: The Feb EMCOMM will expose us to the ICS system. Karl has picked his management team. The SM of the West Central FL area is coming to the Feb Conference. GG has been invited to speak at their Tampa conference. Many attendees signing up for our Feb Conf.

SITUATIONAL AWARENESS. The group agrees that a problem for exercises and deployment effectiveness is improving the situational awareness of participants. Being in an information silo is counterproductive. We'll improve that at Feb Course

KNOWLEDGE DATABASE. Enter the database figures on the website and we will have better idea of who can do what.

OUTREACH. We've got Gilchrist county here, making progress with other counties, looking east of us to see who can benefit us; by this is meant Putnam County. No specific progress on this yet.

HOW THE INTERNET WORKS: Capehart teaching three hours on this at the 2/3 Feb EMCOMM.

SECONDARY SERVICES: This is a continuing do-out; must talke with the North Florida Regional Medical Center. No progress.

EOC RADIO ROOM: Jim Bledsoe asks us to specify the software that we need on the computers in the radio room. Newest version of MS Office will allow us to open and work on PDFs. Two computers in the radio room. Bledsoe asked GG to come to the EOC radio room. After discussion, GG, LG, and John Troupe agreed to meet Bledsoe on the 11th at the radio room. Only computers hardline has to be on guest network. County employees can use the commercial HF on the SHARES system with that radio. Just different from normal ham transceivers. We have noise source at the EOC.

5. Marathon Race Preparation. Van Chesney is working with Pete Winters on amateur participation for Feb 17th Five Points of Life. Looking for volunteers. We should have comm folks at all the medical tents for the marathon and half marathon. Total of 4 medical tents; one at start at Celebration Pointe, 91st and Archer; one in Haile; one half way to Archer. Need is to half reporting on the first runners who come through each location. Start is 0600 and all stations shut at 1200 noon. Locations should be manned before 0600; runners won't get half way to Archer until later. Need 10 volunteers. VHF handhelds with net at Celebration Pointe. Hand helds can generally hit the 820 repeater. Haven't checked the backup. Net control will be Shannon Boal and Bob. General plan is to have two people at each location so that there can be breaks, or schedule so that a person takes a three hour shift, etc. Sign up sheets passed around. VC will follow up with finalized maps after DoT approval. ARES Connect shows this as an event; it also shows the EMCOMM Symposium and the Winter Field Day. Capehart showed how these events are appearing in ARES Connect. New route, lot farther away from the repeater. Get there early because streets will close.

6. HF Radio Propagation. Jim Bledsoe showed some photos and offered to send out notes for posting on the NFARC webpage. Digital modes hear well even with low sunspots. 20-30D DB below the noise.

Equipment and software. He described his equipment set and success so far in HF Dxing: Yaesu FT-857, four antennas running a variety of frequencies. HamRadio Deluxe operating PSK 31, Olivia, Domino. 16 countries. Every band has spots for digital. 0.70 on 40 and 20m. Much PSK activity activity recently, even with poor band conditions. He recommends that evidence of this can be found by checking the frequencies for the mode. Ham Radio Deluxe automatically picks the best frequencies for a particular band. Power: not a lot on PSK31. 5 watts to an operator in NV. He gets Special Event cards electronically as ESQL. Time of day makes big difference. 40M and 80m at night. Gets signals on 40 m. in day also. 20M very active in the morning. Gave tips on improving signal out; low angle antenna helps for DX. End fed antennas by LNR are what Bledsoe uses. 80M in an inverted V. Quad

will hold 200 watts. Endfeds are very easily deployed on deployments. Don't use cheap coax, to improve DX good feedlines essential.

MUF. Maximum usable frequencies. Minimum useful freq: 90% of the time communications are possible with a specific location. NVIS makes local low HF possible inside the skipzone.

Chordal hop does a lot in long distance as does twilight/grayline propagation. Japan on PSK 31 with one hundred watts. Used grayline. Talked about the 16 countries he's contacted. Other modes are possible but not optimal because to random and communications are too quick.

Resources. DX Summit tells who is operating on what frequencies and what mode. Handy. Australian weather service provides useful solar weather map: Hepburn map. You can pick Orlando as the best local place, and the color of the map shows propagation. Red is better. Shows good DX to the area in red, based on the location you've put in as your location. DX Info Center, NOAH Space Weather Center are also good. As is VOCAP. YouTube videos are great sources of information as well. PSK Reporter.org is a good site as well. Leon Couch reiterates the usefulness of PSK Reporter.org for seeing where your signal is going. Your distance, Signal to noise, azimuth reading.

7. Reflections 2.0. Last month Gordon Gibby showed flipping impedances. Last month he demonstrated a normalized chart and showed every quarter wavelength there is a flip.

Today, GG shows what happens in between the quarter wavelength. He illustrated how to use the chart to see what's happening "in between." Graphics then cast on to the screen for the group to see.

Resisitive in series with reactive components. The SWR stays constant over the transmission line; impedance meters were great; but at different distances they read differently....because you're at a different place on the circle. SWR stays the same even as the impedances vary wildly. When current and voltage are not in synch you're not getting the power you think you should be getting. With two reference charts and a load you should be able to predict an impedance. In synch on resistive out of synch on inductive. Phases constantly shifting. Along the transmission line this creates the standing waves. Good impedance matching networks mean you can shove power down the line. High SWR on a line means high loss unless low loss line like window line with no ice is used. Well-made transceiver these days constantly measure SWR to back down power to protect the finals. Losses occur on both transmit and receive. Get losses down! Design system well and you can optimize.

Making capacitor with single unbroken piece of wire. GG showed single wire on yardstick. End is dead short. Result: balanced transmission line shorted. One yard plus few inches long. Velocity factor slows down the wave, so it actually looks longer than one yard. Half wavelength means same impedance. W/velocity factor it's around a 120 MHz half wavelength. GG showed with MFJ at various MHz that this is a capacitor and inductive stub. Stubs used to tune antennas particularly on VHF.

GG talked about how next month he will show how go towards a matching network.

8. Discussion of Conference Status. See paragraph 3, above on progress towards goals, where the Conference status is detailed.

Minutes from last month: approved. Meeting adjourned at 2049 hours.