

# "We Let The Magic Smoke Out -- AGAIN!"

Alachua County ARES/NFARC/Alachua EOC Radio Club  
FIELD DAY 2025

## *"Do you smell smoke, like I do?"*

seems to be *the defining phrase* for our group's Field Day effort, year after year -- but nevertheless, we made fantastic progress for many in our group and for the public this year! Once again, we managed to "smoke" 3KV capacitors, this time in TWO bandpass filters....it is our patented technique to flush out those capacitors with elevated "equivalent series resistance" during Exercises, instead of during Disasters! (That's our Story and we're stickin' to it!)

## **Smoke Brings Out The Best In Us**

The 15m filter gave up the ghost (or smoke) early in the game, with W4JIR quickly noting the odor as well as the SWR change....but not to worry, we had built a

SPARE FILTER and moved it into position. The 80m filter followed in the middle of the night (not sure if that was David again or not....). That was when some of our new leaders rose to the occasion and worked out an innovative solution! This year we had also figured out how to snake *additional coax* out under a rear security door -- and for the first time at the EOC, we had **three HF coaxes**. (Big disaster response triumph!) So they rearranged 3 of our stations on the three working HF antennas. Those three antennas were not far enough apart for adequate signal separation, so they used remaining bandpass filters to provide *filter separation*! Way to go, **David Huckstep W4JIR, Manish Sahni KZ4KC, Mike Hasselbeck WB2FKO, and Leland Gallup W4JIR!** Humble Mike commented, "It was a team troubleshooting effort that was largely the work of Leland and Manish. *I mostly watched in awe as Leland systematically and quickly isolated the problem.*" Leland responded, "*It was Huckstep who figured it out!*"



*Leland Gallup AA3YB giving "the tour" to fascinated visitors*

Fixes Coming: These are tiny little blue ceramic capacitors with huge voltage ratings, but sometimes not up to the task of passing big RF circulating currents, so we use several in parallel to make the required capacitance....so snip, snip, new 20-cent blue capacitors go in, and these bandpass filters will be good as new (maybe better?). Knock on wood!

## **Touching Lives For Good: Six Huge Improvements This Year**

### **1. Coaching People UP!**

While we had many great technology improvements and *funny-later-on* exploits, I think we grew even more in developing our volunteers, our most precious commodity. All year long we held classes, trainings, soldering-labs and oodles of chances for people to grow. But these in-depth

Exercises allow newcomers to really experience the thrills of ham radio and realize their potentials. Leland's POTA-turned-GOTA station was HUGE for so many visitors -- but we also worked to move peripheral already-licensed hams to more enjoyment. We had great success this year!

- One highly-skilled software guy never wanted to get on the air. He was coaxed into getting onto 20-meter phone -- and got over his mic fright and made a great entry into the world of HF Phone! 18 contacts!
- A Technician-licensed ham with too much time on VHF phone to fit the GOTA was cajoled into trying 10m FT8 -- he loved it! 33 contacts!

We held 13 nights of TECHNICIAN CLASS just before Field Day in an attempt to help some local high school students finish out and get their ham license -- and they basically didn't show up. However, we did get three new Technician licensees as a result, and a LOT of visitors/GOTA participants!



Jeff Capehart W4UFL working on a "satellite tower"

## 2. Out Of This World Dining!

**Earl Sloan KI4OXD** took on the task of correcting our nutritional discrepancies and brought along two great friends, unlicensed Gary and Dory. And two cooker/grills with canopy! The result was literally out of this world -- better than ANY sit-down restaurant. The BBQ chicken was the best I've had in my entire life; the breakfast short-order cook would do anything you wanted right in front of you and the salads, baked beans, hamburgers, hotdogs -- well, we sure got all those calories from our hard work replaced in abundance! **This was world-class!** I can't overemphasize what these three did! *We lost his 175 contacts last year....but wow, did we dine well!*

## 3. POTA Skills Move Right Into GOTA

Several in our group have followed the lead of **Ron Lewis KN4ZUJ** with POTA involvement -- and it shows! **Leland Gallup AA3YB** used his POTA skills to set up the most amazing GOTA station right in the entrance foyer of the EOC -- and more than 17 visitors made 203 digital contacts, literally our 4th highest scorer! This was *so* far beyond anything we've ever done before. We were able to use it to explain "radio texting" and also high-insight understanding of spectrum usage by signals -- **the visitors loved the colors of the different texts, and the waterfall.** Tour after tour, new people



everywhere; we had a 7th grader make scores and scores of contacts; his parents/grandparents were so impressed with our operation that they asked to just leave him in our care for several hours! This young man has a very bright future! But we also got previously-inactive hams, college students, the EOC Intern, and many, many older persons on the air! We had people asking if we would be open for tours the next day, too! What was the draw? Polling these persons suggested that the **Alachua Chronicle** press (<https://alachuachronicle.com/alachua-county-hams-host-thrilling-24-hour-radio->



[showdown-with-high-tech-twists/](#) ) was one key in such increased participation- thanks to **Jeff Capehart's (W4UFL)** AI juicy rewrite! But Leland's station & his great personality were huge!

#### **4. Rock Solid Networking**

In previous years, our high speed MESH 2.4GHz database network has had fits and starts -- but **Earl McDow K4ZSW, Mark McDow N4TEK and Susan H. KG4VWI** did extensive testing, adjusted some features on the database computer, used a lot of shielded cable, and **wow!** We had much better performance this year. Just a small number of delays to our far-trailer 700+feet away, and zero database failures! Huge improvement!

#### **5. The 6-Hour Trailer Tower Debacle**

Perhaps our most sweaty improvement was putting up the trailer tower to 35 feet, that **Stewart Reissener KK4DXF** built for us -- **six times!** We have never shoe-horned that trailer into the EOC environment before, not to mention the 25-foot-wide HF beam -- but we did it this year! Even early, on Friday. **Huge advance for emergency comms out of that EOC and even more, it allowed all of Emergency Management personnel and all of the 911 Combined Communications staff to have a 35 foot tall visual to far better understand what we need for effective backup comms.** But.....perfect SWR, *until we rotated and raised the tower* (350 turns on the worm gear hand winch) -- horrible SWR. Down it went (350 turns), fix this/fix that, perfect SWR, up it went (350 turns) -- terrible SWR! *We did that over and over*, and finally with an ohmmeter proved that there was something badly wrong with the "gift LMR400" we had inherited this year. Broken inner conductor shorting out? Replaced that 175-foot length and everything worked perfectly. *Better to find out NOW, than in a disaster!*



#### **6 Notable Growth in Volunteer Skillsets**

Take a look at how many of our participants showed very significant growth in their communications capabilities in the face of a 24-hour effort:

Participant	2024 QSO's	2025 QSO's show big growth!	Comment
David Huckstep W4JIR	190	271	Works most of the 24 hours
Leland Gallup AA3YB	48	52 + shepherded 203 GOTA QSO's	Huge new GOTA career!
Jeff Capehart W4UFL	51	129	Big improvement!
Ron Lewis	0	88	An HF operator as well as FM

KN4ZUJ			satellite guru!
Craig White KO4ZRZ	0	57	Big new involvement and a huge help with the Tower!
Brian Joy KQ4BWH	0	34	Relatively new member, getting right into the thick of it!
Mark McDow N4TEK	0	18	Conquered his "mic fright"!

Once again, **Dan D'Andrea WX1P** pulled the night shift low-bands voice challenge-- **and he is a master at it.** Many of our participants never know of his service to our group in the wee hours.

### Our Scores

The nitty-gritty and comparison to last year:

Area	2024 Contacts	2025 Contacts
Phone	116	133
CW	374	417
Digital	1153	908
GOTA	0	203 (all digital)
TOTAL	1643	1661
Bonus Points	Missed Elected Official Missed Satellite Missed GOTA Coach Missed Youth Participation Missed Field Day Site Responsibilities	Missed Satellite  Missed Field Day Site Responsibilities
Total operators	13	15
GOTA Visitors	0	17+

### Conclusions

- We successfully converted Mike H WB2FKO from FT8/FT4 guru to the **Dark Side** (CW), doubling our CW crew -- he's fantastic! (And he also coached everyone up on FT4!)
- We definitely **lost some points** by diverting **Earl Sloan KI4OXD** into Nutrition Chief... but we also provided fantastic meals not only to our crew, *but also to all of the 911 Combined Communications operators for a weekend*, and that will bring big dividends in better understanding and awareness of our backup communications needs and abilities in more portions of Alachua County government. **A lot of discussion & relationship-building around the sumptuous meals!**

- We had **far higher group usage of much-faster FT4** this year-- and that helped make up for redeployed former high-scorers. Our crew is very comfortable with advanced digital techniques.
- We put a lot of preparation time into developing satellite techniques -- but were too tight for people and time to succeed during Field Day (so far!). The new knowledge and expertise gained may show up later.
- Our **lead-up Technician Class** not only got our community 3 new local hams, but it **resulted in lots of in-person visitors to our Field Day effort**, which helps provide even better education and build relationships.
- During setup, operational, tear-down and cleanup times, we had abundant opportunities for discussions with Alachua County Emergency Management personnel. **These strongly built and strengthened relationships and understanding** -- for example, they had no idea that we were so hard-core that several were sleeping on the carpet Saturday evening!

We found weaknesses in some of our equipment, and we need to put more phone calls and personal interaction into our media outreach, despite some significant successes in print media. We need to move these new members into full-fledged qualified volunteers to deploy and serve our community during disaster -- service is our specialty as an ARES(R) group, not just entertainment and personal growth. We have built up significant strengths in computer assets, radios, monitors, multiplexers, filters, transmission lines, and deployable antennas of multiple types, as well as mobile trailers, solar power and even a fuel-sipping RF-quiet diesel generator. As our long-term members gain age, we have to provide for our community by moving newer members into skills and commitments that continue the response capabilities.