

Alachua County ARES/NFARC

2021 FIELD DAY

JUNE 26/27, 2021

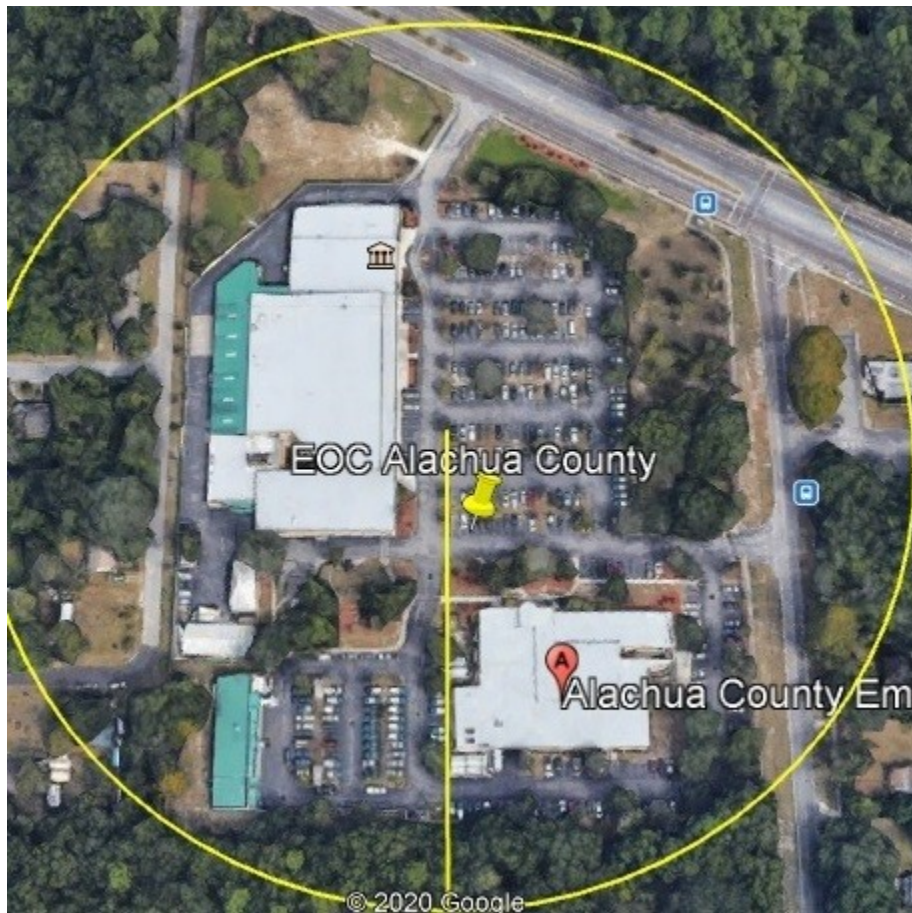
After Action Report/Improvement Plan

WRITTEN JULY 2021



"The Deluge"

(Afternoon thunderstorm drenched part of our operation.)



Approximate 1000 foot diameter circle enclosing all operations and antennas of the event.

HANDLING INSTRUCTIONS

1. Points of Contact:

Alachua County ARES(R):

Name: Jeff Capehart, Asst. Section Manager.
Emergency Coordinator
FCC License: W4UFL

Name: Gordon Gibby MD, Asst. Emerg. Coord
FCC License: KX4Z
SHARES License: NCS521



Earl Sloan at work on Voice at Station 2

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EXECUTIVE SUMMARY



The Amateur Radio Emergency Service (ARES®) typically organizes at the County Level and upward. In Alachua County, multiple amateur radio clubs support the ARES® mission, including the Gainesville Amateur Radio Society, the North Florida Amateur Radio Club, and the Alachua County EOC Radio Club. This document pertains ONLY to the volunteers working together with NFARC/Alachua County EOC Radio Club under the call sign NF4AC at the EOC location.

FIELD DAY is a long-standing American Radio Relay League activity, always carried out on the 4th full weekend of June, designed to test field preparation of amateur radio for service to the nation as mentioned in FCC Part 97.1

Last year, in 2020 the NFARC/EOC clubs carried out a successful, first-ever Field Day effort for this group in spite of the COVID-19 precautions required. Thus it was natural to follow up with a 2021 Field Day now that any (adult) who wishes can have the COVID-19 vaccination. Thus beginning mid-April, efforts began to obtain permission and plan for the event. A new Sheriff administration brought new relationships to be built, and Field Day provides an excellent chance for doing just that.

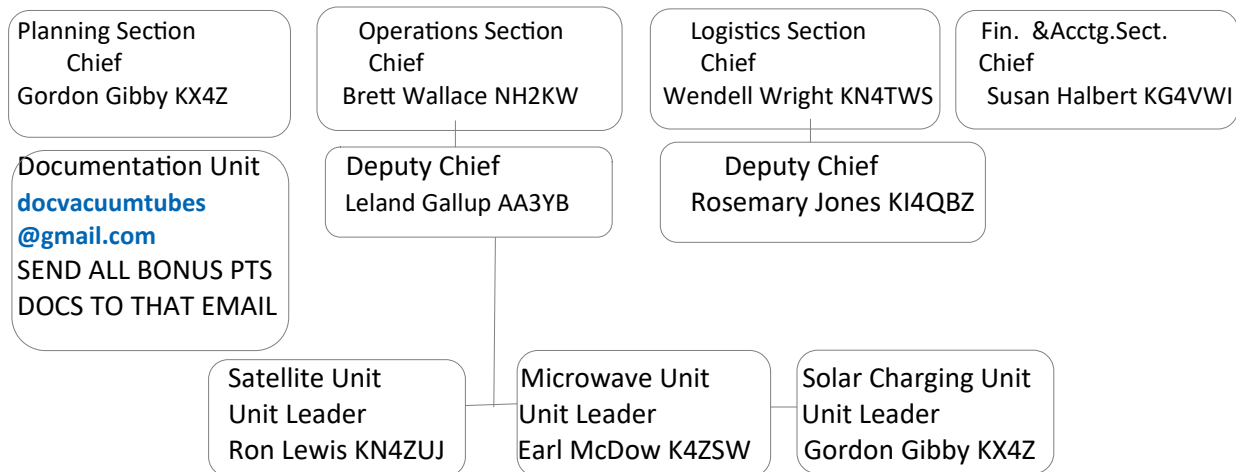
Gordon Gibby reviewed all 61 Improvement Plan recommendations from the 2020 effort and began creating an improved Incident Action Plan for 2021 and recruiting volunteer ICS officers.

After Action Report Improvement Planning

Alachua County ARES 2021 FIELD DAY

The leadership crew that resulted:

Incident Commander: David Huckstep W4JIR
Deputy I.C. Gordon Gibby KX4Z
PIO: Jim Bledsoe KI4KEA
Safety Officer: Brett Wallace NH2KW
Liaison Gordon Gibby KX4Z



Significant Advances as a result of this Field Day Effort:

- Improved backup EFHW multiband EOC antenna, feed end re-positioned to run near vertically for > 40 feet, much higher above ground than before.
- Successful PSK-Reporter check confirming near equivalent performance of primary and secondary EOC HF antennas
- First ever 6-meter experience for many of our members
- Better understanding of EOC/Sheriff volunteer vetting procedures
- Installation of semi-permanent ground rods within grassy site.
- Significantly improved efficiency of contact operation with a **contact rate approximately 100% greater than last year, resulting in a doubling of our contacts.**
- Significantly improved logging system for FT8 with auto-logging that required almost no user intervention other than occasionally verifying that it was indeed logging.

The full Field Day was held commencing at 0800 Local on Saturday June 27, and the facility and grounds were cleared completely by 1415 Local on Sunday June 27th, with a very satisfied group departing.

The group score was computed and submitted by 9PM on Monday June 28th, with an estimated score of 3,2990, including 513 contacts (after duplicate removal). This year, all of the required documents for bonus-point justification were created before submission, so the entire submission was accomplished in just a few minutes.

Major Strengths

The major strengths identified during this event are as follows:

- Multiple improvements were made in volunteers' understanding of the ICS division of labor, unity of command concepts.
- Setup was completed in only 3 hours, including antennas, which this year included not just one HF antenna in the grassy field, but two, and also included an innovative 6-meter vertical antenna built on a basketball hoop base.
- Tear down was completed in 75 minutes
- Completely new 6-meter operation contributed very significantly to our QSO-total using the "free" VHF transmitter regulation -- and allowed for a large amount of youth participation.
- We had TWO RV assets this year, instead of only ONE last year. This made for more protection from the elements and a better operating experience for the VHF station.
- FT8 logging was completely automated this year.
- Multiple new operators gained valuable experience and training by participating in shortwave transmissions and data-based FT8 communications.
- Microwave networking again was a solid success for moving data in and out of the reinforced EOC building
- Clarification was obtained that the EOC rigorous generator testing protocol satisfies the requirement to count our use of their power as emergency power.
- Amplified short wave transmissions were validated as much more successful.
- Interference issues between the powerful stations only 200 yards apart were found to be minimal even without bandpass filters (although 80 meter data/75meter phone were not utilized simultaneously this year).
- An incredibly successful media effort obtained very wide coverage for our efforts, resulting in a small public visitation, far larger than last year.
- We registered with the ARRL Field Day Locator system and had wider visibility among amateur radio operators.
- Better information flow between our club and some nearby clubs, specifically the Columbia County ARES(R) group and the Taylor County group.

After Action Report Improvement Planning

Alachua County ARES 2021 FIELD DAY

- We did a better job at least trying voice and CW alternate mode techniques this year and gained valuable comparisons of efficiency.
- We operated on a wider variety of amateur bands this year, including 160, 80, 40, 20, 15, 10 and 6 meters.
- We streamlined the WINLINK radiogram messaging portion by utilizing the EOC high VHF antennas to make direct connections to recently added local radio assets such as K4MVR-10, avoiding the need for us to set up a winlink gateway
- New leadership gained significant improvement.

Primary Areas for Improvement

- There were still some confusions and lost points due to lack of broad-based understanding of the RULES of the Field Day effort. Still need a way to get more people to better understand the Field Day effort.
- Some people didn't get to operate when they wished.
- Despite a huge improvement from last year, we still have minimal public, Scout, college student or other visitation, so a great chance at significant education is missed.
- There were a few significant safety mix-ups that were preventable with better understanding of tasks.

This document is prepared in order to help our group improve our emergency communications deployment abilities even more, and to assist those who will be planning the event next year.



Youth Participant Hoyt at work making 6-meter contacts

SECTION 1: EVENT OVERVIEW

Event Details

Event Name

2021 ARRL FIELD DAY

Type of Event

Full Scale Event/Contest

Event Start Date

June 26, 2021

Event End Date

June 27, 2021

Duration

30 hours

Location

Alachua County Emergency Operation Center backup radio room, and campus associated with the Alachua County Sheriff .

Sponsor

Alachua County ARES, a component of the American Radio Relay League (ARRL); North Florida Amateur Radio Club, Alachua EOC Radio Club.

Program

Amateur Radio Emergency Service

Mission

Communications Support

Capabilities

VHF local and 6-meter DX communications, analog voice and digital (AX.25 packet)

HF local and national communications, analog voice, CW, and digital (PSK31, WINLINK); Satellite VHF FM voice

Radio Email to anywhere, via WINLINK

Scenario Type

Amateur Radio Emergency Preparedness Contest

Event Planning Team

Gordon L. Gibby KX4Z
Jeff Capehart W4UFL
Leland Gallup AA3YB
David Huckstep W4JIR
Brett Wallace NH2KW

Participating Organizations

Alachua County, Florida
Emergency Operations Center

Number of Participants

- Players - 23
- Controllers - 0
- Evaluators – 0



AMATEUR RADIO SATELLITE COMMS PRACTICE

SECTION 2: EVENT DESIGN SUMMARY

Event Purpose and Design

For scores of years, the American Radio Relay League has sponsored an annual “Field Day” event/contest on the 4th weekend of June, encouraging individuals and groups to practice emergency type communications in the setting of an amateur radio communications contest. The scoring is a combination of points for desirable planning and operations activities, plus points for every connection made (“contact”) to other participants at distant sites with successful bidirectional transfer of a simple message, giving the type of operation at each end, and the assigned “section” in the ARRL organization.

For our group, the exchange we had to transmit and receive acknowledgment for, was

2F NFL

because we ran TWO transmitters at an existing EOC site (Category F) and are in the North Florida ARRL section.

Call sign utilized was

NF4AC

which is the call sign of the Alachua EOC Radio Club, and since we were operating as a Class 2F EOC-based station it seemed appropriate this year and last to use NF4AC (EOC Radio Club) call sign rather than NF4RC (North Florida Amateur Radio Club).

Incident Command System / Leadership

As we did in our first Field Day last year, we organized our effort using Incident Command System principles, and primarily using a very elongated ICS-201 form.¹ Volunteers were recruited by Gordon Gibby. Previous leaders from last year often acted as "deputy" officers this year to assist new leadership

Layout Constraint

1 A wise advisor points out that “The 201 is a tool primarily for briefing, not necessarily for planning. It highlights the pertinent points for the group for the operational period. The individual tasks belong in job action sheets (JAS)” – and we may be able to improve on this next year. It is a trade-off between one very LONG document versus lots of individual documents.

By national Field Day Rules, the entire operation had to be carried out within a 1000 foot diameter circle. Satellite maps were used to guarantee compliance with this rule.

The Incident Action Plan included:

- Full explanation of the event and the location and equipment for each station
- Satellite pictures to show placement
- Time-scripted tasks to accomplish not only planning, but also a zoom dress rehearsal, media notification, the full scale event, and documentation and submission.
- List of assets required for positioning

The Full Incident Action Plan is available at:

<https://qsl.net/nf4rc/2021/NFARCDraftICS201.pdf>

Special Networking Issue

A particular issue was the requirement for tcp/ip networking to allow a unified contact logging system using the popular N3FJP software. One station was located in a secure facility with very thick, reinforced walls, while the other major shortwave station needed to be 200 yards away, across a busy parking lot, in a vacant field. Moving high speed network data in and out of the EOC in a relatively secure fashion against possible interruption by protesters or malefactors was an issue. This was solved by using a ham-radio specific AREDN-based microwave network consisting of three off the shelf Ubiquiti mesh nodes, operating a +28dBm power levels, 5 MHz bandwidth. To make easier connection from logging computers, the Ethernet (cable) output from the end nodes was then plugged into Tenda \$15 home routers acting as Access Points (an option within the Tenda operation software) and the AREDN software provided DHCP delivery of appropriate IP numbers to logging computers as requested. This system utilized a 13dBi gain Yagi at one end, and +10 dB internal antennas on the opposite end, and at the relay station (both pointing toward the YAGI at the far end) – and functioned perfectly throughout the entire event, despite a thunderstorm.

Emergency Power

ARRL Field Day rules allow for bonus points if emergency power is used for all transmitters throughout the event. However, for EOC-based stations where generator backup power is

usually available, the requirement is relaxed to merely requiring testing of the backup generator during the field day period. The Emergency Management department contacted ARRL Contest officials and obtained approval that their normal weekly testing of their generator was in itself, sufficient. This dramatically reduced the battery-charging/inverter effort. As a result, we were able to use AC power from the EOC (which is backed up by generators) for amplifiers to transmit 150 Watts on HF, and still qualify for the Emergency Power bonus, as long as we operated the grassy field transmitters from generators, etc.

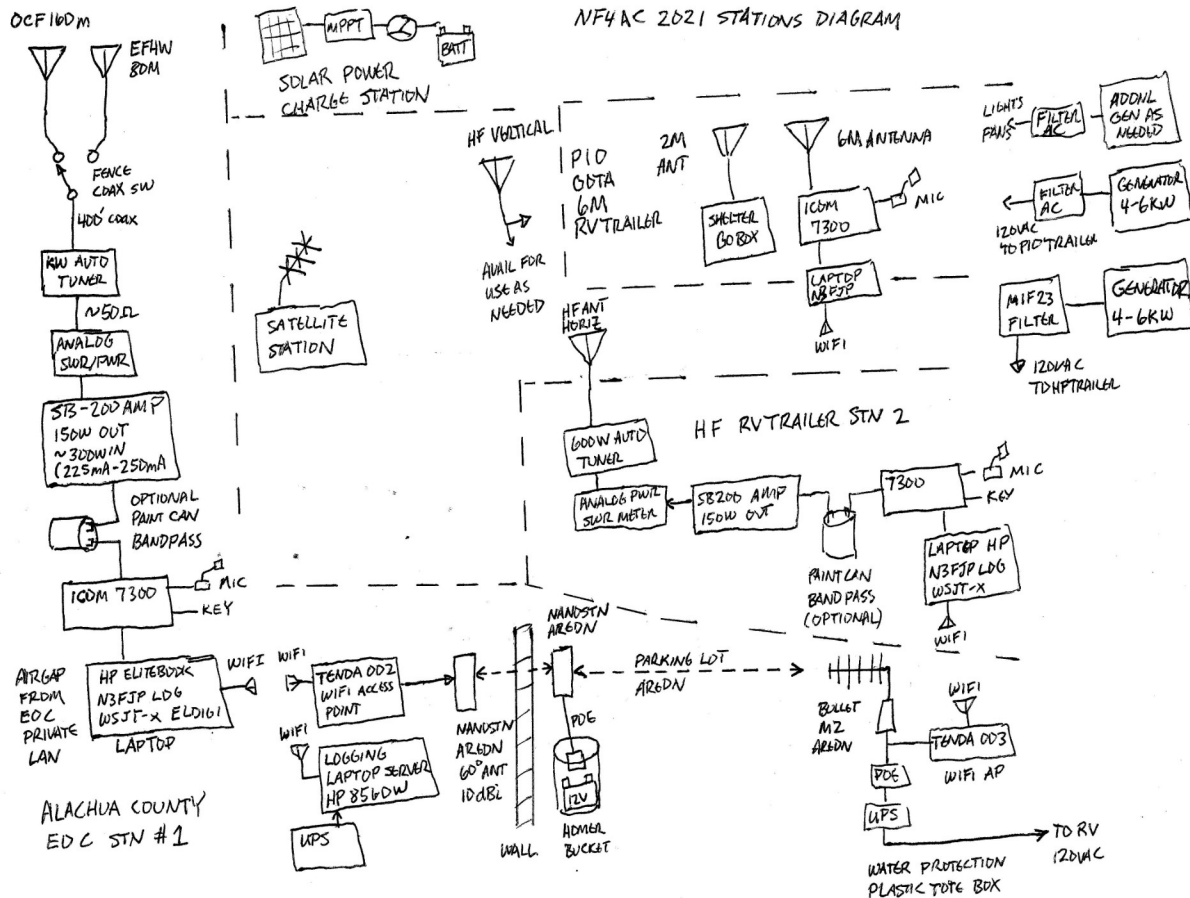
Solar Power

In order to gain the alternative energy bonus points, we utilized a single home-type 300-watt 36voltDC solar panel, driving two inexpensive MPPT controllers, each with approximately 10A capability. We used those to charge two new LIFEPO4 23Ahr 13.8VDC batteries, and then used those to power one of the station for approximately 2 hours, easily capturing the minimum number of contacts. A difficulty is that the solar panel, while already owned, is large and unwieldy, posing a transportation issue. As the cost of these has declined, consideration may be given to purchasing smaller panels that would add up to the same total power.



Solar Panel setup from 2020; in 2021 we used only 1 panel.

DIAGRAM OF ENTIRE ASSET PLAN FOR FIELD DAY EVENT:



Note that this is significantly simplified from our 2020 Field day by utilizing metropolitan Gainesville VHF RMS Stations K4MVR-10, K4ZSW-10, and KX4Z-10 rather than having to provide our own. We also no longer needed to supply inverter power for the EOC station #1.

OBJECTIVES²

No.	Item
1	Hold an enjoyable and educational event, with the goal of increasing the volunteers who are willing and capable to provide advanced backup communications.
2	Score the most points possible without overtaxing our volunteer participants
3	Study the network data options through the EOC wall
4	Increase the familiarity of our volunteers with the ICOM 7300 and with our vacuum tube linear amplifiers
5	Increase our familiarity with the Sheriff Go Box
6	Increase our familiarity with the ICS system
7	Develop additional mode capabilities in our group -- SSB, CW, other techniques than just FT8
8	Improve the automation of the logging
9	Be as courteous and supportive of other clubs participating in Field Day as possible

Timeline Summary

Feb 16, 2021 Presentation to Gainesville Amateur Radio Society on using FT8 / JS8 including Field Day; see <https://qsl.net/nf4rc/2021/JS8FT8Talk.pdf> 61 slides and live demo. (Similar talk on JS8 given by Leland Gallup February meeting NFARC/ARES(R))

April 12, 2021: Letter to Michelle Klement to ask permission to use facilities for Field Day

April 14, 2021: Provided list of known badged volunteers as requested by Ms. Klement.

April 29, 2021: Official permission from Michelle Klement to hold Field Day

2 These are taken from the 2020 Objectives. Unfortunately, we didn't carefully review these objectives in the planning for this year, but they are generally still applicable. A Reviewer agreed, suggesting that these aren't very S.M.A.R.T. (generally difficult to measure) – perhaps we can improve on this next year!!

After Action Report Improvement Planning

Alachua County ARES 2021 FIELD DAY

May 12, 2021: May ARES(R)/NFARC meeting, 20 minutes allotted to discussion of Field Day, over a page of text of information in the TentativeMeetingAgenda document. ICS-201 available.

Incident Commander Checklist created, see:
<https://qsl.net/nf4rc/2021/IncidentCommanderCheckList.pdf>

May 19 2021: Final leadership position, Operations Chief, is filled.

May 19, 2021: Example Field Day ICS-201 posted as part of article for Section Newsletter on using ICS documents and procedures for Field Day.

May 31, 2021: LOGGING: Solution found to allow WSJT-X to log (by way of JTALERT) right into N3FJP software. Published here:
<https://www.qsl.net/nf4rc/2021/N3FJPLoggingConnectionInstructions.pdf>

June 3, 2021: First press release goes out from PIO Jim Bledsoe, with explanation of both Field Day Efforts

June 6-9 -- Lots of discussions as Alachua County EM works on the possible press release as we try to have mention of GARS -- ends up no success there.

June 9, 2021 - Much simpler way to log from WSJT-X into N3FJP. Information immediately provided to GARS President. Refurb laptop being configured for long term loan to EOC

June 9 2021 -- More than half of meeting used to allow each leadership to discuss their area. Training Date published for Operator training. We have approx 12 persons signed up for operating.

June 10, 2021 -- Alachua County releases News Release on our behalf, and has it on their web page as well. See: <https://alachuacounty.us/news/article/pages/Amateur-Radio-Field-Day.aspx>

June 12, 2021 (SAT) Working on EOC antennas; EOC backup End Fed re-routed to have very high location from the beginning. Approx 12 man hours on that effort. First Operator Training by Leland Gallup; installation of new (refurb) digital techniques laptop at EOC.

June 13, 2021 Schedule slots for 6 meters / 2 meters added to schedule

June 14 -- Dalton Herding of EM Office got official approval that our standard Alachua County testing of the generator is sufficient. See Email Document in Appendix.

June 14 -- Gordon Gibby got BACKUPWIN10 and ACER computers updated to latest versions

of Windows (2020H2) and also to N3FJP Version 6.3

June 16 -- 811-utilities marking arranged by David Huckstep W4JIR

June 25, 2021 Friday before Field Day -- Training at the EOC begins at 10AM attended by approx 4 volunteers.

June 25, 2021 9PM: Three volunteers attempt to copy the W1AW bulletin via psk31 and rtty

NOTE: Discovered you can run THREE simultaneous copies of FLDGI, all listening to the same audio source but set to different op modes. Frequency specified by ARRL is their CENTER frequency, not their "dial frequency" -- so adjust your radio accordingly depending on whether using upper- or lower-sideband. ARRL did not appear to follow the "order" of their specified digital communications; MFSK did not seem to be sent. 40 meters gave KX4Z the best signal, but they were readable on 80/40/20 meters. KK4INZ got the best voice signal on 20 meters.

June 26 2021: Units began arriving by 0800. Briefing held at 0830 and teams started working on different tasks. Setup was completed by 1100 and a formal course on solar power was held. Then a fabulous luncheon was provided by Emily Wallace

June 27, 2021: We ended operations approximately at 1 PM. Tear-down took approximately 1 hour, 15 minutes.

June 28, 2021: Planning Section (GordonGibby) worked on getting all the documentation completed. The .adi files output by WSJT-X can be edited within a spreadsheet and saved back out as .csv and renamed back to .adi. Using that technique, the massive .adi files from the 6 meter station were reduced to just the Field Day contacts and re-imported into our N3FJP files; then duplicates were removed and 513 contacts remained.

June 28, 2021. Submission of the complete documentation was completed by 9:15 PM using the web applet.

EQUIPMENT SETUP			
	2021	2020	
EOC Radio	ICOM 7300	ICOM 7300	
EOC Amplifier	SB-200 derated to 150 W	SB-200 derated to 150 W	Our solid state amplifier's power supply failed earlier
EOC Antennas	160M OCF with long end raised substantially to 50+ feet Backup 80M End-Fed Half Wave with wire raised to approx 40 feet	160M OCF with long end dropping approx 12-25 feet No backup	
EOC computer(s)	Donated HP Elitebook running both logging and WSJT-X, 2 screens, donated monitor Wireless mouse	EOC laptop & loaner laptop Wireless mice	
EOC POWER	Using EOC wall power	Using 2kW sine-wave inverter driven by 3 parallel 12V 100Ahr batteries and 75A Power Pole connectors	In the interim we obtained a ruling that the EOC generator testing was sufficient
Station 2 Radio	ICOM 7300	ICOM 746 Pro	
Station 2 Amplifier	SB-200	SB-200	
Station 2 Antenna	80M OCF with Guanella Balun @ 18 feet on roll-on PVC mast, ends at approx 50 feet / 30 feet Backup: 40M sloping vertical OCF,	End-fed HW 80 M using homebrew 49:1 unun & screw-in ground No backup	Unclear if sloping vertical was tried

**After Action Report
Improvement Planning**

**Alachua County ARES
2021 FIELD DAY**

	homebrew Guanella 4:1		
Power	Earl Sloan's 240V 5KW 2-leg generator, assisted by Gibby 3400 watt conventional 120V generator. No inverter generator No RFI filter; generators approx 100 feet away.	Switching between Champion inverter 4 kw and conventional 120V generator on utility trailer using RFI filter. Generators approx 25 feet away	
1 st Trailer (HF station #2)	Gordon Gibby 24-foot travel trailer	Utilized	
2nd Trailer (VHF free station & GOTA)	Brett Wallace Winnebago	None	
Free VHF Transceiver	ICOM 7300 running 6 meters FT8, with homebrew vertical on basketball support	Not really pursued	
Winlink Emails	From EOC 2meter digital station using antennas at 60 feet to local Gainesville RMS	Using mesh link to cell-phone hot-spot provided mesh RMS Gateway (very complicated)	
PIO tent support	No generator, lights provided by Jeff Capehart	Lights, fans, (Rosemary?) and inverter generator (Mike Ridlon)	
Meal Support	FULL LUNCHEON by Emily both days	Not really planned	

EQUIPMENT & INFRASTRUCTURE IMPROVEMENTS MADE AS A RESULT OF 2021 FIELD DAY		
1	Backup HF end-fed antenna significant raised	Thought to reduce ground losses near to the origination of the antenna
2	EOC Fence-mounted Coaxial Antenna Switch	Allows protected, easy switching between main and backup HF antennas, should one be damaged by falling limbs.
3	EOC HF footswitch assembly	Allows operator to have full use of hands when using headset
4	EOC HF adapter allowing 1/4" phone plug headsets to be used with 1/8" ICOM 7300 jack	Prevents mechanical damage to the ICOM 7300 1/8" headset phone jack
5	EOC ICOM 7300 Polarity Protector installed	Protects ICOM 7300 from accidental polarity reversals
6	Grassy Field permanent ground rod installations under "meter covers" -- two ground rods	Allows generator and lightning arrestor grounding
7	RFI-filtered Inverter (2 FT-240-43 common mode chokes, in DC and AC lines)	Provides modified sine wave 120VAC to operate laptop power supplies without generating significant RFI



Amy Woods mentoring volunteers on FT8

SECTION 3: ANALYSIS OF OBJECTIVES / RESULTS

No.	Item	Outcome	Recommendations
1	Hold an enjoyable and educational event, with the goal of increasing the volunteers who are willing and capable to provide advanced backup communications.	<p>P</p> <p>Everyone appeared to have a good time. Multiple volunteers got much more familiar with both HF and higher power communications.</p>	See detailed list in Appendix.
2	Score the most points possible without overtaxing our volunteer participants	<p>P</p> <p>Not only did we make hundreds of contacts – even on 10 & 6 meters, where we have much less experience, but we succeeded at bonus points in all of these areas:</p> <p>Power multiplier for limiting to 150 Watts output.. 100% Emergency Power Media Publicity Public Location Public Information Table Message Origin. Sct. Mgr. Message Handling Alternate Power W1AW Bulletin (copied by at least two volunteers) Educational activity Site visitation by serv agency Social Media Youth Participation</p>	<p>Try to get even more operators to become comfortable next year - to the level that they are contest savvy.</p> <p>Better define who will capture W1AW bulletin and try for many more.</p> <p>Better advertise which format documentation needs to be provided.</p> <p>Need more practice and assets creation for amateur radio satellite communications.</p>
3	Study the network data options through the EOC wall	<p>P</p> <p>Our microwave mesh network performed flawlessly, and the</p>	

		consumer WIFI terminations at each end made it very easy to connect logging computers, and with capacitors on them and UPS's, no glitches there this year.	
4	Increase the familiarity of our volunteers with the ICOM 7300 and with our vacuum tube linear amplifiers	<p>P Multiple operators became very familiar with the 7300 and with the SB-200 vacuum tube amplifiers used at both stations.</p> <p>This event also served to prove the great performance of the “chigger” antenna in the woods south of the EOC.</p>	Essentially equivalent performance of the two HF stations suggested little difference in their capabilities.
5	Increase our familiarity with the Sheriff Go Box	<p>S We didn't pursue this very effectively this year.</p>	Perform the prototype GoBox Polarity Protector installation and then advocate for Sheriff's office technicians to do the remainder
6	Increase our familiarity with the ICS system	<p>P We had much more familiarity with this process this year.</p>	<p>Adhere more to ICS in the actual Operation of the Event (Command Post, Operational Periods, etc) as discussed in Improvement Plan.</p> <p>Continue to attempt to bring new leadership on board.</p>

Ratings Definitions:

Performed without Challenges (P): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.

Performed with Some Challenges (S): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.

Performed with Major Challenges (M): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.

Unable to be Performed (U): The targets and critical tasks associated with the core capability were not performed in a manner that achieved the objective(s).

COMPARISON YEAR OVER YEAR

Item	2021	2020	Comment																																																						
Class	2F	2F	Same																																																						
Total Contacts	513	249	>100% improvement																																																						
Total Points	3,290	2,322	42% improvement																																																						
Operators / Contacts³	<table border="0"> <tr> <td>Operator</td> <td>Contacts</td> </tr> <tr> <td>KN4TWS</td> <td>57</td> </tr> <tr> <td>KX4Z</td> <td>95</td> </tr> <tr> <td>AA3YB</td> <td>30</td> </tr> <tr> <td>W4JIR</td> <td>55</td> </tr> <tr> <td>KO4IDO</td> <td>86</td> </tr> <tr> <td>KK4INZ</td> <td>61</td> </tr> <tr> <td>K9RFT</td> <td>30</td> </tr> <tr> <td>NH2KW</td> <td>20</td> </tr> <tr> <td>WB2FKO</td> <td>20</td> </tr> <tr> <td>KI4OXD</td> <td>20</td> </tr> <tr> <td>KV4RL</td> <td>12</td> </tr> <tr> <td>K1CE</td> <td>8</td> </tr> <tr> <td>KG5FHU</td> <td>8</td> </tr> <tr> <td>W1GLV</td> <td>7</td> </tr> <tr> <td>KN4POZ</td> <td>4</td> </tr> </table>	Operator	Contacts	KN4TWS	57	KX4Z	95	AA3YB	30	W4JIR	55	KO4IDO	86	KK4INZ	61	K9RFT	30	NH2KW	20	WB2FKO	20	KI4OXD	20	KV4RL	12	K1CE	8	KG5FHU	8	W1GLV	7	KN4POZ	4	<table border="0"> <tr> <td>Operator</td> <td>Contacts</td> </tr> <tr> <td>KN4TWS</td> <td>62</td> </tr> <tr> <td>KX4Z</td> <td>60</td> </tr> <tr> <td>AA3YB</td> <td>59</td> </tr> <tr> <td>W4UFL</td> <td>18</td> </tr> <tr> <td>K4DF</td> <td>16</td> </tr> <tr> <td>KN4WIQ</td> <td>13</td> </tr> <tr> <td>W4JIR</td> <td>11</td> </tr> <tr> <td>K4ZSW</td> <td>8</td> </tr> <tr> <td>KM4EVZ</td> <td>1</td> </tr> <tr> <td>Total =</td> <td>9</td> </tr> </table>	Operator	Contacts	KN4TWS	62	KX4Z	60	AA3YB	59	W4UFL	18	K4DF	16	KN4WIQ	13	W4JIR	11	K4ZSW	8	KM4EVZ	1	Total =	9	<p>Approx same Big improvement He let others op. Pres. but not op. Not pres. this yr. Pres. but not op. Big increase! Mesh, but not op. No pres. this yr. NEW OP NEW OP NEW OP NEW OP NEW OP NEW OP NEW OP NEW OP NEW OP NEW OP NEW OP NEW OP</p>
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K4DF	16																																																								
KN4WIQ	13																																																								
W4JIR	11																																																								
K4ZSW	8																																																								
KM4EVZ	1																																																								
Total =	9																																																								

3 These numbers are only approximate because many operators don't insert their name/initials at the start of their operation, and many contacts are also mentored, etc. So just an approximation

**After Action Report
Improvement Planning**

**Alachua County ARES
2021 FIELD DAY**

	Total = 15		67% increase in operators, and improvements in most.
CONTACTS			
CW	22	0	<-- GLG practiced
PHONE	16	12	
DIGITAL	475	237	

Our estimated operating time was from 2 PM - 1PM with perhaps an hour out for the thunderstorm.

NF4AC's Contest Summary Report for ARRL-FIELD-DAY
Created by N3FJP's ARRL Field Day Contest Log
Version 6.6 www.n3fjp.com

DUPLICATES REMOVED INFORMATION

NF4AC's Contest Summary Report for ARRL-FIELD-DAY
Created by N3FJP's ARRL Field Day Contest Log
Version 6.6 www.n3fjp.com

Total Contacts = 513
Total Points = 1,010 (before power multiplier)

Total Contacts by Band and Mode:

Band	CW	Phone	Dig	Total	%
----	--	-----	---	-----	---
160	0	0	2	2	0
80	1	5	74	80	16
40	21	8	109	138	27
20	0	2	98	100	19
15	0	0	99	99	19
10	0	0	27	27	5
6	0	1	66	67	13

**After Action Report
Improvement Planning**

**Alachua County ARES
2021 FIELD DAY**

	--	-----	----	-----	----
Total	22	16	475	513	100

Total Contacts by Operator:

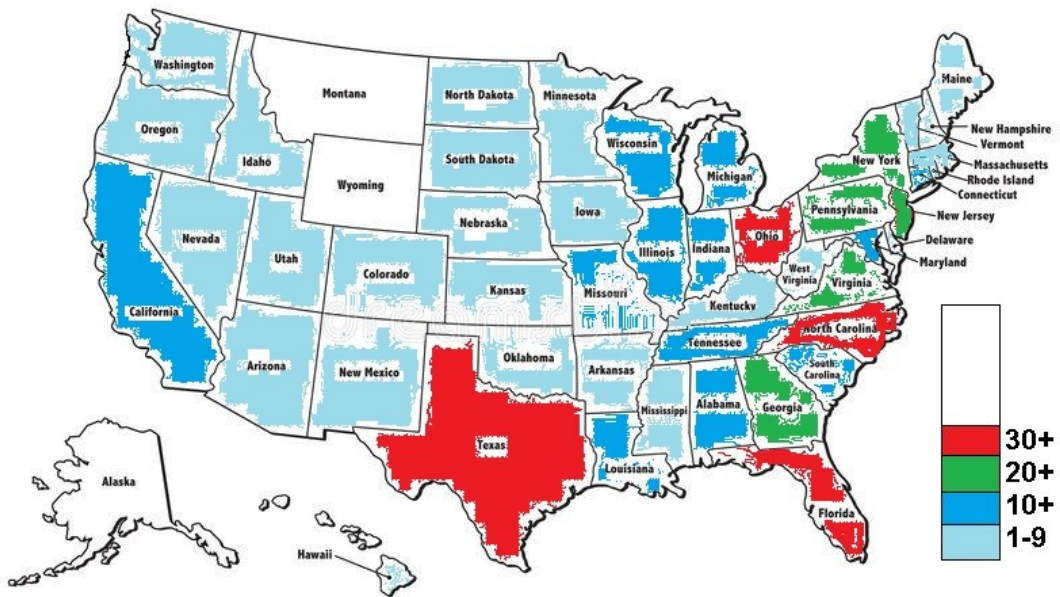
Operator	Total	%	
-----	-----	----	
KX4Z	95	19	
KO4IDO	81	16	<<--- NEW OPERATOR
KK4INZ	61	12	<<--- New to our physical location
KN4TWS	57	11	
W4JIR	55	11	
AA3YB	30	6	
K9RFT	30	6	
NH2KW	20	4	<<-- NEW OPERATOR
WB2FKO	20	4	<<-- NEW OPERATOR
KI4OXD	18	4	<<-- NEW to our physical location
KV4RL	12	2	<<-- NEW OPERATOR
K1CE	8	2	<<-- NEW OPERATOR
KG5FHU	8	2	<<-- NEW OPERATOR
W1GLV	7	1	
KO4IDO	5	1	(duplicate)
KN4POZ	4	1	<<-- NEW OPERATOR
KI40XD	2	0	(duplicate)

Total = 17

Total Contacts by Station:

Station	Total	%
-----	-----	----
EOC-HFDigital	241	47
GLG-HF	205	40
KK4INZ	58	11
	9	2

Total = 3



Total Contacts by Section:

Section	Total	%
OH	41	8
NC	38	7
NFL	24	5
STX	24	5
VA	23	4
GA	21	4
EPA	18	4
SNJ	17	3
AL	15	3
IL	15	3
MDC	15	3
TN	13	3
IN	12	2
MI	12	2
MO	12	2
SC	12	2
WNY	12	2
LA	11	2
WI	11	2
CT	10	2
ENY	9	2
KY	9	2

**After Action Report
Improvement Planning**

**Alachua County ARES
2021 FIELD DAY**

NNJ	9	2
NTX	9	2
MS	8	2
WPA	8	2
GTA	7	1
PR	7	1
EMA	5	1
NH	5	1
WCF	5	1
WMA	5	1
DX	4	1
OR	4	1
AR	3	1
AZ	3	1
CO	3	1
MN	3	1
OK	3	1
ORG	3	1
RI	3	1
SD	3	1
WV	3	1
DE	2	0
KS	2	0
LAX	2	0
ME	2	0
NE	2	0
NLI	2	0
SB	2	0
SCV	2	0
SFL	2	0
SV	2	0
UT	2	0
WTX	2	0
WWA	2	0
EWA	1	0
IA	1	0
ID	1	0
ND	1	0
NM	1	0
NV	1	0
ONN	1	0
PAC	1	0
QC	1	0
VT	1	0

Total = 66

Total Contacts by State \ Prov:

State	Total	%
-----	-----	----

**After Action Report
Improvement Planning**

**Alachua County ARES
2021 FIELD DAY**

OH	41	8
NC	38	7
TX	35	7
FL	31	6
NJ	26	5
PA	26	5
NY	23	4
VA	23	4
GA	21	4
AL	15	3
IL	15	3
MD	15	3
TN	13	3
IN	12	2
MI	12	2
MO	12	2
SC	12	2
	11	2 ⁴
CA	11	2
LA	11	2
WI	11	2
CT	10	2
MA	10	2
KY	9	2
MS	8	2
ON	8	2
NH	5	1
OR	4	1
AR	3	1
AZ	3	1
CO	3	1
MN	3	1
OK	3	1
RI	3	1
SD	3	1
WA	3	1
WV	3	1
DE	2	0
KS	2	0
ME	2	0
NE	2	0
UT	2	0
HI	1	0
IA	1	0
ID	1	0
ND	1	0
NM	1	0
NV	1	0
QC	1	0

4 The blank “state” is in the output from N3FJP, and we don’t have an explanation what it means; presented “as is”

**After Action Report
Improvement Planning**

**Alachua County ARES
2021 FIELD DAY**

VT 1 0

Total = 49

Total Contacts by Country:

Country	Total	%
-----	-----	----
USA	492	96
Canada	8	2
Puerto Rico	7	1
Barbados	1	0
Bermuda	1	0
Cuba	1	0
England	1	0
Hawaii	1	0
Venezuela	1	0

Total = 9

Total Contacts by CQ Zone:

CQ Zone	Total	%
-----	-----	----
05	278	54
04	195	38
03	28	5
08	9	2
09	1	0
14	1	0
31	1	0

Total = 7

Total Contacts by Grid:

Grid	Total	%
-----	-----	----
	510	99
EM33	1	0
EM50	1	0
FN34	1	0

Total = 3

Total Contacts by Initials:

**After Action Report
Improvement Planning**

**Alachua County ARES
2021 FIELD DAY**

Initials -----	Total -----	% ---
GLG	96	19
AEW	86	17
WW	56	11
DH	54	11
WCF	52	10
LG	30	6
RFT	30	6
BRW	20	4
MIKE	20	4
ERS	14	3
CDC	12	2
	9	2 ⁵
OLIVIA	8	2
RP	8	2
RG	7	1
ES	6	1
MEM	4	1
WDW	1	0

Total = 17

Total = 3

ESTIMATED GASOLINE USAGE		
2 generators arrived 5gal ea	10 gal (departed low)	
2 - 5gal cans	10 gal	
2 2-1/2 cans	5 gal	
Confirmed Earl purchased an additional 5 Gallons	5 gal	
1 5 gal went unused	- 5 gal.	
UNKNOWN PROPANE for Brett's RV	4x15lb tanks	Est. 60 lbs of propane = 14 gallons
KNOWN TOTAL	Est. 25 gallons gasoline+ 14 gallons propane	Rough estimate of total costs = \$131

5 The blank initials are “as is” presented by N3FJP; the software didn’t provide any explanation.

VOL HOURS ESTIMATED			
Preparation	Equip. Creation	8 vol-hrs	
	Training Events	20 vol-hrs	includes students
	EOC antenna work	12 vol hrs	Improved End Fed
	Antenna creation	6 vol hrs	GLG in NC
Zoom tabletop dress rehearsal	8 persons x 1.5 hrs	12 vol hrs	in lieu of physical dress rehearsal done last year
Field Day Event	17 person x 10 hrs (avg) (estimate)	170 vol hours	May be much more than this
Documentation/ Review		5 vol hours	
TOTAL		233 vol-hours	



Dean Covey making Solar-powered FT8 contacts at Station 2

SPECIFIC TECHNIQUE LEARNING POINTS														
CW	<p>An especially clipped and streamlined communications technique was very commonly observed, and it was so fast that memory keyers were of limited usefulness:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Calling Station</td> <td style="width: 50%;">Responding Stn</td> </tr> <tr> <td>FD K1AAA</td> <td></td> </tr> <tr> <td></td> <td>N4ZZZ</td> </tr> <tr> <td>1F ENY</td> <td></td> </tr> <tr> <td></td> <td>R 2F NFL</td> </tr> <tr> <td>R TU FD K1AAA</td> <td></td> </tr> </table>	Calling Station	Responding Stn	FD K1AAA			N4ZZZ	1F ENY			R 2F NFL	R TU FD K1AAA		This technique was so fast that even with my minimal skills I was able to make 22 contacts in less than 2 hours, even dealing with computer issues.
Calling Station	Responding Stn													
FD K1AAA														
	N4ZZZ													
1F ENY														
	R 2F NFL													
R TU FD K1AAA														
PHONE	<p>Our operators found this extremely frustrating with very low contact counts per hour. Comparison with Columbia County indicated they were achieving only 6 contacts per hour per person.</p> <p>Stations were separated, calling CQ was often unrewarding, and each station that was successful was dealing with a "pileup" which made things slower.</p>	Contact rates on this mode were very low compared to the other modes, and the resulting points are half as well.												
Digital	<p>We did NOT see very many stations dropping 3 kHz lower than the normal FT8 frequencies as we had expected.</p> <p>We did see some PSK31 below the FT8 frequencies but did not participate</p> <p>We did see minimal FT4 operation on the established frequencies -- but this mode is SO FAST that it was difficult for our volunteers to respond quickly enough when required.</p> <p>The most productive effort was on FT8, and in the nighttime there was SPACE on several bands and our combined QSO rate would often reach 30+ stations per hour..</p>													



Our 6-meter antenna that reached Ireland!

SECTION 4: CONCLUSION

Our 2nd Field Day as a club was an even bigger success than our first. We demonstrated a greatly-streamlined Field Day effort, and greater operator skill resulting in twice the number of contacts, and a significantly increased score.

Our publicity effort was even more success than last year and provided the public with more information about ways to become involved in this wonderful hobby as well as in our volunteer community service.

Significant Advances as a result of this Field Day Effort:

- Improved backup EFHW multiband EOC antenna, feed end repositioned to run near vertically for > 40 feet, much higher above ground than before.
- Successful PSK-Reporter check confirming near equivalent performance of primary and secondary EOC HF antennas
- Long-term loan data computer improves the EOC backup radio station capabilities
- First ever 6-meter experience for many of our members
- Better understanding of EOC/Sheriff volunteer vetting procedures
- Installation of semi-permanent ground rods within grassy site.

Our effort was significantly improved from last year:

- Significantly increased volunteer effort.
- Significantly more sophisticated deployed stations, with setup still accomplished in 3 hours.
- Fifteen operators documented, 66% improvement over 9 the previous year.
- First-ever 6-meter experience for many of our members
- Significantly improved efficiency of contact operation with a **contact rate approximately 100% greater than last year, resulting in a doubling of our contacts**
- Significantly improved logging system for FT8 with auto-logging that required almost no user intervention other than occasionally verifying that it was indeed logging.
- Tear-down accomplished in 1.25 hours



6-meter guru Craig Fugate KK4INZ

APPENDIX A IMPROVEMENT PLAN

No.	Item	Corrective Action	Volunteer rising to champion	Comments / Completion
1	Encourage other local clubs to have a dedicated PIO so that we can have unity of command within groups, but better coordination between groups. ⁶	Letter and discussion to other groups within Alachua County; possibly a talk.	Gordon Gibby	Our PIO works for our Incident Commander (unity of command).
2	Alachua County EM prefers for supportive press releases to being from THEIR office.	PIO work with Alachua County EM next year to encourage press releases – a huge boon to our efforts	Next Year's PIO	
3	Post station call sign on the ARRL hashtag and Facebook to get more understanding of your effort and thus more ready contacts.	(stated)	PIO	
4	Provide more training to the participants on the rules and also why we made various decisions. ⁷	(stated)	Next year's organizers	
5	Provide more direction and review from a Command Post / ICS operations environment which will assist in helping Section Chiefs accomplish their various efforts.	(stated)	Next year's Command Staff	

⁶ A reviewer points out this is not a deficiency on our part, and that we have no Authority to direct how other groups operate – obviously true. All we can do is suggest improved methods of communication.

⁷ More than one participant was confused about some of the basic rules, exchange information, etc., of the Field Day, particularly since this is only our 2nd effort and many of our volunteers are very new to Field Day.


**After Action Report
Improvement Planning**

**Alachua County ARES
2021 FIELD DAY**

6	Separate training meeting for the Section Chiefs to brief very very explicitly on duties, to make it very clear what duties we're asking each Chief to get done for documentation.	More clearly divide / separate the Planning from the Operations and follow the HSEEP Planning P more explicitly	Next year's leadership	
7	Hard copy of duties for Section Chiefs on site.	Might be handled better through ICS / Command Post and Planning P implementation	Next year's leadership	
8	Provide hard copy of the planning materials at the site, and water protected.	Suggested	Operations	
9	Confusion on the part of visitors about trailers, functions.	Suggest that we follow the example of several clubs that have a contingent of PIO folks who actively greet visitors, host them. Placards may assist.	Incident Commander, PIO	

**After Action Report
Improvement Planning**

**Alachua County ARES
2021 FIELD DAY**

10	HOTWASH COMMENT: Be certain of fire extinguishers for each radio setup	(stated)	Operations	<p>Station 2 trailer has a fire extinguisher within reach, but away from the KITCHEN area -- the normal most likely cause of a fire.</p>  <p>However it might be a good idea to CALL ATTENTION to the position of the fire extinguisher within each trailer when operators enter.</p>
11	Better placards at each station -- including the CALLSIGN and EXCHANGE		Operations	I actually had trouble remembering the call when sending CW at 1 AM...
12	HOTWASH COMMENT: Provide additional RV/VEHICLE for people during thunderstorms-- the water was inches deep!		Logistics	

**After Action Report
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**Alachua County ARES
2021 FIELD DAY**

13	Provide additional voltmeters, and possibly AC voltmeters that show the voltage on each deployed unit.		Logistics	
14	Weather Watch radio at all locations.		Logistics	We did OK with only one unit and VHF but more units might be useful
15	Utilize more 2.5 gal fuel containers and fewer heavy 5 gallon, or half fill them.		Logistics	
16	Voice may not be worth as much -- the fellows trying it were discouraged and felt they were getting only 3 /hour		Operations	
17	HOTWASH CONCERN: Improve the scheduling so we don't end up with 3 persons scheduled for the same station and no one scheduled in the middle of the night....		Operations	We don't have a system that directly connects input and output of the scheduling, so work to make it easier for people to see and check it more often. There were some late entries that I almost missed
18	HOTWASH COMMENT: Possibly have PIO crew engage any visitors quickly and host their visit.		PIO	
19	HOTWASH COMMENT: Provide some sort of monitor computer so people can see how things are going / supervise?		Logistics	

**After Action Report
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**Alachua County ARES
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20	HOTWASH COMMENT: Would like to try and contact the ISS.		Operations	
21	HOTWASH COMMENT: Possibly have a mock station setup to teach people?		Operations	
22	Be certain to connect up the lightning arrestors to ground rods!		Operations	At conclusion of event, discovered HF antenna 2 never got a lightning arrester, and neither one was ever connected to the ground rod.
23	If at all possible, have a single person to act as SAFETY OFFICER so they aren't distracted and can fully check everything.		Incident Commander	We don't get any bonus points for this, but it is still worth doing. Our ICS-201 had a document for checking.
24	Brett: Have OPERATIONAL PERIODS with review and alterations as needed by Operations / IC / Planning		Incident Commander	
25	Capture birthdate / sex / other information as needed for Sheriff Dept records check from the initial contact. ⁸		Planning / Operations	
26	Add a bristle type welcome matt on the ground outside trailer for Station 2 located on sandy soil		Gordon	
27	Fix the new footswitch adapter so that the SM-30 desk mic works (appears to need the +8VDC)		(DONE)	DONE -- wired thru the +8VDC and it works fine now.

⁸ Our hosts had some new security procedures this year that we weren't aware of earlier but were fairly easily handled. Some of this is just getting better acquainted and forging even stronger relationships.

**After Action Report
Improvement Planning**

**Alachua County ARES
2021 FIELD DAY**

28	CF: Establish a fixed Command Post -- might be where to have a monitoring logging computer		Incident Commander	
29	CF: Staff the CP with Section Chiefs -- even if just one person holding all hats, depending on workload.		Incident Commander	
30	CF: Staff the Command net from the CP		Incident Commander	
31	CF: 146.55 at each station		Operations	
32	CF Formal briefings at beginning of operations and at scheduled times during, and at end of operation.		Incident Commander	
33	CF: formal check -in WW: advocates for central signin/signout so we would know who is on site at all times.		Operations	
34	CF: Rotate people around so others hold the "hat" while various people get chance to operate		Operations	
35	CF: recommend to ARRL to switch the point system		??	
36	WW: Provide blank ICS211e form for individuals to send in, and provide reminders of this opportunity		Logistics	
37	WW: Plans are to move the porta potty (aka "oven") into the shade next year, and use hand sanitizer instead of water -- looking for comments on this.		Logistics	
38	WW: Suggest next year potentially hold up the tent establishment until AFTER the deluge??		Logistics / Operations to consider	

**After Action Report
Improvement Planning**

**Alachua County ARES
2021 FIELD DAY**

39	Increase the number of persons who fully understand the networking and computer systems.		Operations	
40	Have emergency boot USB's for each computer.		Operations	
41	RESTORE POINT for each computer installed.		Operations	
42	Windows auto-scheduling of copying of internal logs to a flash drive at intervals.		Operations	
43	Additional battery for the intermediate MESH relay		Operations	
44	Better understand the GFCI issue of the HF Station #2 trailer – radio equipment side tripped GFCI, possibly due to rain on extension cord connections?		Logistics	
45	Increase the font size of the right hand panel of WSJT-X so people can read easier and make it possible to reposition screen as needed		Operations	
46	Provide pre-event training that works for non-retired persons also.		Operations	
47	Weather: Thunderstorms are somewhat the afternoon Norm in June – work for more “cover”		Logistics	
48	Consider adding additional Operations Deputies or Assistants – as the tasks for Operations seem to be growing		Incident Commander	

49	<p>Consider significantly enlarging our diversity of outreach to the general public by adding some of the ideas from Santa Rosa ARES®⁹ such as:</p> <ul style="list-style-type: none"> • Food bank donations on site • Raffle • Barbecue food truck for meals to public, some free to 1st responders • Armed Forces recruiting booth? • Sheriff outreach to neighborhood efforts? 		Plannint / Operations	

9 See the Santa Rosa ARES® amazing Field Day information on pages 10/11 here: <https://arrl-nfl.org/wp-content/uploads/2021/07/QST-NFL-July-2021.pdf>



Our Information Table and Weather Watch Radio

APPENDIX B

ICS PLANNING DOCUMENTATION

SEE:

[HTTPS://QSL.NET/NF4RC/2021/NFARCDRAFTICS201.PDF](https://qsl.net/nf4rc/2021/NFARCDRAFTICS201.pdf)



The setup of the tents is an important item that planners of the following year often need.



This shows the positioning of the Station 2 HF RV

APPENDIX C:

DOCUMENTATION THAT ALACHUA COUNTY GENERATOR TESTING IS SUFFICIENT FOR EMERGENCY POWER BONUS POINTS.

Bourque, Paul, N1SFE <n1sfe@arrl.org>
Fri, Jun 11, 11:26 AM (3 days ago)
to Dalton Herding

Good morning Dalton,

As per our conversation, the documents provided fulfill the requirements of the Field Day rule 4.8.4.1

Have fun on Field Day!

73,

Paul Bourque, N1SFE
Contest Program Manager

ARRL - The national association for Amateur Radio®
225 Main Street
Newington CT 06111-1400
Telephone: 860-594-0232
Fax: 860-594-0346
n1sfe@arrl.org
www.arrl.org

which was in response to:

From: Dalton Herding <dherding@alachuacounty.us>
Sent: Friday, June 11, 2021 10:21 AM
To: Bourque, Paul, N1SFE <n1sfe@arrl.org>
Subject: Alachua County Field Day Inquiry - Criteria 4.8.4.1

Good Morning Mr. Bourque,

My name is Dalton Herding, I work as an Emergency Management Program Coordinator with the Alachua County Division of Emergency Management. We spoke this morning regarding ARRL Field Day Criteria 4.8.4.1: The emergency power source must be tested during the Field Day period but you are not required to run the Class F operation under emergency power.

We discussed the intent of this item, the relationship between Alachua County Division of Emergency Management and our local ARRL chapter, as well as the frequency with which the generator at the Alachua County Emergency Operations Center is tested. We also discussed that provision of documentation regarding this testing may suffice to meet this item.

Please see the attached documentation and confirm if it will suffice regarding the above criteria.

Sincerely,




Dalton Herding

Dalton Herding
Emergency Management Program Coordinator
Emergency Management
1100 SE 27th St • Gainesville • Florida • 32641
3522646540 (office)

PLEASE NOTE: Florida has a very broad public records law (F.S.119). All e-mails to and from County Officials and County Staff are kept as public records. Your e-mail communications, including your e-mail address, may be disclosed to the public and media at any time.

-----DOCUMENTATION OF TESTING -----

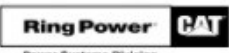
6/10/2021 Alarm History

Alarm History Unit: Alachua County 911 Main

Monitoring:	Date:	Alarm State:
Engine Stopped *	Mon Jun 07 2021 08:20:52 GMT-0400 (Eastern Daylight Time)	1
Engine Running *	Mon Jun 07 2021 07:56:43 GMT-0400 (Eastern Daylight Time)	0
Engine Stopped *	Mon May 31 2021 08:21:07 GMT-0400 (Eastern Daylight Time)	1
Engine Running *	Mon May 31 2021 07:56:19 GMT-0400 (Eastern Daylight Time)	0
Engine Stopped *	Mon May 24 2021 08:21:23 GMT-0400 (Eastern Daylight Time)	1
Engine Running *	Mon May 24 2021 07:56:30 GMT-0400 (Eastern Daylight Time)	0
Engine Stopped *	Mon May 17 2021 08:21:39 GMT-0400 (Eastern Daylight Time)	1
Engine Running *	Mon May 17 2021 07:56:49 GMT-0400 (Eastern Daylight Time)	0

LOAD TEST FORM



Power Systems Division

500 WORLD COMMERCE PARKWAY
ST.AUGUSTINE FL. 322092 904 737 7730

Dealer Code D:D358 Work order #: 0632908

Date: 05/13/21 Customer name: ALACHUA CO. FLEET

Address: MTG-911-1

Employee #: 3314

GENERATOR

Serial # DFHD-4078886 Kw: 900

Serial # C00071154 Voltage: 484

Arraignment: Hertz: 60

R.P.M. 1800 Phase: 3

Hour: 1158 P.F.: 1

Time	RPM	Oil PSI	Water temp.(F)	ROOM Temp. (F)	P.F.	VOLTS			AMPS			KW	Hour Meter
						Phase 1	Phase 2	Phase 3	Phase 1	Phase 2	Phase 3		
9:40	60	52	172	60	1	480	480	480	921	921	921	765.6	1158
10:10	60	51	175	60	1	480	480	480	921	921	921	765.6	1158
10:40	60	51	175	60	1	480	480	480	921	921	921	765.6	1159
11:10	60	51	176	60	1	480	480	480	921	921	921	765.6	1159
11:40	60	50	176	60	1	480	480	480	921	921	921	765.6	1160
						VOLTS			AMP.			KW	Full Load
						AVG.			AVG.			AVG.	AVG.
						480.00			921.00			765.60	85.1%

Oil Pres. Water Temp. Ambient Temp.

AVG. AVG. AVG.

50.75 175.5 60

comments

I hereby authorize the above repair work to be done along with the necessary materials. You and your employees may operate the above equipment for the purpose of testing, inspection or delivery at my risk. An express mechanic's lien is acknowledge on equipment to secure the amount of repairs thereto. I understand that while customers equipment is being tested or repaired that Ring Power does not pay for rental of a replacement machine nor the down time due to work authorized by:

Tested by: BRYAN W

Page 1 / 1

APPENDIX D
FULL DOCUMENTATION
WHAT WENT WELL!

Item#	Submitter	Things that worked well	Comments
PLANNING BEFORE TABLETOP DRESS REHEARSAL			
1	GLG	The Incident Action Plan gave an incredibly helpful list of who needed to do what when – most detailed plan for a field day I’ve ever seen.	How do we strike a balance? The inclusion of the "checkerboard" summary was designed to improve communication -- but still we need to do more explanation of the exchange and techniques.
2	GLG	Planning for this event began in mid April this year	Much earlier than previously and allowed us to get the idea out in front of lots of amateurs and secure permissions from a new Administration
3	GLG	We worked extremely hard to provide publicity for sister club GARS	
4	GLG	Thanks to an important tip from Jeff Capehart, we got ourselves on the ARRL Field Day Locator Map and used it to help others understand the THREE Field Days in Alachua County	
PLANNING AFTER TABLE TOP			
1		Adding in the additional RV was a	

		HUGE help	
2		Documentation had separate points for each officer, and a checkerboard square of key information.	These were great improvements brought about by last year's Improvement Plan
3	GLG	We got lots of new people more experienced at HF and digital operations.	
4	GLG	We had better evening out of material that had to be transported. For the first time ever, my truck was NOT filled to the ceiling in both front and back seats. Wendell did a great job putting out individual lists for each person.	
5	GLG	We had an operator list published at the site	
PUBLICITY			
1	GLG	WE GOT GREAT PRINT COVERAGE – Gnv Mainstreet Daily The Gainesville Sun	Jim Bledsoe arranged the invites to the media, the press release and WOW! Did he get a response!
2	GLG	Homemade brochure done on coated paper this year (\$\$\$ \$)	Consider using local company next year.
3	Hotwash	Better signage this year	
LOGISTICS			
1	GLG	Porta Potty worked out well	Can we make a simple portable hand cleaning station that can be used year after year? Appropriate for either water or gel cleaners.
2	GLG	Plenty of wireless mice this year -- esp since needed only one computer per station.	We are placing these additional wireless mice permanently at the EOC

3		We never ran out of gasoline, thanks to Logistics and volunteers.	
4		Placement of the generators around the angled wall reduced noise significantly	Requires significant extension cord lengths -- volunteers stepped up to the plate. Remember for next year!!
5	GLG	Better table space for brochures this year	
6	GLG	INCREDIBLE MEALS!!!	Hooray, Emily!
OPERATIONS			
1	GLG	Excellent briefing at 0830 by Operations	
2	GLG	Logging software worked flawlessly except when the computer died early Sunday morning for unknown reasons DIRECT LOGGING TO N3FJP WAS FANTASTIC	Hold more training on this? Practice rebuilding from backups?
3	GLG	Mesh was a huge success	The mesh was a huge success.
4	GLG	No failures of the WIFIs at either end -- added capacitors and UPS system fixed the issues noted last year.	Based on IP from last year
5	GLG	Solar panel charging worked well for the LIFEPO4 batteries.	Working for smaller panels next year. Good deals have been located.
6	GLG	Weather watch by Jeff worked well -- and our VHF net passed the information along well.	
7	GLG	Earl's 5 kw generator was a big hit and worked well. Gordon ran a 2nd circuit into the trailer to accommodate the 2nd leg of 120VAC (Without that advance planning we would have had a problem....)	
8	GLG	We had at least 15 operators -- much more than the 9 or 10 that I listed in	

		documentation last year. BIG IMPROVEMENT		
9	GLG	Amy did a great job teaching new participants the nuances of how to best run FT8 by jumping back and forth between calling CQ and hunt-and-pounce. If 6 CQ's didn't bring a response, we switched temporarily.		
10	GLG	Stairs on the HF RV were a big improvement, even if slightly slanted.		
11	GLG	Col. Huckstep provided great fire extinguishers		Can we make a fire extinguisher holder that will be re-usable year after year?
12	GLG	Far better expertise demonstrated by our group at putting lines in trees We also TRAINED some new people at this.		
13	GLG	Amplifiers were easy to use and gave us plenty of signal strength		
14	GLG	No predetermined band plan worked out fine with comms on vhf or thru the logging system.		
15	GLG	This year we basically had ZERO inverter generators and had minimal to zero difficulties with RFI		
16	GLG	We worked without the bandpass filters and seemingly did well!! If needed for 3 stations, they are still available.		
17	GLG	Excellent training and mentoring of newer operators-- particularly by Leland in advance, and by Amy during the event.		
18	GLG	Earl had every part needed for the mesh system		
19	GLG	This year we had an EXCELLENT backup antenna not only for the		

		EOC, but also for the Station #2 -- and we had excellent 6 meter antenna	
20	GLG	Hunt and pounce to the STRONGEST signal worked great for FT8	
21	GLG	We were also able to hold frequency and CQ often on FT8 -- not on other modes	
22	GLG	In the wee hours the bands were much less full and much more easily controlled!	
FINANCE & ACCOUNTING			
1		Our “donations accepted” method of paying for items appeared to work well.	NEVER FAIL TO ASK FOR WHAT YOU NEED!! “Ask and ye shall receive” – good advice.
PLANNING AFTER EVENT			
1	GLG	With about 5 hours of work, the submission was done by Monday evening.	Make forms available in .odt next year -- better explain forms -- class just for the Section Chiefs on what they need to do for documentation.



Volunteer Operations Chief Brett Wallace at the 6-meter station