

**INCIDENT BRIEFING (ICS 201) REV-2
DRAFT 3**

NORTH FLORIDA AMATEUR RADIO CLUB (NF4AC)

2020 ARRL FIELD DAY

ALACHUA COUNTY EMERGENCY OPERATIONS CENTER (EOC)

1. Incident Name: NF4AC
2020 Field Day

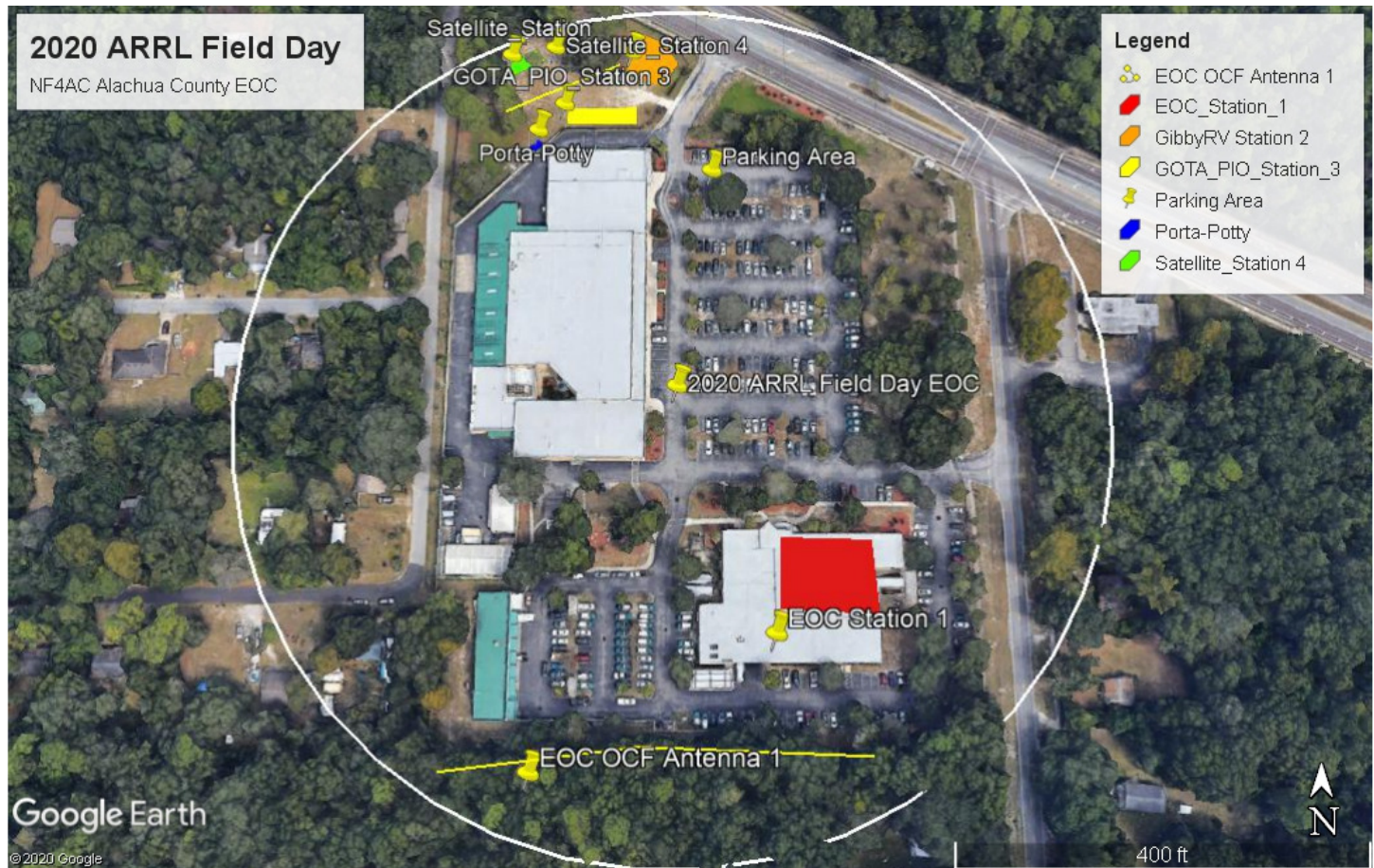
2. Incident Number:

3. Date/Time Initiated:
Date: June 27, 2020 Time: 8:00am

4. Map/Sketch (include sketch, showing the total area of operations, the incident site/area, impacted and threatened areas, overflight results, trajectories, impacted shorelines, or other graphics depicting situational status and resource assignment):

The 1,000 Foot Diameter Operating (white) Circle per ARRL Field Day Rules includes:

- EOC Radio Room in Station #1 (inside Southeast building)
- RV Trailer Station #2 (orange zone)
- PIO/Demo/GOTA Station #3 (yellow zone)
- Satellite Comms Station #4 (green zone)
- Porta-Potty (blue zone)



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Expanded View of Northwest Area shows positions of Gordon's RV Station #2 (orange zone), Public Information GOTA Station #3 (yellow zone), and the Satellite Communications Station #4 (green zone). Please note that we walked this area and noted the large tree between the green and orange zones is sparse.

One Porta-Potty (blue zone) will be brought in for this event to be located southwest of the PIO/GOTA Station #3 for easy public access. The RV trailer has a restroom as well.

A Solar PV Generator / Battery Charging Station (on a trailer or truck bed) shall be setup in the Parking Area outside the NW Area. Additional Solar PV generating/charging station(s) can be setup as needed provided they are checked for EMI/RFI emissions effecting radio operations.



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<p>5. Situation Summary and Health and Safety Briefing (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.</p> <p style="text-align: center;"><u>2020 ARRL FIELD DAY</u></p> <p>At approximately 8am Saturday morning, teams shall arrive to setup Radio Stations and associated equipment. Please review the schedules included herein. We hope to have setup done by 11 AM and then relax and get lunch elsewhere before the start of operations. Teardown operations shall commence Sunday on or before 2pm the official end of the contest.</p> <p>Due to COVID-19, everyone should attempt social distancing, and also use facial masks whenever possible and follow any other advice from the Safety Officer. We will limit groups to 10, keep everyone spaced out, and try to wipe anything that we have to have many people use. Please review the Field Day rules packet; this will avoid a lot of questions having to be answered multiple times.</p> <p>We will try to operate the normal EOC Station #1 with up to 150 watts output, on Digital, CW and SSB Voice on ARRL Field Day Operating Bands per attached schedule to be monitored and controlled by Operations.</p> <p>We expect to be able to also operate an RV trailer Station #2 in the northwest corner of the compound, using an end-fed antenna (or alternate center fed) supported by its mast and/or trees there – shooting for about 35 feet up. The RV trailer with AC will be powered by roughly 4kw conventional generator, consuming about 3/4-1 gallon per hour.</p> <p>We expect to be able to operate a demonstration PIO/GOTA Station #3, <u>Call Sign NF4RC</u>, under a canopy with at least the Shelter Go-Box to show to any authorities who are interested. That may be our ‘free VHF/UHF station’</p> <p>We expect to be able to operate a 2nd “free” Satellite Station #4 operating on VHF/UHF bands. This does not change our Class 2F (2 transmitters max simultaneously other than the two freebie stations) so will need to coordinate when satellite and other stations operate on VHF/UHF bands.</p> <p>A Field Day Band Plan Schedule is provided in the Attachments that shows each of the four stations operating bands, modes, and frequency range in (12) 2-hour increments monitored and controlled by Operations during the event. Changes by any station to move to a different band shall be coordinated with the Operations Chief to prevent stepping on each other’s transmission. The Operations Chief shall communicate all band plan scheduling changes to all (4) stations as they occur. Each team shall be responsible for recording these on a hard-copy of the attachment.</p> <p>We will use the standard N3FJP Networked Logging Software, and expect to link the computers using TCP/IP either over a dedicated ham radio microwave (ubiquity, 2.397 GHz, 5 MHz bandwidth) or using the GUEST network if we can connect to it from the trailer.</p> <p>We expect to commence operations for points at 2PM Saturday and the emphasis will be on FUN and if we don’t have all the stations operating all the time – that’s ok! Learning and fun are prime objectives.</p> <p>We are trying to develop bandpass filter that will improve our ability to operate on nearby bands during the night. The EOC station will tend to have less noise on 40 meters and 30 meters we expect.</p> <p>We plan to have considerable ADVANCED TESTING so that on the Field Day weekend there is NOT a wild push. The testing should include REAL OPERATIONS.</p>		

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6. Prepared by: Name: <u>John Trites, NO5X</u> Position/Title: <u>Planning Chief</u> Signature: _____					
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INCIDENT BRIEFING (ICS 201)

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7. Current and Planned Objectives: setup the following Communications Stations for a 2F Class 2020 ARRL Field Day Event, with free PIO/GOTA and Satellite stations at the Alachua County Sherriff's Office and Emergency Operations Center (EOC) grounds.

Class 2F Station #1: EOC Primary Radio Room shall include a new ICOM 7300 Radio, LDG1000 Pro II Tuner, 12VDC Power Supply, 12V Battery emergency power, approximately 400 feet of LMR400 and 100 feet of RG-8X coaxial feedline, and a 160m to 10m Off Center Fed (OCF) Dipole Antenna located south of the EOC's fence line and optional SB-200 Amplifier providing 150 Watts output.

Class 2F Station #2: Gordon's RV located in the Northwest Map orange color area shall include an ICOM 746Pro and ICOM 725Radio, 600 watt LDG Auto-Tuner, SB200amplifier, low-noise Power Supply, 12V Battery emergency power, approximately 50 feet of RG8X coaxial feedline, and a 130 foot end-fed 49:1 balun Antenna near the RV. Multiple 1:1 Common Mode choke/un-un will be used on the feedline close to the radio. The station shall be powered by 4kW gasoline conventional generator and optional SB-200 Amplifier providing 150 Watts output.

PIO/GOTA Station #3: Canopy(s) located in the Northwest Map yellow area shall include a SHELTER GO BOX Radio, 12V Battery emergency power [AGM from the EOC stock], approximately 20 feet of RG8X coax, and some type of VHF/UHF antenna nearby. We will try to add a Signalink to the Go-Box equipment for Digital Winlink communication messages.

Satellite Station #4: Canopy(s) located in the Northwest Map yellow area shall include an ICOM 706MKIIG and YAESU FT-817 Radios, 12VDC Power Supply(s), 12V Battery emergency power, approximately 50 feet of coaxial feedline, (2) VHF/UHF Antenna(s) hand-held and/or mounted to a tri-pod.

8. Current and Planned Actions, Strategies, and Tactics:	
Time:	Actions:
4 weeks in advance	<ul style="list-style-type: none"> ■ Measure microwave path loss to the trailer area (Operations & Planning) □ Test N3FJP Field Day Logging software on two laptops (uses port 1000) on the Guest network ■ Discuss having the emergency generator tested during the Field Day period, so that we don't have to run the EOC station from batteries....
3 weeks in advance	<ul style="list-style-type: none"> □ Measure the noise level on the EOC antenna using Spectrum analyzer (Gibby) □ Procure the necessary N3FJP Field Day Logging software (Logistics & Finance) □ Obtain computer power supplies that don't produce RFI at levels interfering with station(s) performance. (Gibby / Operations) □ Construct proper digital cables for the new 7300 Radio at least for Signalink (Operations) □ Construct and test bandpass filters (Gibby) □ Provide training opportunities for use of ICOM7300 and ICOM746PRO and SB-200 (Operations)
1 - 2 weeks in advance	DRESS REHEARSAL <ul style="list-style-type: none"> □ Bring in trailer, set up trailer station, Demo station, generator, Solar charging and test all of this □ Test the network connection to the EOC radio room and have logging computers all working. □ Test ability of stations to operate on nearby bands and record outcome; if possible, record spectrum analyzer signal levels at opposite station
WEEK BEFORE	<ul style="list-style-type: none"> □ PIO to send media press releases and appropriate information – send copies of releases and/or published coverage to PLANNING SECTION for BONUS POINTS, specifically jtrites@tritesengserv.com with a subject line documenting it is for bonus points for MEDIA PUBLICITY □ PIO issues invitations to ELECTED GOVERNMENT OFFICIALS and SERVED AGENCY REPRESENTATTIVES – keep documentation for submission to PLANNING □ PIO to outreach through SOCIAL MEDIA and document with photo/screenshot to PLANNING: Social Media: 100 points for promoting your Field Day activation to the general public via an active, recognized and utilized social media platform (Facebook, Twitter, Instagram, etc.). This bonus is available to bona fide amateur radio clubs and Field Day groups that welcome visitors

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	to their operation. Individual participants do not qualify for this bonus. Club websites do not qualify for this bonus. Available to all classes	
Friday Afternoon & Evening	<input type="checkbox"/> Gordon can use help packing the trailer in the afternoon for transport and solar power systems. (There is a checklist for the trailer) Expect trailer to arrive around 6 PM, with full water, empty gray and black water tanks, one charged battery, one generator, antenna mast and an HF antenna, and some provisions in the refrigerator. Either the generator or my batteries/inverter will need to run the refrigerator overnight – then the inverter can be released to help the EOC crew run their amplifier. <input type="checkbox"/> Someone purchases gasoline for the generator (lets have 3 5-gallon jugs on hand) Need a CHAIN to lock them to a tree and a KEY stored in the TRAILER. Gordon has keys to the Trailer and will give one set to OPERATIONS. <input type="checkbox"/> DIGITAL BULLETIN (BONUS POINT) OPERATIONS to coordinate having this message captured transmitted at 6pm / 9 pm Eastern - 3.5975, 7.095, 14.095 45.45-baud Baudot, PSK31 in BPSK mode and MFSK16 on a daily revolving schedule. <input type="checkbox"/> Email the text of the bulletin to: jtrites@tritesengserv.com <input type="checkbox"/> SSB BULLETIN (BONUS POINT) OPERATIONS to coordinate having this message captured at 9:49 PM Eastern - 3.99, 7.29, 14.29 (Note the 7.29 is full AM with carrier!) <input type="checkbox"/> Email the text of the bulletin to: jtrites@tritesengserv.com	
Saturday (6/27) 8:00 – 11:00	<input type="checkbox"/> LOGISTICS is in charge of delivery <input type="checkbox"/> Setup crew (OPERATIONS) Check-In at Northwest Area PIO Station #3 <input type="checkbox"/> Setup crew Install radios, primary and backup antennas, feedlines, tuners, logging laptops, (Primary Generator, Solar PV and emergency back-up) power, and associated equipment at Station #2 and PIO/GOTA Station #3 locations. <input type="checkbox"/> Satellite crew (Trites / Ridlon) Install radios, primary and backup antennas, feedlines, tuners, logging laptops, (Primary Generator, Solar PV and emergency back-up) power, and associated equipment at Satellite Station #4. <input type="checkbox"/> Set up Inverter in the EOC (with bank of 2-3 AGM batteries) to operate the linear amplifier and/or the ICOM 7300 – use MIF23 filter and associated filters. Position inverter as far as possible from the Radios. Check background noise level before and after turning on inverter and adjust as necessary (try different positions of AC line chokes if needed) <input type="checkbox"/> SETUP (Operations) to document 100% Emergency POWER (BONUS POINTS) for every station and send the photos to prove it with pertinent subject line, to PLANNING SECTION, specifically jtrites@tritesengserv.com	
Saturday 11:00 – 13:00	<input type="checkbox"/> Setup crew Testing: Station #1 (EOC), Station #2 (Trailer), PIO/GOTA Station #3 and Satellite Radio Station #4 (Trites / Ridlon) Systems for planned bands and operating modes: CW, SSB Phone, and Digital (FT-8, FT-4, other). <input type="checkbox"/> Operations Dress Rehearsal of (4) Stations transmitting at 50 watts and then 150 watts on combinations of planned bands to test for interference between stations. Operations to write Test Plan. <input type="checkbox"/> Lunch on your own – we will see where we can go safely. <input type="checkbox"/> PIO to send photos documenting PUBLIC LOCATION for Bonus Points , with appropriate subject line to PLANNING SECTION, specifically jtrites@tritesengserv.com <input type="checkbox"/> PIO to send photos documenting PUBLIC INFORMATION TABLE (Demo Station) for Bonus Points , with appropriate subject line to PLANNING SECTION, specifically jtrites@tritesengserv.com	
Saturday 12:00 – 14:00	<input type="checkbox"/> Participants Check-In at Northwest Area PIO Station 3	
Saturday	<input type="checkbox"/> OPERATIONS to set up one or more SOLAR POWER CHARGING SYSTEM(s) (BONUS POINTS) and take photo for documentation to send to PLANNING SECTION, with appropriate subject line for documentation and manage that system to charge at least 2 batteries during Saturday and then to have them used and DOCUMENTED for at least FIVE CONTACTS. <input type="checkbox"/> Send a written statement as a file to PLANNING SECTION, specifically jtrites@tritesengserv.com with a photo of the charging system and the specific contacts listed that were made by Alternate Power. <input type="checkbox"/> Operations is encouraged to have METERING on the charging stations and to educate members as to the success / performance of the systems utilized.	

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Saturday / Sunday	<p><input type="checkbox"/> OPERATIONS to set up one or more EDUCATIONAL ACTIVITIES (BONUS POINTS) and document with attendance sheet and photograph sent by email to PLANNING SECTION, specifically jtrites@tritesengserv.com with appropriate subject line – make it One document preferably in .doc or pdf so that PLANNING can easily upload it to the ARRL.</p> <p><input type="checkbox"/> PIO (BONUS POINTS) is to invite an ELECTED GOVERNMENT OFFICIAL and document both the invite and the visit with a FILE including a photo or written statement, send to PLANNING SECTION, specifically jtrites@tritesengserv.com with an appropriate subject line. Encouraged to mentor up and coming PIO members by involving them in this processing</p> <p><input type="checkbox"/> PIO (BONUS POINTS) to invite REPRESENTATIVE OF AN AGENCY served by ARES and document with copy of invitation / photo or suitable substitute in one file sent to PLANNING SECTION, specifically jtrites@tritesengserv.com</p>	
Saturday 14:00 – 00:00	<p><input type="checkbox"/> Operators work in pairs (Operator and Logger) making and logging (QSO's) contacts to other radio clubs participating in the 2020 ARRL Field Day event at EOC Station #1, RV Station #2, PIO/GOTA Station #3, and optionally at Satellite Station #4.</p> <p><input type="checkbox"/> Keep it to two transmitters that "count" maximum at all times. One VHF and One Satellite radio are "free". Groups are allowed one dedicated satellite transmitter station without increasing their entry category"</p> <p><input type="checkbox"/> We may use cell phones, or FRS radios, or VOIP phones to talk between the two stations, depending on what works.</p> <p><input type="checkbox"/> RADIOGRAM TO SM OR SEC: [ORIGINATED BY NF4AC] (BONUS POINTS) OPERATIONS to perform and document (by copy of radiogram) origination of a formal message to the ARRL Section Manager or Section Emergency Coordinator by your group from its site. You should include the club name, number of participants, Field Day location, and number of ARES operators involved with your station. The message must be transmitted during the Field Day period and a copy of it must be included in your submission in standard ARRL radiogram or no credit will be given. The message must leave or enter the Field Day operation via amateur radio RF. Documentation by sending a copy also to PLANNING SECTION, specifically jtrites@tritesengserv.com Note: these may be easiest to do on VHF digital from the "free" vhf station.</p> <p><input type="checkbox"/> TEN RADIOGRAMS SENT FROM THE FIELD DAY SITE: [ORIGINATED BY NF4AC] BONUS POINTS Message Handling: 10 points for each formal message originated, relayed or received and delivered during the Field Day period, up to a maximum of 100 points (ten messages). Copies of each message must be included with the Field Day report. The message to the ARRL SM or SEC under Rule 7.3.5. does not count towards the total of 10 for this bonus. Available to all Classes. All messages claimed for bonus points must leave or enter the Field Day operation via amateur radio RF. OPERATIONS to have this accomplished and documented by having a COPY sent to PLANNING SECTION of each message, specifically to jtrites@tritesengserv.com</p> <p><input type="checkbox"/> SATELLITE: BONUS POINTS Satellite QSO: 100 bonus points for successfully completing at least one QSO via an amateur radio satellite during the Field Day period. "General Rules for All ARRL Contests" (Rule 3.7.2.), (the no-repeater QSO stipulation) is waived for satellite QSOs. Groups are allowed one dedicated satellite transmitter station without increasing their entry category. Satellite QSOs also count for regular QSO credit. Show them listed separately on the summary sheet as a separate "band." You do not receive an additional bonus for contacting different satellites, though the additional QSOs may be counted for QSO credit unless prohibited under Rule 7.3.7.1. The QSO must be between two Earth stations through a satellite. Available to Classes A, B, and F. 7.3.7.1 Stations are limited to one (1) completed QSO on any single channel FM or Linear Satellite OPERATIONS to have this accomplished and documented by having appropriately documented LOG ENTRIES sent to PLANNING SECTION of each message, specifically to jtrites@tritesengserv.com The group is encouraged to make this a teaching moment!</p>	
Saturday Night / Sunday Morning	<p><input type="checkbox"/> Operation in the middle of the night is at the discretion of Operations based on available volunteer. We may be having so much fun that we can't stop these people! I suggest that representatives from the General Staff meet and assess operations of the stations (a) within the first few hours; (b) in the evening, to determine overnight options. (Suggestion only).</p>	

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Sunday (6/28) 00:00 – 14:00	<input type="checkbox"/> Operators work in pairs (Operator and Logger) making and logging (QSO's) contacts to other radio clubs participating in the 2020 ARRL Field Day event at EOC Station #1, RV Station #2, PIO/GOTA Station #3, and optionally at Satellite Station #4.		
Sunday 1400	<input type="checkbox"/> Documentation Unit (Planning Section) gathers ALL documentation for filing. In general everything other than the logging computers should be emailed in the text or in an attachment to PLANNING SECTION specifically jtrites@tritesengserv.com		
14:00 – 1600	<input type="checkbox"/> Teardown crew (OPERATIONS) Uninstalls all radios, primary and backup antennas, feedlines, tuners, logging laptops, (Primary Generator, Solar PV and emergency back-up) power, and associated equipment at Station 2, PIO/GOTA Station #3 and Satellite Station #4 locations. <input type="checkbox"/> Teardown crew cleans Northwest Area grounds and EOC Radio room areas. <input type="checkbox"/> LOGISTICS moves gear back to proper storage locations		
Sunday after Teardown	<input type="checkbox"/> Anyone who is left, we go get supper and discuss the "issues" we learned from. INCIDENT COMMANDER is in charge of this.		
Sunday/Monday	<input type="checkbox"/> Documentation Unit (Planning Section) files contest results with ARRL electronically <input type="checkbox"/> Documentation Unit obtains EMAIL or CONFIRMATION of submission and forwards to Incident Commander <input type="checkbox"/> Planning Section writes up report of operation, with input from all other sections		
6. Prepared by: Name: <u>John Trites, NO5X</u> Position/Title: _____ Signature: _____			
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9. Current Organization (fill in additional organization as appropriate):

Incident Commander(s)

Gordon Gibby, KX4Z

(Deputy – Volunteer needed)

Liaison Officer

(Need Volunteer)

Safety Officer

Gordon Gibby, KX4Z

Public Information Officer

Jeff Capehart, W4UFL

PIO Assistants

Carolyn Tann-Starr,
KN4WIQ

Jim Bledsoe
KI4KEA

Planning Section Chief

John Trites, NO5X

Planning Deputy

Gordon Gibby, KX4Z

Operations Section Chief

Leland Gallup, AA3YB

Operations Deputy(s)

Earl McDow, K4ZSW
Jim Bledsoe, KI4KEA

Finance/Administration
Section Chief

Susan Halbert, KG4VWI

Finance/Admin Deputy

TBD

Logistics Section Chief

Rosemary, KI4QBZ

Logistics Deputy

TBD

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10. Field Day Issues:

Issue:	Resource(s)	Remedy	Plan	Report
Generate 2020 Field Day Interest Questionnaire	John NO5X	Generated Google Form	Completed (5/21) and emailed 59 potential participants	Google Form Analytics – to be sent out by (5/29)
2.4 GHz Wireless Communications	Leland AA3YB Earl K4ZSW John NO5X	Test (2) Ubiquity Radio Systems through EOC NW Wall and to NW Area	TBD	TBD
Spreadsheet Forms for Bonus Points	John NO5X	2020 Field Day Planning Excel Workbook	Team to Review	Write After Action Report
Operating Band Plan and Schedule	John NO5X	2020 Field Day Planning Excel Workbook and Appendix A	Team to Review and Finalize by (6/11)	Write After Action Report
(1) Porta-Potty for NW Area	Rosemary KI4QBZ	Quotes for Rental over Field Day weekend	Delivery on Friday (6/26 after Noon) Pickup on Sunday (6/28 after 2pm)	Write After Action Report
Gordon's New RV 2 nd Restroom	Gordon KX4Z	Get written approval from Sherriff's Dept. to drive RV into NW Area	Delivery on Friday (6/26 after Noon) Removal on Sunday (6/28 after 2pm)	Write After Action Report
Media Publicity and Follow-up	Jeff W4UFL Carolyn KN4WIQ	Create FD Flyer and Send News Release(s) to local newspaper, radio or TV stations.	Public Location and Invite Follow-up Calls to Media Need Public Information Table at the event	Write After Action Report
Class 2F Stations required 100% E-PWR	Leland AA3YB	TX operating on power completely independent from commercial power.	Includes Battery power and gasoline generator power	Write After Action Report
W1AW Bulletin	Leland AA3YB	Correctly Copy W1AW Bulletin transmitted several times over the FD Weekend.	Check ARRL Schedule for times, bands and modes of transmitted message	Write After Action Report
Site Visit by Elected Official	Jeff W4UFL Carolyn KN4WIQ	Invite Mayor, Supervisor(s), Board Member(s), or preferably Alachua County Sherriff Sadie Darnel	Explain the benefits of Amateur Radio for the community and how we can provide a valuable service at no taxpayer expense.	Write After Action Report
Education Activity	Jeff W4UFL Gordon KX4Z	A Formal Amateur Radio related activity	Gordon's Arduino battery charger	Write After Action Report
Electronic FD Log Submission	John NO5X	Send Field Day Results electronically to the ARRL	Claim all of the contact and bonus points for the club.	Write After Action Report
Satellite QSO	John NO5X Mike R. K4MR	Make 2-way contact to any ARO Bird during the FD Event	Designate a (2) person team and (2) FM/SSB Radios	Write After Action Report
Logging Station Comms Network between NW Area & EOC Stations	Earl K4ZSW Leland AA3YB John NO5X	Setup a 2.4GHz Mesh Network between the NW Orange Area and the EOC Radio Room.	Test (3) Ubiquity Radio Systems through EOC NW Wall and to NW Area	Write Test Report
W1AW Bulletin	Gordon KX4Z	Gordon to coach someone who is willing to perform this task.	Friday evening, digital is by far the easiest time and mode.	Write Test Report
2020 Field Day Logging Software for (3) Stations	Leland, AA3YB Susan, KG4VWI	Purchase (3) N + 1 N3FJP 2020 Field Day Logging Software programs to support (3) Stations	Operations Download & Register Software @ http://n3fjp.com/fieldday.html Use PayPal \$8.99 per station	Operations send payment receipts to Finance & Accounting for Reimbursement
N3FJP Logging Database Server and Client Stations	Leland AA3YB Earl K4ZSW John NO5X	Setup (N + 1) and Test Laptops with 2020 Field Day N3FJP Logging software.	Operations Install and Configure Primary Station #1 as the Server / Database and Client-1. Setup Station #2 as Client -2 and a 3 rd backup laptop as Client-3.	Write Test Report

Prepared by: Name: John Trites, NO5X

Position/Title: _____ **Signature:** _____

INCIDENT BRIEFING (ICS 201)

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11. Resource Summary: EOC Station #1					
Resource	Resource Identifier	Date/Time Ordered	ETA	Arrived	Notes (location/assignment/status)
New ICOM IC-7300 and RigExpert Zoom 230	AA3YB W4JIR		Delivered	<input type="checkbox"/>	This new equipment was ordered by Deputy Sherriff David Huckstep and delivered to the EOC to be setup and configured by the NF4ARC ARES group for EOC Emergency Communications. And, it was approved for use during the 2020 NF4ARC Field Day event. Zoom 230 Antenna Analyzer for FD measurements AGM Batteries can be charged inside EOC or at the NW Area's Solar PV Charging Station.
New AT-1000 Pro	AA3YB W4JIR		Delivered	<input type="checkbox"/>	
New 12V Power Supply	AA3YB W4JIR		Delivered	<input type="checkbox"/>	
(3) AGM 12VDC Batteries.	AA3YB W4JIR		Delivered	<input type="checkbox"/>	Zoom 230 Antenna Analyzer for FD measurements AGM Batteries can be charged inside EOC or at the NW Area's Solar PV Charging Station.
160m – 10m OCF Dipole Primary Antenna	AA3YB EOC		Complete	<input type="checkbox"/>	This is the existing Chigger Dome Antenna south of ECO with recently repaired feedline. SWR readings take on (5/29) indicate good SWR on most bands. Setup to use new LTG-1000 auto-tuner.
Necessary Digital TNC and cables for the new 7300 to support FT-8, FT-4 and Winlink OPS	AA3YB		3 weeks in adv.	<input type="checkbox"/>	Operations to determine requirements and work with Finance and Logistics to procure necessary equipment, cabling and software where applicable.
Spare antenna for the EOC HF station	KX4Z		Sat. AM	<input type="checkbox"/>	Gordon bringing an 80m to 10m End-Fed Half-Wave (EFHW) backup antenna for the EOC should the primary OCF go down. Installation should be at the 100 ft. south fence line OCF antenna disconnection point between the LMR-400 and RG-8X feedline coax cables.
2.4GHz Mesh Network and Wireless Networking gear or solutions	AA3YB K4ZSW KI4KEA		1 – 2 weeks prior to Field Day	<input type="checkbox"/>	Operations to install, setup, test and commission 2.4GHz Mesh Network for N3FJP FD Logging Network between EOC Radio Rm Station #1 and (3) Stations in NW Areas.
N3FJP Logging / Operations computer for EOC Station #1	AA3YB NO5X		1 – 2 weeks prior to Field Day	<input type="checkbox"/>	Operations to purchase, install and configure N3FJP Field Day Logging Software in TCP/IP mode, Database / Server and Client-1 on laptop in EOC Radio Rm Station #1. Operations to write test plan for N3FJP Logging Database / Server including re-connection procedures and 15-min auto-backup of contacts for (3) Clients if the Mesh Network goes down for an extended period. Finance Chief to reimburse Operations for \$8.95 per station.
Spectrum Analyzer	KX4Z		1 – 2 weeks prior to Field Day	<input type="checkbox"/>	Trip to the EOC prior to the Field Day and scope out the RFI level on the antenna. Make tentative measurements in the NW grassy area with an exploring antenna
Prepared by: Name: <u>John Trites, NO5X</u> Position/Title: _____ Signature: _____					
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12. Resource Summary: RV Trailer Station #2 (Gordon Gibby, KX4Z)					
Resource	Resource Identifier	Date/Time Ordered	ETA	Arrived	Notes (location/assignment/status)
RV Trailer – includes mast, internal chairs, internal table, etc.	KX4Z		Fri	<input type="checkbox"/>	Gordon to park in NW Area Orange Zone along the road fence line.
N3FJP Logging / Operations computer for RV Station #2	KX4Z AA3YB		Fri	<input type="checkbox"/>	Operations to purchase, install and configure Client-2 N3FJP Field Day Logging Software. Finance Chief to reimburse Operations
SB-200 Amplifier for RV station	KX4Z		Fri	<input type="checkbox"/>	Gordon
600-Watt auto tuner	KX4Z		Fri	<input type="checkbox"/>	Gordon
GO BOX HF RIG including antenna tuner	KX4Z		Fri	<input type="checkbox"/>	Gordon – may not need much of this
ICOM 746 Pro	KI4QBZ		Testing before	<input type="checkbox"/>	Rosemary to provide with power supply
Coax & EFHW antenna	KX4Z		Fri	<input type="checkbox"/>	Gordon
1:1 Balun	KX4Z		Fri	<input type="checkbox"/>	Gordon
Slingshot equipment	KX4Z		Fri	<input type="checkbox"/>	Gordon
Potable water in travel trailer	KX4Z		Fri	<input type="checkbox"/>	Gordon
FIRE EXTINGUISHER with support mount	KX4Z		Sat AM	<input type="checkbox"/>	Gordon
3 five-gallon safe containers of gasoline	KI4QBZ		Sat AM	<input type="checkbox"/>	Logistics / Finance and Accounting
100% Emergency Power	KX4Z K4ZSW		Sat AM	<input type="checkbox"/>	Generator for the RV Trailer, (2) MIF 23 based filters 2kW sine wave inverter and I can bring a 50 or 100-foot #16 extension cord.
300 – 600Watt Portable Solar PV Charging Station	KX4Z		Sat AM	<input type="checkbox"/>	(1 or 2) 300Watt solar panels (1 or 2) 15A MPPT chargers (1) 12V 75-100 Ah Battery
HF Antenna	KX4Z		Sat AM	<input type="checkbox"/>	Gordon to specify details
Intercom	KX4Z		Sat AM	<input type="checkbox"/>	Allows two operators with headsets to deal with a radio on SSB
600-watt auto-tuner			Sat AM		For RV trailer station #2
Prepared by: Name: <u>John Trites, NO5X</u> Position/Title: _____ Signature: _____					
ICS 201, Page 13		Date/Time: _____			

1. Incident Name: NF4AC 2020 Field Day		2. Incident Number:		3. Date/Time Initiated: Date: June 27, 2020 Time: 8:00am	
13. Resource Summary: PIO / DEMO and GOTA Station #3 (Jeff Capehart, W4UFL)					
Resource	Resource Identifier	Date/Time Ordered	ETA	Arrived	Notes (location/assignment/status)
EOC Shelter Go-Box	AA3YB		Sat AM	<input type="checkbox"/>	Test digital beforehand. To be located in the NW Area Yellow zone during field day.
Signalink or other TNC to go on Shelter Go box	??	June 1st	2 wks. adv.	<input type="checkbox"/>	To be located with the EOC Shelter Go-Box to support Digital and Winlink comms.
Computer for the Demo station outreach	AA3YB	June 1st	Sat AM	<input type="checkbox"/>	N3FJP Client-3 Logging Station Winlink Express Other programs ??
Table & chairs for Demo station	KI4QBZ	June 1st	Sat AM	<input type="checkbox"/>	Rosemary – will need TRANSPORT
Canopy(s) for Demo Station	KI4QBZ	June 1st	Sat AM	<input type="checkbox"/>	Rosemary – will need TRANSPORT
Backup Radio Station #3	KX4Z	June 1st	Sat AM	<input type="checkbox"/>	HF station with Signalink that can be a part of this effort, possibly with a tuner
VHF WINLINK gateway node NF4AC-3	KX4Z	June 1st	Sat AM	<input type="checkbox"/>	Set it up so that anyone on site and easily send Winlink messages from the “free” VHF transmitter per the rules.
Public Information Office Materials	W4UFL KN4WIK	1 – 2 wks. prior to Field Day	Sat AM	<input type="checkbox"/>	Create and Print set of materials to hand out to public during Field Day
Media Publicity and Media Follow-up 100 bonus points	W4UFL KN4WIK	2 weeks prior to Field Day	Sat AM	<input type="checkbox"/>	Send News Release(s) to local newspaper, radio or TV stations' assignment editor or news director (two weeks in advance) with a flyer showing location, dates and times and FD contact(s) and a description of the event. <i>Provide follow up call(s) to those contacted the Tuesday before the event to invite them to FD operations on Saturday afternoon (or Sunday morning)</i>
Public Location and Invite 100 bonus points	W4UFL KN4WIK	2 weeks prior to Field Day	Sat PM or Sun AM	<input type="checkbox"/>	Includes private property as long as the public is invited to the event. Needs Public Information Table at the event with small display, pamphlets, brochures and sign-up sheet to track potential new ARO's
ARRL Section Manager Message 100 points for 1st message 10 points for each additional NTS Radiogram	W4UFL KN4WIK	2 weeks prior to Field Day	Sat PM or Sun AM	<input type="checkbox"/>	Create and Transmit ARRL Radiogram using NTS style format to the Florida ARRL Section Manager (Kevin Bess KK4BFN,) during the 2020 Field Day Event. Must be sent over the radio waves using any legal method, any band and any mode.
Site Visit by Elected Official 100 bonus points	W4UFL KN4WIK	2 weeks prior to Field Day	Sat PM or Sun AM	<input type="checkbox"/>	Mayor, Supervisor(s), Board Member(s), Sherriff Sadie Darnell Explain the benefits of Amateur Radio for the community and how we can provide a valuable service at no taxpayer expense. Extend Invitation to local Red Cross, EOC, Salvation Army and other served Emergency Management agency personnel
Designating a Safety Officer 100 bonus points	KX4Z	2 weeks prior to Field Day	Sat AM through Sun AM	<input type="checkbox"/>	Designee (KX4Z) must complete a Safety Checklist in the ARRL FD Rules Packet and ensure that FD is a Safe Event.

1. Incident Name: NF4AC 2020 Field Day		2. Incident Number:		3. Date/Time Initiated: Date: June 27, 2020 Time: 8:00am	
13. Resource Summary: PIO / DEMO and GOTA Station #3 (Jeff Capehart, W4UFL)					
Educational Activity Bonus 100 bonus points	KX4Z	2 weeks prior to Field Day	Sat PM or Sun AM	<input type="checkbox"/>	A Formal Amateur Radio related activity Ideas could include: G. Gibby's Arduino battery switcher/charger, or how to make printed circuit boards, or how to publish on Kindle
Social Media Promotion 100 bonus points	W4UFL KN4WIK	2 weeks prior to Field Day	Sat AM	<input type="checkbox"/>	Publicize/Post NF4ARC Field Day Event on Facebook, Twitter, Instagram or other Social Media sites And TAG the ARRL on each of these sites in the Post(s).
Electronic FD Log Submission 50 bonus points	NO5X	Within 1 week after Field Day	July 6th	<input type="checkbox"/>	Send Field Day Results electronically to the ARRL to claim all of the contact and bonus points for the club.
				<input type="checkbox"/>	
Prepared by: Name: <u>John Trites, NO5X</u> Position/Title: _____ Signature: _____					
ICS 201, Page 14 - 15			Date/Time: _____		

1. Incident Name: NF4AC 2020 Field Day		2. Incident Number:		3. Date/Time Initiated: Date: June 27, 2020 Time: 8:00am	
14. Resource Summary: Satellite Station #4 (John Trites, NO5X and Mike Ridlon, K4MVR)					
Resource	Resource Identifier	Date/Time Ordered	ETA	Arrived	Notes (location/assignment/status)
ICOM 706MKIIG Radio Go-Box	NO5X		Sat AM	<input type="checkbox"/>	Includes radio, 12V / 30Amp power supply and LDG AT-200 Pro II auto-tuner
2m VHF Tape Measure Antenna	NO5X		Sat AM	<input type="checkbox"/>	Backup Antenna for 2m only Transmit 5 – 10 Watts or Receive only.
New VHF/UHF LPDA Antenna	NO5X		Sat AM	<input type="checkbox"/>	In Design now. Fabrication and Assembly TBD
RG-8X feedline coaxial cables	NO5X		Sat AM	<input type="checkbox"/>	As required to support 2-way Satellite Comms
6-foot table, 2 chairs, 10' x 10' canopy for Satellite Station #4	NO5X		Sat AM	<input type="checkbox"/>	NW Area Green Zone Station #4 setup, operations, and tear down by John Trites and Mike Ridlon
Satellite Tracking Software on Laptop	NO5X		Sat AM	<input type="checkbox"/>	Ham Radio Deluxe and other programs on my laptop
Yaesu FT-857	K4MVR		Sat AM	<input type="checkbox"/>	Dual-band setup for Satellite Communications
Go-box and 12VDC Battery	K4MVR		Sat AM	<input type="checkbox"/>	30 Ah Battery Charge Controller, Transfer Switch, and 12V distribution block.
New Dual band 2x4 Cross Yagi Antenna	K4MVR		Sat AM	<input type="checkbox"/>	I will hopefully have tested this before the 20th. Still in the build process.
Folding camp chairs	K4MVR		Sat AM	<input type="checkbox"/>	Two
Portable table, 10x10 canopy	K4MVR		Sat AM	<input type="checkbox"/>	If needed. Please let me know.
Operating Laptop	K4MVR		Sat AM	<input type="checkbox"/>	Sat tracker Software, Winlink, and more.
RG-8X Feed line	K4MVR		Sat AM	<input type="checkbox"/>	Approx. 100' on a Reel
2 kW Generator	K4MVR		Sat AM	<input type="checkbox"/>	RF Quiet
100Watt Portable Solar PV Charging Station	K4MVR		Sat AM	<input type="checkbox"/>	Located in NW Area Green Zone to support Satellite Station #4 and any other stations wishing to charge batteries.
50' extension cord	K4MVR		Sat AM	<input type="checkbox"/>	
Tri-pod	K4MVR		Sat AM	<input type="checkbox"/>	I don't have an articulating mount so don't know if it can/will be used.
Prepared by: Name: <u>John Trites, NO5X</u> Position/Title: _____ Signature: _____					
ICS 201, Page 16		Date/Time: _____			

APPENDIX A – 2020 EOC FIELD DAY BAND PLAN & SCHEDULE

Operating Schedule	Saturday (6/27)		EOC Radio Room Station 1		RV Trailer NW Area Orange Zone Station 2		PIO/DEMO & GOTA NW Area Yellow Zone Station 3		VHF/UHF Satellite NW Area Green Zone Station 4	
By John Trites NO5X	UTC Time	NF4AC Time	Band / Freqs / Mode	Operators	Band / Freqs / Mode	Operators	Band / Freqs / Mode	Operators	Band / Freqs / Mode	Operators
Setup (3 Hours)		11am - 2pm	HF	AA3YB	HF	KX4Z	VHF/UHF	W4UFL	VHF/UHF	NO5X K4MVR
Sat_1		2pm - 4pm								
Sat_2		4pm - 6pm								
Sat_3		6pm - 8pm								
Sat_4		8pm - 10pm								
Sat_5		10pm - 12am								
	Sunday (6/28)									
Sun_1		12am - 2am								
Sun_2		2am - 4am								
Sun_3		4am - 6am								
Sun_4		6am - 8am								
Sun_5		8am - 10am								
Sun_6		10am - 12pm								
Sun_7		12pm - 2pm								
Teardown		2pm - 5pm								

APPENDIX B – 2020 EOC FIELD DAY MICROWAVE LOGGING NETWORK

2020 ARRL Field Day – Alachua County EOC Site Testing

Ubiquiti Point-to-Point Link Testing

March 30th, 2020

John Trites, NO5X

Test Report

Earl McDow, K4ZSW Leland Gallup, AA3YB

Purpose: To determine if we can establish a reliable Point-to-Point (or Multi-Point) 2.4 GHz communications Mesh Network supporting two or more Field Day N3FJP Logging Laptops.

Logging Stations: The primary Logging laptop shall be setup with the N3FJP Logging Database as the Server and Client #1 located in the Alachua County EOC Radio Room Station #1 next to the new ICOM IC-7300 Radio.

The 2nd Logging laptop shall be setup with the N3FJP as Client #2 to Station #1's Logging Database Server located in the NWArea-2 Orange zone inside Gordon's new RV Trailer Station #2.

An optional 3rd Logging Laptop may be setup with N3FJP as Client #3 to Station #1's Logging Database Server over a Wireless network through Station #3 in the NWArea-3 Yellow zone for the PIO Demo/GOTA Station #3. This station does not require logging for PIO/Demo contacts but can be used for logging GOTA contacts and serves as a backup N3FJP logging laptop for Station #1 or Station #2 in the event of either failing.

Logging Backup: All Logging Station Laptop Clients shall be configured to auto-backup their contacts every 15-minutes in the event one or more of them fail or lose a Mesh Network link connection to Station #1's Database/Server.

Planning/Operations shall write, train and follow a Loss of N3FJP Server Database connection procedure for any N3FJP Logging Client program that crashes due to a loss of communications to the Logging Server. This procedure shall describe the steps required to re-establish communications over the Mesh Network and re-connect to the N3FJP Database/Server.

Summary Report: The challenge of building a reliable Mesh Network for Field Day between Station #1 inside the EOC's Radio Room and Station #2 located in the Northwest Orange zone's Station#2 is through the 18" Concrete EOC's outside NW wall. All (4) radios are from Ubiquiti Networks, two attached to Bullet M2 and one attached to Nano M2 omni-directional antennas. Radio-1 is an Omni radio attached to a 13-element Yagi antenna.

There were three sets of test groups:

1. **Test Group A** established a series of tests starting with a baseline of (fixed location) Radio-2 set at about 8 feet above the floor 1 foot from the NW building corner inside wall on top of a filing cabinet and Radio-1 on the floor both inside Rm 59 of the EOC.
 - Pairs of tests starting with 2 and 3 vary the distance from outside the EOC NW wall (other side of concrete) with even tests using vertical polarizations and odd tests using horizontal polarization of Radio-1's Yagi antenna.

- Each pair of tests moves the Yagi Radio-1 from outside the EOC NW wall (about 3 – 4 feet away from Radio-2 inside the EOC Rm 59) to 1/4 distance, 1/2 distance, 3/4 distance and in the NW Area Orange zone.
 - Test results show that in almost all cases, horizontal polarization, has a higher S/N (signal to noise ratio) than vertical polarization for both radios at approximately 2m (6.5 FT) in height. I recommend increasing the height(s) of both radios to decrease Fresnel reflection path loss for this point-to-point configuration very low to the ground.
 - Test 10 with vertically polarized Radio-1 Yagi to omni-directional Radio-2 Bullet M2 resulted in a negative 4dB S/N Ratio not capable of supporting communications in one direction.
 - Test 11 with horizontally polarized Radio-1 Yagi to omni-directional Radio-2 Bullet M2 resulted in a very low 5dB S/N Ratio also not capable of supporting reliable communications in one direction.
 - In order to support reliable two-way communications between radios, a 20 dB S/N Ratio is required to support 10^{-9th} Bit Error Rate. Lower S/N Ratios in the 12 – 16 dB can support communications but with 30 – 20% packet loss respectively.
2. **Test Group B** was setup to test Radio-4 with Bullet M2 antenna outside the EOC's Rm 59 NW Wall approximately 2m (6.5 FT) height from the ground and Radio-1 with Yagi antenna in last location of Test Group A just inside the NW Area Orange zone.
- Comparison of Test Group A's test 10 vertically polarized Yagi with Test Group B's test 1 shows a small 2dB S/N Ratio improvement.
 - Comparison of Test Group A's test 11 horizontally polarized Yagi with Test Group B's test 2 shows a significant 19 dB improvement.
 - Either polarization of the Yagi will result in a minimum 22 dB S/N Ratio at Radio-1 (Yagi) and minimum 47 dB S/N Ratio at Radio-4. This proves the Test B group configurations will support reliable communications on segment 1 between outside the EOC NW corner wall and the NW Area Orange zone.
3. **Test Group C** was setup to the test Radio Radio-4 with Bullet M2 antenna outside the EOC's Rm 59 Wall approximately 2m (6.5 FT) height from the ground and Radio-2 with Bullet M2 antenna inside the EOC's Rm 59 Wall approximately 2.5m (8 FT) height from ground.
- Resulted in a minimum 32 dB S/N Ratio between Radio-4 and Radio-2 through the 18" concrete EOC NW Wall. This proves Test C group configuration will support reliable communications on segment 2 from each side of the EOC's NW corner wall.
4. **Test Group D** was NOT tested yet but is pending. We need to establish a wireless or Ubiquiti radio link (segment 3) between Radio-2 inside the EOC's Rm 59 and the EOC's Radio room for Station #1's N3FJP Logging Server Database / Client-1.

- An alternative to segment 3 is a standard wireless connection inside the EOC OR running approximately 100 feet of Cat-6 ethernet cable from the EOC Radio Room and EOC Room 59 on the floor of the presentation area (**need permission from the EOC to temporarily run this cable on the floor or in the ceiling**).

Test Plan Group A:

2020 Field Day N3FJP Logging Software		Testing Team	Leland Gallup	AA3YB
Ubiquity 2.4 GHz Point-to-Point Radio Testing Plan				
Date:	5/29/2020		Earl McDow	K4ZSW
Site:	Alachua County EOC		J. Trites	NO5X
Test Plan:	John Trites, NO5X			

Radio ID	Radio and Antenna Description	Ext. Antenna	Owner/Name	-	-
Radio-1	Ubiquity Omni	TUPAVCO TP512 13-element Yagi	K4ZSW-AREDN		-
Radio-2	Ubiquity Bullet M2	n/a	K4ZSW-AREDN2		
Radio-3	Ubiquity Nano M2	n/a	AA3YB		
Radio-4	Ubiquity Bullet M2	n/a	KX4Z		

Test Group A		Radio-2 K4ZSW-AREDN2 @ Loc-1: Inside EOC Rm 59					
		Config		Measured		Calc	
Test #	Test Condition	Location-1	Antenna Height / Orientation	TX Power	RX Signal	Noise	S/N Ratio
1	Both Radios Inside EOC NW Rm 59 area	Inside EOC NW Rm 59	8FT / Omni	+10dBm	-55	-90	35
2	18" Concrete / Rebar	Inside EOC NW Rm 59	8FT / Omni	+10dBm	-60	-90	30
3	18" Concrete / Rebar				-60	-90	30
4	18" Concrete / Rebar + 560 FT				-69	-90	21
5	18" Concrete / Rebar + 560 FT				-77	-90	13
6	18" Concrete / Rebar + 560 FT				-82	-90	8
7	18" Concrete / Rebar + 560 FT				-77	-90	13
8	18" Concrete / Rebar + 560 FT				-77	-90	13
9	18" Concrete / Rebar + 560 FT				LOST SIGNAL		
10	18" Concrete / Rebar + 560 FT				-94	-90	-4
11	18" Concrete / Rebar + 560 FT				-85	-90	5

Test Group A		Radio-1 K4ZSW-AREDN @ Loc-2: EOC-2 Outside NW Rm 59					
				Config	Measured		Calc
Test #	Test Condition	Location-2	Antenna Height / Orientation	TX Power	Signal	Noise	S/N Ratio
1	Both Radios Inside EOC NW Rm 59 area	Both Radios Inside EOC NW Room area / 1FT Horiz		+8dBm	-44	-95	51
2	18" Concrete / Rebar	Outside EOC NW Rm 59	6FT / Vertical	+8dBm	-53	-95	42
3	18" Concrete / Rebar	Outside EOC NW Rm 59	6FT / Horizontal		-47	-95	48
4	18" Concrete / Rebar + 560 FT	Outside EOC 1/4 distance to NW Area	6FT / Vertical		-68	-95	27
5	18" Concrete / Rebar + 560 FT	Outside EOC 1/4 distance to NW Area	6FT / Horizontal		-62	-95	33
6	18" Concrete / Rebar + 560 FT	Outside EOC 1/2 distance to NW Area	6FT / Vertical		-79	-95	16
7	18" Concrete / Rebar + 560 FT	Outside EOC 1/2 distance to NW Area	6FT / Horizontal		-70	-95	25
8	18" Concrete / Rebar + 560 FT	Outside EOC 3/4 distance to NW Area	6FT / Vertical		-70	-95	25
9	18" Concrete / Rebar + 560 FT	Outside EOC 3/4 distance to NW Area	6FT / Horizontal		LOST SIGNAL		
10	18" Concrete / Rebar + 560 FT	Outside EOC in NW Area Fence Opening	6FT / Vertical		-73	-95	22
11	18" Concrete / Rebar + 560 FT	Outside EOC in NW Area Fence Opening	6FT / Horizontal		-77	-95	18

Test Plan Group B:

Test Group B		Radio-4 @ Loc-3: Outside EOC NW Wall					
				Config	Measured		Calc
Test #	Test Condition	Location-3	Antenna Height / Orientation	TX Power	Signal	Noise	S/N Ratio
1	Outside EOC NW Rm 59 + 560 FT	Outside EOC NW Production WorkRm 95	6FT / Omni	?? dBm	-48	-95	47
2	Outside EOC NW Rm 59 + 560 FT				-47	-95	48

Test Group B		Radio-1 K4ZSW-AREDN @ Loc-2: Orange Zone / Fence Opening					
				Config	Measured		Calc
Test #	Test Condition	Location-2	Antenna Height / Orientation	TX Power	Signal	Noise	S/N Ratio
1	Outside EOC NW Rm 59 + 560 FT	NW Area Fence Opening	6FT / Vertical	+8dBm	-71	-95	24
2	Outside EOC NW Rm 59 + 560 FT	NW Area Fence Opening	6FT / Horizontal		-58	-95	37

Test Plan Group C:

Test Group C		Radio-2 K4ZSW-AREDN2 @ Loc-1: Inside EOC Rm 59					
				Config	Measured		Calc
Test #	Test Condition	Location-3	Antenna Height / Orientation	TX Power	Signal	Noise	S/N Ratio
1	Inside EOC NW Rm 59 to Outside EOC NW Wall	Inside EOC NW Production WorkRm 95	6FT / Omni	+10dBm	-59	-91	32

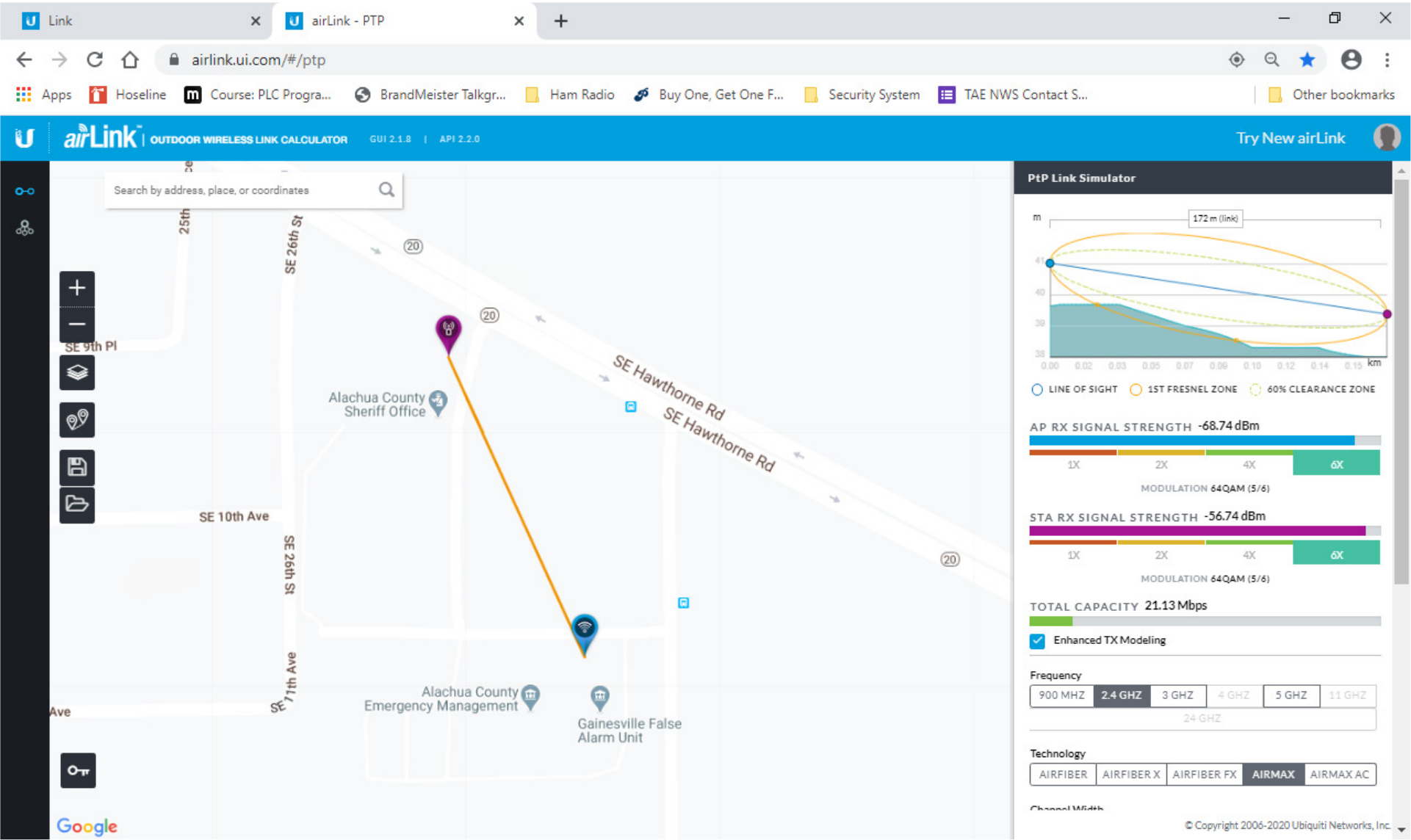
Test Group C		Radio-4 @ Loc-3: Outside EOC Rm 59 NW Wall					
				Config	Measured		Calc
Test #	Test Condition	Location-2	Antenna Height / Orientation	TX Power	Signal	Noise	S/N Ratio
1	Inside EOC NW Rm 59 to Outside EOC NW Wall	Outside EOC NW Rm 59	6FT / Omni	** dBm	-51	-95	44

Test Group A: Tests 2 & 3 demonstrate the path loss between Radio-1 with a 18dB Gain Yagi antenna in both horizontal and vertical directions and Radio-2 Omnidirectional Bullet M2 antenna through the EOC NW concrete wall approximately 6 feet apart.

**** At the time of testing, the Transmit Power Level for Radio-4 was not recorded. Gordon Gibby can log into his Radio-4 and check the current TX Power Level, we can determine the path loss through the EOC's NW Corner concrete wall.**

Ubiquiti recommends operating their radio transmitters between +14dBm to +18dBm for optimum performance and reliability.

AirLink Outdoor Wireless Link Calculator:



AirLink Outdoor Wireless Link Calculator:

Link

airLink - PTP

airlink.ui.com/#/ptp

AppsHoselineCourse: PLC Progra...BrandMeister Talkgr...Ham RadioBuy One, Get One F...Security SystemTAE NWS Contact S...Other bookmarks

airLink

OUTDOOR WIRELESS LINK CALCULATOR

GUI 2.1.8 | API 2.2.0

Try New airLink

Search by address, place, or coordinates

+

-

Layers

Map

Save

Print

Key

SE 9th Pl

SE 10th Ave

SE 26th St

SE 7th Ave

SE Hawthorne Rd

SE Hawthorne Rd

Alachua County Sheriff Office

Alachua County Emergency Management

Gainesville False Alarm Unit

MODULATION 64QAM (5/6)

TOTAL CAPACITY 21.13 Mbps

☒ Enhanced TX Modeling

Frequency

900 MHZ2.4 GHZ3 GHZ4 GHZ5 GHZ11 GHZ

24 GHZ

Technology


AIRFIBERAIRFIBER XAIRFIBER FXAIRMAXAIRMAX AC

Channel Width

5 MHz

ACCESS POINT

Antenna Gain8dBi



NANOSTATION LOCO M2


Height2 m

EIRP10 dBm

AP Location29.641653830999335,-82.289

STATION

Antenna Gain18dBi



NANOBRIDGE M2

Height2 m

EIRP8 dBm

Station Location29.643061867981523,-82.290

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SAFETY MESSAGE/PLAN (ICS 208)

1. Incident Name: NFARC 2020 FIELD DAY	2. Operational Period: Date From: June 26 Date To: June 28 Time From: 0000LOC Time To: 2359LOC:																					
3. Safety Message/Expanded Safety Message, Safety Plan, Site Safety Plan: <ul style="list-style-type: none"> COVID-19 Risks. Exercise prudent caution. Maintain social distancing whenever possible; utilize appropriate masking when unable. Pay attention to sanitization of surfaces, microphones, etc. Wash hands frequently. Suitable wash facilities will be made available. Contact Operations or Safety Officer if any concerns. MICROPHONES/HEADSET: Suggest each person, if possible, bring their own microphone / Headset (with name marked) for ICOM 8-pin OCTAL plug. Otherwise, microphones should be wiped with suitable sanitizer between use by different persons (suggest 70% alcohol-based systems) Suggest that persons consider obtaining their own Boom Headset/Mic as we discussed beginning December 2019 <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 25%;">Location</th> <th style="width: 25%;">Maximum People</th> <th style="width: 50%;">Details</th> </tr> </thead> <tbody> <tr> <td>EOC Radio Room</td> <td>2 persons; masks</td> <td>Try to stay apart – suggest use of intercom where appropriate.</td> </tr> <tr> <td>EOC Conference Room (if suitable for use)</td> <td>10 persons; masks</td> <td>Stay spread out! If possible, when you exit the area, wipe down the table area where you were located</td> </tr> <tr> <td>RV Trailer Radio Operations</td> <td>2 persons; masks</td> <td>Additional person may go into restroom. Obviously, wash your hands well. Since the water supply is limited, don't leave the water RUNNING while you scrub until you're ready to rinse, please.</td> </tr> <tr> <td>DEMO / GOTA STATION</td> <td>.... 10 persons maximum , total in this area INCLUDING THE RV TRAILER</td> <td>This is an OUTDOOR effort and was set up that way specifically because the risk of spread outdoors is far less (perhaps an order of magnitude less or more). Masks are still suggested if unable to guarantee social distancing.</td> </tr> <tr> <td>SATELLITE STATION</td> <td></td> <td>This is an OUTDOOR effort and was set up that way specifically because the risk of spread outdoors is far less (perhaps an order of magnitude less or more). Masks are still suggested if unable to guarantee social distancing.</td> </tr> <tr> <td>Solar Power Charging</td> <td>10 persons max, masks optional</td> <td>This is an OUTDOOR effort and was set up that way specifically because the risk of spread outdoors is far less (perhaps an order of magnitude less or more). Masks are still suggested if unable to guarantee social distancing.</td> </tr> </tbody> </table> <ul style="list-style-type: none"> SUN: avoid sunburn and over heating. Drink fluids. Porta-Potty and indoor and trailer facilities will be available Over Use: Do not stress yourself. This is a FUN event. Plan ahead to reduce efforts on the day of. Security: Maintain situational awareness, particularly at night. Firearms are not allowed within any of the government buildings unless you are a police officer. Strongly recommend that firearms in your vehicle or person not be brought to visibility. Fire/Explosion/Electricity: Care in handling liquid fuels and electrical cables. Do not pour liquid fuel into a generator until it has cooled off. Do not make contact with electronic connections (extension cord plugs ins) that are wet with dew. Ground all generators at the generator. Physical Hazards: Please mark and appropriately minimize any trip or walk-into hazards from cables, wires. FIRST AID: There will be modest first aid supplies at the RV Trailer. <p>PLEASE CONTINUE TO NEXT PAGE</p>		Location	Maximum People	Details	EOC Radio Room	2 persons; masks	Try to stay apart – suggest use of intercom where appropriate.	EOC Conference Room (if suitable for use)	10 persons; masks	Stay spread out! If possible, when you exit the area, wipe down the table area where you were located	RV Trailer Radio Operations	2 persons; masks	Additional person may go into restroom. Obviously, wash your hands well. Since the water supply is limited, don't leave the water RUNNING while you scrub until you're ready to rinse, please.	DEMO / GOTA STATION 10 persons maximum , total in this area INCLUDING THE RV TRAILER	This is an OUTDOOR effort and was set up that way specifically because the risk of spread outdoors is far less (perhaps an order of magnitude less or more). Masks are still suggested if unable to guarantee social distancing.	SATELLITE STATION		This is an OUTDOOR effort and was set up that way specifically because the risk of spread outdoors is far less (perhaps an order of magnitude less or more). Masks are still suggested if unable to guarantee social distancing.	Solar Power Charging	10 persons max, masks optional	This is an OUTDOOR effort and was set up that way specifically because the risk of spread outdoors is far less (perhaps an order of magnitude less or more). Masks are still suggested if unable to guarantee social distancing.
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EOC Radio Room	2 persons; masks	Try to stay apart – suggest use of intercom where appropriate.																				
EOC Conference Room (if suitable for use)	10 persons; masks	Stay spread out! If possible, when you exit the area, wipe down the table area where you were located																				
RV Trailer Radio Operations	2 persons; masks	Additional person may go into restroom. Obviously, wash your hands well. Since the water supply is limited, don't leave the water RUNNING while you scrub until you're ready to rinse, please.																				
DEMO / GOTA STATION 10 persons maximum , total in this area INCLUDING THE RV TRAILER	This is an OUTDOOR effort and was set up that way specifically because the risk of spread outdoors is far less (perhaps an order of magnitude less or more). Masks are still suggested if unable to guarantee social distancing.																				
SATELLITE STATION		This is an OUTDOOR effort and was set up that way specifically because the risk of spread outdoors is far less (perhaps an order of magnitude less or more). Masks are still suggested if unable to guarantee social distancing.																				
Solar Power Charging	10 persons max, masks optional	This is an OUTDOOR effort and was set up that way specifically because the risk of spread outdoors is far less (perhaps an order of magnitude less or more). Masks are still suggested if unable to guarantee social distancing.																				
4. Site Safety Plan Required? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Approved Site Safety Plan(s) Located At:																						
5. Prepared by: Gordon Gibby, KX4Z Position/Title: Inc Com/Safety Of Signature: s G. Gibby_____																						
ICS 208	IAP Page _____	Date/Time: May 28 2020 1515 LOC_____																				

1. Incident Name: NFARC 2020 FIELD DAY	2. Operational Period: Date From: June 26 Date To: June 28 Time From: 0000LOC Time To 2359LOC:	
3. Safety Message/Expanded Safety Message, Safety Plan, Site Safety Plan: CONTINUED (continued from page 1)		
ARRL: SAFETY OFFICER CHECKLIST		
NOTE: ARRL Field Day Safety Officer Checklist To qualify for the 100-point Safety Officer bonus (for Class A stations), a group must appoint a qualified person/s who are present at their site from the beginning of set-up until the end of break-down. This form is NOT intended to be all inclusive.		
The Safety Officer/s certify <u>by submitting this form</u> that due diligence was made to provide a safe operation. (THIS FORM OR PHOTO THEREOF MUST BE SUBMITTED WITH ARRL FIELD DAY SUBMISSION.)		
Instructions: [check (or circle) any/all that apply]		
<div style="display: flex; flex-direction: column;"> <div><input type="checkbox"/> Safety Officer/s or qualified designated assistant/s was on site for the duration of the event.</div> <div><input type="checkbox"/> Fuel for generator properly stored.</div> <div><input type="checkbox"/> Fire extinguisher on hand and appropriately located.</div> <div><input type="checkbox"/> First Aid kit on hand.</div> <div><input type="checkbox"/> First Aid - CPR - AED versed else trained participant/s on site for full Field Day period.</div> <div><input type="checkbox"/> Access to NWS alerts to monitor for inclement weather.</div> <div><input type="checkbox"/> Tent stakes properly installed and marked.</div> <div><input type="checkbox"/> Temporary antenna structures properly secured and marked.</div> <div><input type="checkbox"/> Site secured from tripping hazards.</div> <div><input type="checkbox"/> Site is set up in a neat and orderly manner to reduce hazards.</div> <div><input type="checkbox"/> Stations and equipment properly grounded.</div> <div><input type="checkbox"/> Access to a means to contact police/fire/rescue if needed.</div> <div><input type="checkbox"/> Safety Officer is designated point of contact for public safety officials.</div> <div><input type="checkbox"/> Minimize risks and control hazards to ensure no injuries to public.</div> <div><input type="checkbox"/> As necessary, monitoring participants for hydration and ensuring an adequate water supply is available.</div> </div>		
Signature (Safety Officer) _____	Date _____	
4. Site Safety Plan Required? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Approved Site Safety Plan(s) Located At:		
5. Prepared by: Gordon Gibby, KX4Z Position/Title: Inc Com/Safety Off Signature: s G. Gibby_____		
ICS 208	IAP Page _____	Date/Time: May 28 2020 1515LOc_____