1. Incident Name:
NFARC/ARES Field Day 2021

2. Incident Number:
004

3. Date/Time Initiated:
Date: Time:

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):



Alachua County EOC/ASO. 1100 SE 27th Street. Gnv FL 32641. Permission given (Michele Klemens) to utilize NW grassy area inside fence, and trees. ARRL Field Day Rule: All antennas and items must be within 1000 ft dia circle. Positioning of items in grassy area is approximate and will be settled by Operations Section. Solar charging truck to be parked out of the way of all, and as far away from HF stations as possible (to avoid RFI). Map of County and both known Field Days:

https://qsl.net/nf4rc/2021/CountyFieldDayMap.jpg

Fenced NW Grassy Area for outdoor Station#2



High security area. Follow all commands from authorities. Field Day access to the *inside* of the EOC building is restricted. Personnel inside EOC limited to badged volunteers; Gordon, Leland, D. Huckstep, Jim B., Jeff have access badge. Inside the building, stay away from CCC area.

Station #2 (Outdoors) is open to all volunteers.

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.

Field Day Executive Summary

ARRL Field Day @ Alachua County EOC: NF4AC EOC Club Call Sign

Note that there are at least TWO groups holding Field Day in Alachua County. This information is for the ARES/NF4RC/NF4AC group. The Gainesville Amateur Radio Society will hold their excellent Field Day in Waldo, Florida. Further details on that effort: http://gars.club/

(requested in previous Improvement Plan)

Online Operating SignUp

June 26, 27, 2021 Field Day is always the last FULL weekend in June.	EXCHANGE: 2F NFL	LOGISTICS prepares and supervises all equipment to be brought to/from site.
Onsite setup begins at 0800 Saturday due to LOWER	INSIDE THE EOC (Station #1): using 160M multiband OCF	OPERATIONS supervises all functions of running the

INCIDENT BRIEFING (ICS 201)			
1. Incident Name: NFARC/ARES Field Day 2021	2. Incident Number: 004	3. Da Date:	te/Time Initiated: Time:
TEMPERATURES Last year it only took 2 hours. (We had practiced & had lots and lots of helping hands!)	dipole raised really high. operation. Amplifier available. Use up to 150W output. EOC wall power.		operation.
Once set up we may disperse, get lunch, come back at NOON to test-operate Possibility: SONNY'S - Waldo Road 2700 NE Waldo Road	NW FIELD OUTDOORS (Station #2, RV Trailer) Using 80M end-fed multiband Balun antenna, and possibly also a Vertical. Amplifier Available. Use up to 150W output. Power: Generators.		Free Satellite Station try to get bonus points!!
Actual Field Day starts at 2 PM CALL SIGN NF4AC (Alachua County EOC Call)	1 Free VHF transmitter EOC data station can do the radiograms required for bonus points. Connect to K4ZSW-10 145.070 or KX4Z-10 on 145.030		PIO/GOTA Station tent or better Plan is for VHF demo / Alachua County Shelter Go-Box Demo. ((coordinate with VHF data station inside EOC))
2 HF Transmitters, Class 2F	Try every band from 160 to 2 meters!! Try every mode you want CW, FT8, PSK, RTTY, VOICE		All bonus point photo documentation goes to Documentation Email (see below)
SPECIAL SUGGESTION for FIR (https://qsl.net/nf4rc/2020/AlachuaCouwhat it was like, because we are doing "improvement items" maybe YOU co	ntyARES2020FIELDDAYAfter. a similar plan this year. Experien	ActionR ced ham	eport.pdf)to find out what we did, is suggest you read it too for the
	SAFETY CONSIDERATION	ONS	
COVID-19	Strongly suggest vaccinations. Follow current rules as of that date.		
SUN	Avoid sunburn and over-heating. Use sunscreen, cover, hats, and drink lots of Fluids		
RESTROOM	Logistics will handle Porta Potty. Trailer also has small restroom and safe water EOC has abundant restrooms		
OVER STRESS INJURIES	This is a FUN event. Plan ahead and limit your efforts on the day of the Event to what is SAFE for your body!! Don't hesitate to "take a break."		
Fire / Explosion / Electricity	ire Extinguishers near Generators / Fuel. xercise great care with fuel. xercise great care with electrical cables.		

6. Prepared by: Name: g. gibby_____ Position/Title: planning____Signature: /s/_____

ICS 201, Page 1 Date/Time: 6/17/2021 8 AM Update_____

Lock vehicles / structures if not attended. Avoid leaving valuable out in sight.

Never Block EOC Doors!! -- Secured Building!!

Page: 2

SECURITY

1. Incident Name: NFARC Field Day 2021	2. Incident Number:	3. Date/Time In Date:	nitiated: Time:
7. Current and Planned Objectives:			

☐ PARTICIPANT: PLEASE PRINT A COPY OF THIS AND BRING WITH YOU TO KEEP TRACK!

No.	Item	Check off	Sign off (if needed for later Taskbook entry)	"Bragging Points"
1	Learn how to tune a vacuum tube power amplifier		Mentor	10
2	Make 5 Field Day FT8 Contacts			10
3	Make 5 Field Day PSK Contacts			10
4	Make 5 Field Day RTTY Contacts			10
5	Make 5 Field Day SSB Contacts			10
6	Compose, post, and send 2 radiograms using WINLINK for Field Day bonus points		Copy received by Documentation	20
7	Make a Field Day contact on 160 meters			10
8	Make a Field Day contact on 10 meters			20
9	Make a Field Day contact on 6 meters			30
10	Learn how to set the LDG tuner for semi- or full- auto tuning operating as desired		Mentor	20
11	Keep log for someone for 1 hour			30
12	Make 1 CW contacts OK to use FLDGI			30
13	Set up an HF antenna and obtain SWR under 2:1 on 80 meters (tuner allowed)			20
14	Set up an HF antenna and obtain SWR under 2:1 on 40 meters (tuner allowed)			20
15.	Build a 2 meter emergency antenna on site and demonstrate SWR < 2:1 (no electronic tuner allowed)			20
16	Build a 2 meter or 70 cm 3-element directional antenna and demonstrate SWR < 2:1 (no electronic tuner allowed)			40

CITATIO TO TAL DIVACCINO FOI

- A. Safety for All.
- B. Have fun and learn!

Note that the AAR/IP from the 2020 Field Day gives LOADS of tips and tricks from multiple participants and is well worth the time to review: https://qsl.net/nf4rc/2020/AlachuaCountyARES2020FIELDDAYAfterActionReport.pdf

1. Incident NFARC Fie		2. Incident Number:	3. Date/Time Initiated: Date: Time:	
8. Current and Planned Actions, Strategies, and Tactics:				
Time:	Actions:			
	DOCUMENTATION EM	MAIL SEND ALL DOCUMENTATION C	COPIES FOR POINTS TO	
ALWAYS	DOCVACUUMTUBES@GMAIL.COM THIS IS THE EMAIL ADDRESS OF THE DOCUMENTATION UNIT FOR 2021			
6 weeks in advance		nteers for leadership positions most po I need OPERATIONS CHIEF filled, Bro		
6 weeks in advance and following	Within the next letting them know the What is AR A few days to a by phone or in does not hurt to lin early June, so special events tours of you Field About two weel outlets. This will the weekend, you NOTE: PIO has	ONS FROM SCOTT ROBERTS KK4ECR QST - https://arrl-nfl.org/wp-content/uploa week, send out a personal invitation (no ow about Field Day and inviting them to verificate the RL Field Day? Flier to the email a week after sending the initial invite, follow person to extend an invitation to Field Day take a box of donuts to leave for their or send a follow-up email to remind your corresponding to a the property of the person to extend an invitation to Field Day take a box of donuts to leave for their or you may have at your event that they may have at your event that they may have at your event that they may have at your event a press release Il help to get your event on their calendary our event will be one of the considered experience of 6/3/2021. Timing its part of 15/3/2021.	ads/2021/04/QST-NFL-May-2021-2.pdf It a press release) to each contact, visit your Field Day site. You can attach ow up with key media and public officials ay. (If you are going to visit in person, it office.) Intacts of the dates for Field Day and any ay with to attend. (Free food, special see to the news desk of all your media or and when assignments are given for events to cover. Degan executing with drafts to review before	
6 weeks in advance	■ Incident Commander - Register the Field Day location with the ARRL Field Day Locator Page: http://www.arrl.org/field-day-locator			
4 weeks in advance	Planning) measured in this. Note: networking https://qsl.net/nf4rc/202 DAVID HUCKSTEF so that we don't have to Full County Load Testin corporate and outside pupdate: MOOT now	onfirm microwave plans microwave path 2020 with high success. Note we don't with N3JP how-to from 2020 using ARE 20/HowToNetworking.pdf Confirm having the emergency general or run the EOC station from batteries Going switchover not required (due to compute planning.) We just need the generator statement of the proposed of the sentation preserved for submission.	use the EOC Guest Network at all for EDN (Par 97 operation) tor tested during the Field Day period, Generator only has to be STARTED. uter concerns this requires extensive arted and making power.	
3 weeks in advance	■ OPERATIONS: Pro NOTE: Document expl Log is here: https://ww NOTE: Gibby finally go document on how to do NOTE: Gibby wrote a c circulated it to Operatio ■ GIBBY Dig out the	ne older 19V computer power supplies that	OGI to log directly to N3FJP Field Day inectionInstructions.pdf T-X and FLDGI, and pubished a FJPLoggingConnectionInstructions.pdf operate several different modes, and don't make RFI (Gibby / Operations)	
1-2 weeks in advance	■ GIBBY: dig up the	information on radio-to-radio signal level	•	

1. Incident Name: NFARC Field Day 2021		2. Incident Number:	3. Date/Time Initiated: Date: Time:
Sat June 12	■ GIBBY: Check the EOC Off Center Fed Antenna east side (drooping) [June 12] ■ GIBBY: Potentially create Vertical portion to the End Fed backup antenna right at the start, if sling shot allows [June 12] □ GIBBY: (Bandpass Filters built last year GIBBY will bring & store at EOC of most benefit between 80CW/Data and 75 Phone) [June 12]		
WEEK BEFORE	■PIO to send media press releases and appropriate information — □ send copies of releases and/or published coverage to PLANNING SECTION for BONUS POINTS, to DOCUMENTATION, docvacuumtubes@gmail.com Here is an example of a PDF document we submitted one year in fulfilmment of that requirement: https://qsl.net/nf4rc/2020/FieldDayBonusPoints/PressRelease.pdf Create a similar file and submit to Documentation. ■PIO issues invitations to ELECTED GOVERNMENT OFFICIALS (city county commissioners) and SERVED AGENCY REPRESENTATIVES INCLUDING ALACHUA COUNTY SHERIFF— □PIO COPY DOCUMENTATION (docvacuumtubes@gmail.com) on EMAIL FOR ALL INVITATIONS FOR POINTS CREDIT. □PIO to outreach through SOCIAL MEDIA and □ document with photo/screenshot to DOCUMENTATION (docvacuumtubes@gmail.com) Create a PDF if possible of the documentation and send to Documentation. RELEVANT ARRL RULE TEXT: 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 to their operation. Individual participants do not qualify		
Thursday Evening 7PM	for this bonus. Club websites do not qualify for this bonus. Available to all classes □OPERATIONS: ZOOM TABLE TOP DRESS REHEARSAL ORGANIZED BY OPERATIONS Everyone is invited, leadership requested to attend if possible. https://us02web.zoom.us/j/89530741792		
FRIDAY EOC 10AM onward	□ Review the networking plans, and computers, passwords, etc □ Leland Gallup AA3YB (Operations Deputy Chief) volunteers to spend rest of the day there to accomodate schedules of other Sections to check out networking, logging software, computers, anything that needs to be checked out, so that there is enough time to FIX anything that needs fixing. □ If there is anything remaining to be done with EOC Station #1 antennas, will be attended to then.		
Friday Afternoon & Evening	CHAIN to lock them to a will give one set to OPE OPERATIONS: DI message captured transpsk31 in BPSK mode a VERSIONS OPERATIONS: SS message captured at 9 Email the text of the TEXT that you copied.	gasoline for the generator (lets have mine a tree and a KEY stored in the TRAILER. ERATIONS. GITAL BULLETIN (BONUS POINT) OF smitted at 6pm / 9 pm Eastern - 3.5975, and MFSK16 on a daily revolving schedules BULLETIN (BONUS POINT) OPERA 1:49 PM Eastern - 3.99, 7.29, 14.29 (Note bulletin to (PLANNING SECTION EMA)	PERATIONS to coordinate having this , 7.095, 14.095 45.45-baud Baudot, alle. THEY DON'T ALWAYS SEND ALL ATIONS to coordinate having this e the 7.29 is full AM with carrier!) ALL ADDRESS) We have to submit the

4	Mana a .	O Impidant Number	2. Data/Time Initiated	
1. Incident Name: NFARC Field Day 2021		2. Incident Number:	3. Date/Time Initiated: Date: Time:	
		SATURDAY MORNING	SETUP	
	□ LOGISTICS is in charge of delivery of all equipment please keep track			
Saturday	□ OPERATIONS Setup crew Check-In at Northwest Area PIO Station 3			
(6/27) 8:00 – 10:00	□ OPERATIONS: 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, GOTA and Satellite locations. NOTE: WE DO NOT EXPECT TO NEED AN INVERTER TO POWER AMPLIFIERS FOR 2021			
	Radio Systems for plan	etup crew Testing: Station 1 (EOC) Stated bands and operating modes: CW, Stated radios, computers, logging all works.		
Saturday	SATU	RDAY MORNING FORM	AL EDUCATION	
(6/27) 10-12	See publ	ished Schedule <u>https://v</u>	www.qsl.net/nf4rc/	
	E	REAK AND LUNCH AFT	ER SETUP	
12:00-13:00 OPERATIONS: Lunch 2021 WE SHOULD PLAN TO HAVE LUNCH TOGETHEROPERATIONS.				
13:00	COME BACK AND GET EVERYTHING READY!			
	FIELD DAY CONTACTS BY PARTICIPANTS			
	logging (QSO's) contac	Operators work in pairs whenever possi ts to other radio clubs participating in the GOTA Station 3, and optionally at Satell	2020 ARRL Field Day event at EOC	
	□ OPERATIONS mag	y wish to arrange and publish a sched	ule of signups for operating.	
BEGINNING 2 PM SATURDAY		the FT8 log automatically. You will problegging computer yourself.	pably need to log PSK31, RTTY, CW, or	
		nsmitters that "count" maximum at all ups are allowed one dedicated satellite tra		
	depending on what wor	nones, or FRS radios, or VOIP phones to ks. You can also see what band the oth careful to set this properly!		
		articipants Check-In at Northwest Area P he Northwest Area. Badged personnel o		

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated:	
NFARC Field Day 2021		Date:	Time:

BONUS POINT EFFORTS AND DOCUMENTATION SAFETY OFFICER

□ SAFETY OFFICER: Carry out reviews of safety techniques and fill out the Safety Check List -- write at the bottom that you carried it out and sign it, take photo, and send as PDF document to DOCUMENTATION

THIS FORM IS ENCLOSED IN THIS PACKET BEFORE THE OFFICIAL FIELD DAY RULES.

NOTE; CLASS F STATIONS MAY BE UNABLE TO RECEIVE CREDIT FOR THIS, BUT IT IS A GOOD IDEA ANYWAY.

ARRL RULE: 7.3.17 Safety Officer Bonus: A 100-point bonus may be earned by having a person serving as a Safety Officer for those groups setting up Class A stations. This person must verify that all safety concerns on the Safety Check List (found in the ARRL Field Day Packet) have been adequately met. This is an active bonus – simply designating someone as Safety Officer does not automatically earn this bonus. A statement verifying the completion of the Safety Check List must be included in the supporting documentation sent to ARRL HQ in order to claim this bonus.

1. Incident Name:	2. Incident Number:	3. Date/Time In	nitiated:
NFARC Field Day 2021		Date:	Time:

BONUS POINT EFFORTS AND DOCUMENTATION **OPERATIONS**

□ OPERATIONS(SOLAR UNIT) alternate (solar) power one solar power station to charge a battery, back of pickup truck, to be used later to make contacts using barefoot lcom 7300 to get the solar power points.
☐ Take a photo of the solar power charging system, put it in a PDF document for proof, and send it to the DOCUMENTATION email address.
□ OPERATIONS to set up one or more EDUCATIONAL ACTIVITIES (BONUS POINTS) and document with attendance sheet and photograph sent by email to DOCUMENTATION with appropriate subject line – make it One document preferably in .doc or pdf so that DOCUMENTATION can easily

□ OPERATIONS -- Document starup of EOC GENERATOR TO GET THE 100% EMERGENCY POWER POINTS -- PROVE WITH PHOTO & STATEMENT -- PHOTO INSIDE PDF DOCUMENT. SENT TO DOCUMENTATION UNIT.

□ OPERATIONS: 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 **DOCUMENTATION (at the email address listed bove)** . Note: these may be easiest to do on VHF digital from the "free" vhf station, USING THE EOC VHF DATA TRANSCEIVERS FOR THAT PURPOSE. Consider using Earl's Gateway on 145.070 or Gordon via 145.030 See: https://gsl.net/nf4rc/2021/SectionManagerMessage.pdf

SATURDAY

□ OPERATIONS TEN RADIOGRAMS SENT FROM THE FIELD DAY SITE: [ORIGINATED BY NF4AC 1

TEXT OF ARRL RULE: 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: SEND COPIES TO DOCUMENTATION

PDF Documents:

upload it to the ARRL.

https://gsl.net/nf4rc/2021/AlternatePowerBonusPoints.pdf https://gsl.net/nf4rc/2021/EducationalActivityBonusPoints.pdf https://qsl.net/nf4rc/2021/EmergencyPowerBonusPoints.pdf https://gsl.net/nf4rc/2021/SectionManagerMessage.pdf https://gsl.net/nf4rc/2021/MessageHandlingBonusPoints.pdf

ODT Documents:

https://qsl.net/nf4rc/2021/AlternatePowerBonusPoints.odt https://qsl.net/nf4rc/2021/EducationalActivityBonusPoints.odt https://gsl.net/nf4rc/2021/EmergencyPowerBonusPoints.odt https://qsl.net/nf4rc/2021/SectionManagerMessage.odt https://qsl.net/nf4rc/2021/MessageHandlingBonusPoints.odt

1. Incident Name: NFARC Field Day 2021		2. Incident Number:	3. Date/Time Initiated: Date: Time:	
	BONUS	POINT EFFORTS AND D	OCUMENTATION	
		SATELLITE UNIT OF OPER	ATIONS	
14:00 – 00:00	OPERATIONS: SATELLITE: BONUS POINTS Satellite QSO: 100 bonus points for succe completing at least one QSO via an amateur radio satellite during the Field Day period. "Gener for All ARRL Contests" (Rule 3.7.2.), (the no-repeater QSO stipulation) is waived for satellite Q Groups are allowed one dedicated satellite transmitter station without increasing their entry cat Satellite QSOs also count for regular QSO credit. Show them listed separately on the summary as a separate "band." You do not receive an additional bonus for contacting different satellites, the additional QSOs may be counted for QSO credit unless prohibited under Rule 7.3.7.1. The must be between two Earth stations through a satellite. Available to Classes A, B, and F. 7.3.7 Stations are limited to one (1) completed QSO on any single channel FM satellite. OPERATIO have this accomplished and documented by having appropriately documented LOG ENTRIES DOCUMENTATION. The group is encouraged to make this a teaching moment!			
	ODT:	1/SatelliteQSOBonusPoints.pdf 1/SatelliteQSOBonusPoints.odt		
	<u>πιφο.//φοι.πουπι+το/202</u>	T/Odtellite QOODSHUST SIIItS.Out		
WEE HOURS	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).			
	CONCLUSION OF OUR FIELD DAY EFFORT			
Sunday 1400 OPERATIONS: Tear down crew Uninstalls all radios, primary and backup ante tuners, logging laptops, (Primary Generator, Solar PV and emergency back-up) powequipment at Station 2, GOTA and Satellite locations.		ment to DOCUMENTATION EMAIL ary and backup antennas, feedlines,		
		_		
	□ LOGISTICS moves	s gear back to proper storage location		
MEAL AFTERWAR DS	HOTWASH DISCUSSION/MEAL □Anyone who desires, we go get supper and discus the "issues" we learned from. OPTIONAL. INFORMAL. POSSIBILY: SONNY'S WALDO ROAD 2700 NE WALDO ROAD			
		FIELD DAY SUBMIS	SION	
Sunday/ Monday	□Documentation Unit (Planning Section) files contest results with ARRL electronically □Documentation Unit obtains EMAIL or CONFIRMATION of submission and forwards to Incident Commander □Planning Section writes up report of operation, with input from all other sections			
6. Prepared by: Name: Position/Title:Signature:				
ICS 201, Page 2 Date/Time				

INOIDERT BRIEFING (100 201)					
1. Incident Name:	2. Incident		. Date/Time Initiated: Date: Time:		
9. Current Organiza	tion (fill in additional org	ganization as appropriate	e):		
We try to utilize iCS in order to give people HANDS-ON experience with this highly-refined system, in which we are all pretty green. Here is the current organization: and this will help you pass IS-100: (Trying to give new people chance to try out some things!!) TBD = To Be Determined (would YOU like to volunteer??)					
Incident Commander: Deputy I.C. PIO: Safety Officer: Liaison	David Huckstep W4JIR Gordon Gibby KX4Z Jim Bledsoe KI4KEA (an Brett Wallace NK2KW Gordon Gibby KX4Z	d certainly can help GARS if t	hey wish!)		
Planning Section Chief Gordon Gibby KX4Z	Operations Section Chief Brett Wallace NK2KW	Logistics Section Chief Wendell Wright KN4TWS	Finance & Accounting Sect. Chief Susan Halbert KG4VWI		
Documentation Unit docvacuumtubes @gmail.com SEND ALL BONUS PTS DOCS TO THAT EMAIL	Deputy Chief Leland Gallup AA3YB	Deputy Chief Rosemary Jones KI4QBZ			
Satellite Unit Unit Leader Ron Lewis KN4ZUJ Microwave Unit Unit Leader Earl McDow K4ZSW Gordon Gibby KX4Z					
* Unfilled positions are handled by the person to whom they would have reported, until stood up for function.					
NOTE for those studying for ICS courses: "Deputies and Assistants are not interchangeable. A Deputy must have the same qualifications as the position they are subordinate to, as they must be ready to take over that position at any time, while an Assistant is assigned to aid in managing the workload. Assistants may bring a particular functional or technical expertise to augment the position they are supporting (e.g., Assistant Safety Officer, Aviation). "					
6. Prepared by: Nar	 me: Posi	tion/Title:	Signature:		
ICS 201, Page 3		UPDATED 5/23/2021_			

1. Incident Name: NFARC 2021 Field Day		2. In	cident Number:		3. Date/Time Initiated: Date: Time:	
10. Resource Summary:					2 0.101 1.11101	
Resource	Resource Iden Volunteer Provi		Date/Time Ordered Volunteer Transporting	ETA (Requested Arrival)	Arrived	
EOC STATION (#1) ("INSIDE")						
SIGN for the entrance way of EOC announce Field Day, explain phone # to call to get help with entry.	OPERATIONS		OPERATIONS	Prior to Field Day Weekend		
EOC Main Antenna needs checking - short side drooping?	Gordon Gibby - planned June 12		N/A	Prior to Field day weekend		
SPARE HF ANTENNA needs checking & higher	Gordon Gibby - planned June 12		N/A	Prior to Field Day weekend		
SOFTWARE on Logging Computer	OPERATIONS		OPERATIONS	WEEK BEFORE		
NETWORK SYSTEM - microwave ubiquity	OPERATIONS		OPERATIONS	WEEK BEFORE		
NETWORK SYSTEM wifi home Tenda router	GIBBY - ■capac now added to pov		GIBBY	WEEK BEFORE		
MOUSE THAT WORKS on both logging and FT8 computers (avoid RFI issues)	OPERATIONS	, , , , , , , , , , , , , , , , , , , 	OPERATIONS	WEEK BEFORE		
Mouse, USB dongle	Gibby		Gibby	WEEK BEFORE - place at EOC		
Mouse, unknown	Ridlon		Ridlon	Saturday		
MICROWAVE NETWORK	ZDELAVÇTA	TION	J OUTSIDE EEN	CED ANTENNA	ADEA	
Ubiquity Relay Station with Battery	OPERATIONS Network Asst.	TION	OPERATIONS Network Asst.	WEEK BEFORE		
NETWORKING WITHIN	NW GRASSY	ARE	A			
Networking Ubiquity TRANSCEIVER on pole by fence for for NW grassy Area – if significant logging neede(d by station other than RV, an additional mesh transceiver may be needed)	OPERATIONS Network Asst. (Gordon can provextra ubiquity programmed for l bandlet me knowyou want!))	vide 1	OPERATIONS Network Asst.	Week Before		
WIFI Tenda Home Router with power supply inside waterproof container of some sort, with some sort of power system from Trailer or separate	Gordon Gibby		Gordon Gibby	Week Before		

1. Incident Name: NFARC 2021 Field Day		2. In	cident Number:		3. Date/Time Initiated: Date: Time:
10. Resource Summary:					
To. Resource Summary.					
RV TRAILER STATION (#		E")			
Data Computer for RV trailer FT8 with RFI free power system & MOUSE	Gordon Gibby, including mouse		Gordon Gibby	Week Before	
LOGGING computer for RV Trailer with RFI free power system and MOUSE	OPERATIONS Network Assit		OPERATIONS Network Asst	Saturday Morning	
MICE (to avoid touchpad issues from RFI)	OPERATIONS		OPERATIONS	by Saturday	
Mouse, unknown	Ridlon		Ridlon	Saturday	
600 Watt Antenna Tuner	Gordon Gibby		GIBBY	SATURDAY	
ICOM 7300	RECOMMMEN TWO RADIOS LOGISTICS - 1 GIBBY - BACK		LOGISTICS / GIBBY	SATURDAY	
EQUIPMENT MANUAL FOR ICOM 7300	GIBBY		GIBBY	SATURDAY	
24-foot TRAVEL TRAILER NOTE: NOT planning to bring utility trailer this year. Set generators on ground.	Gordon Gibby		Gibby	SATURDAY	
INCLUDES ANTENNA MAST NOTE: TRAILER NOW INCLUDES SUN AWNING. 3 fold up chairs & fold-up table	Gordon Gibby	S	Gibby	Saturday	
GENERATOR 4KW ARRIVES FULL FUEL	Gordon Gibby		Gibby	SATURDAY	
GENERATOR 5KW ARRIVE FULL FUEL	Earl Sloan		Sloan	SATURDAY	
RFI FILTER FOR GENERATOR rated 23 Amperes AC	Gordon Gibby		Gibby	SATURDAY	
RFI extension cord commmon mode filter for radios (qty 2) rated only 10A	Gordon Gibby		Gibby	SATURDAY	
HF ANTENNA- End Fed 135 foot with 2turn/14turn Balun & ground screw	Gordon Gibby		Gibby	SATURDAY	
FIRE EXTINGUISHER for generator area	Gordon Gibby		Gibby	SATURDAY	
FIRE EXTINGUISHER for fuel area	Logistics		Logistics	SATURDAY	
CHAIN / LOCK for fuel NOTE: GIVE A KEY TO OPERATIONS.	Logistics		Logistics	SATURDAY	
GROUND Rod / connection to generators	Logistics		Logistics	SATURDAY	
SB-200 AMPLIFIER	Gordon Gibby		Gibby	SATURDAY	
Cables from amplifier to transceiver	Gordon Gibby		Gibby	SATURDAY	

1. Incident Name: NFARC 2021 Field Day		2. Incident Number	r:	3. Date/Time Initiated: Date: Time:
10. Resource Summary:		<u> </u>		
1:1 RF choke baluns for RV Station	Gordon Gibby	Gibby	SATURDAY	
Potable Water in RV Station	Gordon Gibby	Gibby	SATURDAY	
Minimum Three 5-gallon gasoline containers with chain and lock	LOGISTICS	Logistics	SATURDAY	
PIO / WELCOME AREA THE OPERATION IS OPTI				
Water, refreshments	Logistics	Logistics	Saturday/Sunday	
Coffee & Doughnuts	Logistics	Logistics	SUNDAY MORNING	
CANOPY(S)	LOGISTICS	Logistics	SATURDAY	
Canopy, 10 foot	Huckstep	Huckstep	Saturday	
Canopy	Amy Woods	Amy Woods	Saturday	
MULTIPLE FANS	LOGISTICS	Logistics	SATURDAY	
High-power Fan	Jeff Capehart	Jeff Capehart	Saturday	
Fan	Leland Gallup	Leland Gallup	Saturday	
GENERATOR	LOGISTICS	LOGISTICS	SATURDAY	
GENERATOR (inverter, needs filter), with extension cord	Gallup	Gallup	Saturday	
Generator, 2kw, with 5 gallons of gas, thought to be "quiet"	Mike Ridlon	Mike Ridlon	Saturday	
EXTENSION CORD	Mike Ridlon	Mike Ridlon	Saturday	
LIGHTING FOR NIGHTTIME	LOGISTICS	Logistics	SATURDAY	
Table, Chairs TO ACCOMODATE SEVERAL	LOGISTICS	Logistics	SATURDAY	
Table & 2 chairs	Mike Ridlon	Mike Ridlon	Saturday	
Table & 2 chairs	Leland Gallup	Leland Gallup	Saturday	
SHELTER GO BOX (obtain from Em. Mgr)	LOGISTICS	Logistics	SATURDAY	

1. Incident Name: NFARC 2021 Field Day		2. Incident Number	er:	3. Date/Time Initiated: Date: Time:
				Date. Time.
SIGNALINK EQUIV & CABLES for SHELTER (Note Box #1 includes digital	LOGISTICS	Logistics	Week Before	
signalink) IGLOO Water cooler, filled with ice/water	Ridlon	Ridlon	SATURDAY	
12x12 2pole Rain Fly (same one as last yer)	Ridlon	Ridlon	SATURDAY	
POSSIBLE: older Coleman Tent, notify Ridlon if you wish im to bring it	Ridlon	Ridlon	NOTIFY HIM	
SATELLITE STATION (A				
SATELLITE STATION (FREE STATION)	Operations - Sate	Satellite	SATURDAY	
2+ HT's with spare batteries (one for uplinkg, one for Downlink)	Ron Lewis	Ron Lewis	Per Satellite Passes	
Arrow II antenna w/duplexer (not used)	Ron Lewis	Ron Lewis	Per satellite passes	
W1ANT satellite tracking app on Android phone// recorder.	Ron Lewis	Ron Lewis	Per satellite passes	
Yaesu 991a / 20 meter center fed dipole, power supplies	Ron Lewis	Ron Lewis	Per satellite passews	
CANOPY / TABLE / CHAIRS AS NEEDED Ron works out of his truck so this may not be necessary	LOGISTICS	LOGISTICS	SATURDAY	
EZ tent to bring and a folding table with chairs to set up a display	Ron Lewis	Ron Lewis	Optional per him if he is able to put together display	
Yagi, couple of radios and paraphenalia and laptop	Mike Ridlon	Mike Ridlon	Saturday	
FACILITIES PORTA POTTY 1 facility Dampiers	LOGISTICS ■ALREADY ORDERED 5/12/2021 by Wendell. \$100	Dampier's	ARRIVE: FRIDAY THRU SUNDAYMINIM UM.	
Wash-up Station as desired	LOGISTICS		FRIDAY- SUNDAY	
LIGHTING AS DESIREDFOR OUTSIDE / INSIDE	LOGISTICS		SATURDAY	

1. Incident Name: NFARC 2021 Field Day		2. Incident Numbe	r:	3. Date/Time Initiated: Date: Time:
10. Resource Summary	':			
SOLAR POWER SYSTE	M			
1 300 Watt Solar Panel 10-15 A charge controller	Gordon Gibby	Gordon Gibby	WEEK BEFORE store in EOC	
LiFePO4 Batteries 20AH x 2	EOC	EOC	WEEK BEFORE WIRE UP	
6. Prepared by: Name:	•	Position/Title: Signature:		
ICS 201, Page 4		Date/Time: UPDATED 5/23/21		

INCIDENT BRIEFING (ICS 201) APPENDIX ONE

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 by submitting this form that due diligence was made to provide a safe operation.

[check (or circle) any/all that apply]

- o Safety Officer/s or qualified designated assistant/s was on site for the duration of the event.
- o Fuel for generator properly stored.
- o Fire extinguisher on hand and appropriately located. o First Aid kit on hand.
- o First Aid CPR AED versed else trained participant/s on site for full Field Day period.
- o Access to NWS alerts to monitor for inclement weather.
- o Tent stakes properly installed and marked.
- o Temporary antenna structures properly secured and marked.
- o Site secured from tripping hazards.
- o Site is set up in a neat and orderly manner to reduce hazards.
- o Stations and equipment properly grounded.
- o Access to a means to contact police/fire/rescue if needed.
- o Safety Officer is designated point of contact for public safety officials.
- o Minimize risks and control hazards to ensure no injuries to public.
- o As necessary, monitoring participants for hydration and ensuring an adequate water supply is available.

signature(s) / call(s) date

Revised 3/2021

APPENDIX TWO

MEASURED ANTENNA INTERACTIONS 2020 EOC FIELD DAY

Power level in dBm sent to the EOC Chigger antenna on each band was known, the power level in dBm received on the End Fed multiband antenna approx 25-30 feet height was measured at the NW Grassy corner, and the total path loss was calculated by subtracting.

Measured Antenna Interactions				
80 meters	-70 dB			
40 meters	-80 dB			
20 meters	-100 dB			

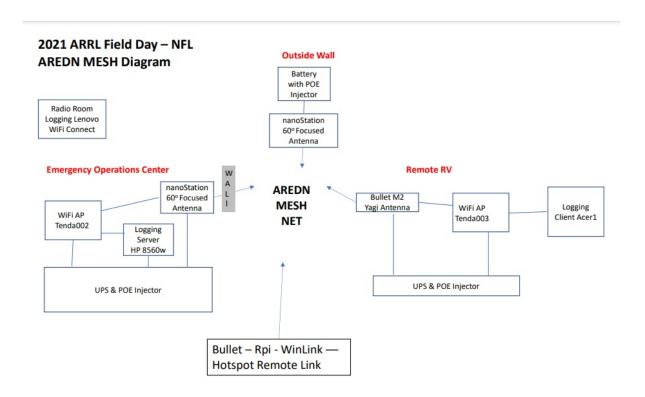
For example, if +50 dBm were transmitted at the EOC (100 Watts output), the received signal at the receiver terminals on the SAME FREQUENCY on 80 meters would be $50 \, \text{dBm} - 70 \, \text{dB} = -20 \, \text{dBm}$

That results in a 22 millivolt RMS signal on a 50 ohm connection, which is a very loud signal (52 dB above S9 on a typical receiver) but it is no where close to a voltage necessary to even cause a diode to conduct (0.6 V) much less do any damage to an input device.

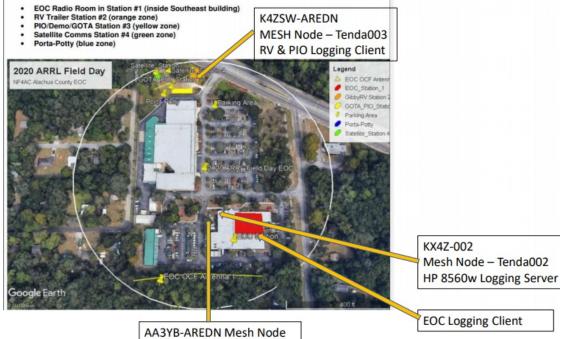
We also tested listening on the 2nd harmonic band, to a transmitter on the band below at the opposite station, using the bandpass filters, and could hear NO DESENSING of the radio.

APPENDIX THREE -- Microwave System 2020

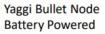
NF4AC Field Day Contest Log Registration #: 33532



2021 ARRL Field Day NFL — MESH Node Locator The 1,000 Foot Diameter Operating (white) Circle per ARRL Field Day Rules includes: • EOC Radio Room in Station #1 (inside Southeast building) • BY Trailer Station #2 (orange 2002)









Omni Bullet Node AC Powered POE



nanoStation Node 60 degree

Selected material lifted from Earl McDow's Excellent 2020 Document on the Logging system and from the 2020 AAR/IP. Certain security details are left out here for protection.

LOCATION	UNIT / FUNCTION	Notes
EOC	Tenda002 wifi access point to allow EOC logging on Part 15 WIFI to connect. Connects by ethernet cable to KX4Z-002 which provides the IP numbers.	Power: uninterruptible power suply, AC from extension cord within EOC
	KX4Z-002 AREDN Channel -2 beams thru wall. Acts as a 13- host router, DHCP server providing IP numbers to users in the EOC, with a default route (over the WAN)	Power: uninterruptible power suply, AC from extension cord within EOC
Outside the EOC	AA3YB-AREDN Node Acts as a 13 host router, DHCP server (serving no users)	Powered by 12V storage battery with Dc-DC steup and POE injector
Fenced NW Area	K4ZSW-AREDN Bullet M2 Acts as a 13-host router, DHCP server, serving the Tenda Access Port	Power: uninterruptible power supply, AC from extension cord from Gordon's RV
	Tenda003 wifi access point to allow Fenced area participants	Power: uninterruptible power supply, AC from extension cord

	on Part 15 WIFI to connect. Connects by ethernet cable to K4ZSW-AREDN, which provides the IP numbers.	from Gordon's RV Protected from weather by tote box

Item	Username / Password / Passphrase	
WIFI Access Passphrase		End-users at either end.
N3FJP Contact	User: NF4AC	
Logging Software	PW: 33532	
Lenovo (BackupWin10) EOC Logging Client	User: NF4AC Ham PW: NF4RC	
ACER1 (RV logging Client)	User: ARRL Field Day PW: nf4rc	
Logging Server IP	10.163.157.30	Needed at each logging client
MESH Node Passwords	Device user PW KX4Z-002 root AA3YB-AREDN: root K4ZSW-AREDN root	

Unit	IP Numbers	
KX4Z-002	MESH IP: 10.90.57.209 LAN IP: 10.163.157.17 Power: 28 dBm Firmware 3.16.1.1	
AA3YB-AREDN	MESH IP: 10.224.111.87 LAN IP: 10.6.245.113 Power: 28 dBm Firmware 3.20.3.1	
K4ZSW-AREDN	MESH IP: 10.184.252.226 LAN IP 10.143.206.33 Power: 25 dBm Firmware 3.20.3.1	
All Units	Channel -2 Bandwidth 5 MHz	

INFORMATION ON CONNECTING WSJT-X AND FLDGI TO N3FJP FIELD DAY LOGGING SOFTWARE: https://www.gsl.net/nf4rc/2021/N3FJPLoggingConnectionInstructions.pdf

From the AAR/IP from 2020:

"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 as an issue. This was solved by using a ham-radio specific AREDN-based microwave network consisting of three off the shelf Ubiquity 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.

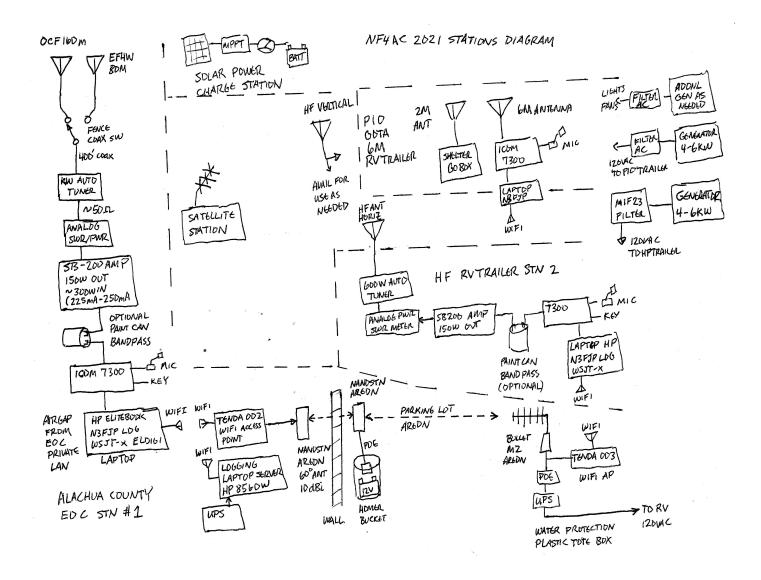
For security reasons, further operational details and exact measurements of wall absorption made by our teams are not presented in this document."

A networking how-to document from the 2020 Field Day can be viewed here: https://qsl.net/nf4rc/2020/HowToNetworking.pdf

2020 Mesh YAGI



APPENDIX FOUR: FIELD DAY DIAGRAM 2021



NOTES: 2021 Significant Differences From 2020

- 1. No Inverter/batteries needed to power the EOC Station -- can use EOC Wall power except if doing solar contacts.
- 2. Solar power will only charge 1 or 2 batteries -- just enough to do the required solar contacts. Only ONE Solar panel. Much less work!!
- 3. Do not expect to need the WINLINK GATEWAY this year -- connect to Earl K4ZSW-10 or K4MVR-10 or KX4Z-10 directly from the EOC. (Turn off PIO VHF when using data VHF from EOC!!)
- 4. Filters on Generators unless no RFI output.
- 5. We expect to have TWO HF antennas at the grassy Station 2 area; PIO station can provide GOTA (use separate call!!) using one of these if sufficient visitors.

ORGANIZATION OF OUTDOOR STATION #2 & RELATED TEAMS

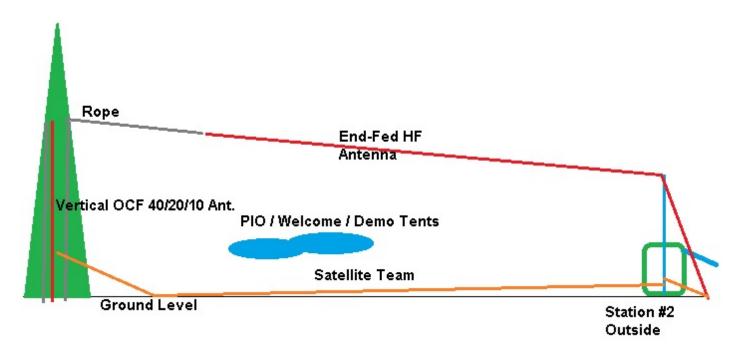


1. CAUTION: POWER LINE RUNS ALONG WEST EDGE OF PROPERTY -- keep all antennas, rope attempts or ropes far away.

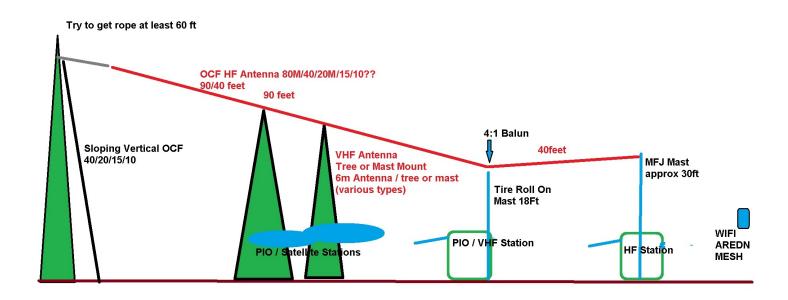
- 2. Possible Layout -- subject to change!
 - Pio/Associated tents did better when shaded by the trees
 - RV needs to be far enough from trees to stretch out HF horizontal antenna
 - RF now has awning (and also has fire extinguisher)
 - Microwave Link has to be at Fence to have clear view of EOC
 - AC power extension cord to dry-box for wifi @ fence
 - Possibly move generators closer to road and move RV closer (as shown) to open area away from generators (fire extinguisher)
 - Fuel somewhat shaded by trees (fire extinguisher)
 - Satellite crew (requirements unclear?) -- position approx
 - Advertize Visitor/Dignitary Parking in front of Sheriff Office -- typically empty on weekends
- 3. Possible to hoist VHF/UHF antenna into trees also, great for PIO Demo/GOTA but suspect many WINLINK email will move from EOC VHF station due to 60 foot tower antennas reach directly to KX4Z-10 (145.030) or K4ZSW-10 Earl or K4MVR-10 (Ridlon)

4. Possible HF Antennas

- End-Fed Half-Wave 135 foot FT-240-43 2turn/14-turn, cap on input, base near RV (caution flags on antenna). Attempt as much as possible to keep RV at least somewhat away from antenna.
- Possible Vertical Semi-Vertical Off-Center-Fed Vertical 65 foot (40/20/10 meter vertical for lower elevation angle, better for distant stations) -- from some tall tree. Requires very high limb for rope.
 - COAX RUN along ground -- lengthy run and trip hazard -- how to deal with?? Need Coax for this...



IF TWO RV's are available, and the roll-on mast, then a different setup can be done using an off-center-fed dipole that might have lower losss than the end-fed option





POSSIBLE SITES FOR GROUND RODS

APPENDIX FIVE: INCIDENT RADIO COMMUNICATIONS PLAN ICS-205

INCIDENT RADIO COMMUNICATIONS PLAN ICS-205												
1. Incident Name: 2. D 2021 FIELD DAY NF4AC Date					Date/Time Prepared: ate:June 13 me:1500LOC			3. Ope	3. Operational Period Date From:FRI JUN25 Date To: SUN JUN 27 Time From: Time To:			
Zone Grp.	C h #	Function	Channel Name / Trunked Radio System Talkgroup		Assign -ment	RX Freq. N or W	RX TON E/ NAC	TX FREQ N or W	TX TON E / NAC	MODE (A, D, or M)	Remarks	
-	7	LOCAL	146.55		HAM	146.55	N/A	146.55	N/A	A	Security, Weather Alerts, etc. Avoid unnecessary chatter.	
8	8	FD	146.52		HAM	146.52	N/A	146.52	N/A	A	Field Day Calling Freq NOTE ARRL CEASED TO FORBID THIS FREQ MANY YEARS AGO.	
		FD	146.49		HAM	146.49	N/A	146.49	N/A	Α	Posible off-calling Freq to move for contacts if others need Calling Freq	
Note th	hat		tions d Day con radiogram							r the so	oftware.	
6. Prej ICS 20		red By (Co	mmunication	s Unit		eader) Name GG @req. OPERAT				TIONS Signature Date / Time		

APPENDIX SIX: Field Day Rules 2021 (Downloaded 4/26/2021)

from: http://www.arrl.org/files/file/Field-Day/2021/2021%20Field%20Day
%20Packet.pdf

ARRL Field Day 2021 Rules Temporary Rule Waivers for ARRL Field Day 2021:

For Field Day 2021 only, Class D stations may contact all other Field Day stations, including other Class D stations, for points. Class D and Class E stations are limited to 150 Watts PEP. (See Field Day rule 4.6)

- 1. Eligibility: Field Day is open to all amateurs in the areas covered by the ARRL/RAC Field Organizations and countries within IARU Region 2. DX stations residing in other regions may be contacted for credit and may submit entries as check-logs.
- 2. Object: To work as many stations as possible on the 160, 80, 40, 20, 15 and 10 Meter HF bands, as well as all bands 50 MHz and above, and in doing so to learn to operate in abnormal situations in less than optimal conditions. A premium is placed on developing skills to meet the challenges of emergency preparedness as well as to acquaint the general public with the capabilities of Amateur Radio.
- 3. Date and Time Period: Field Day 2021 will be held June 26-27. Field Day is ALWAYS the fourth full weekend of June, beginning at 1800 UTC Saturday and ending at 2059 UTC Sunday.
 - 3.1. Class A and B (see below) stations that do not begin setting up until 1800 UTC on Saturday may operate the entire 27-hour Field Day period.
 - 3.2. Stations who begin setting up before 1800 UTC Saturday may work only 24 consecutive hours, commencing when on-the-air operations begin.
 - 3.3. No class A or B station may begin its set-up earlier than 0000 UTC on the Friday (Thursday afternoon or evening local time) preceding the Field Day period. Cumulative set-up time shall not exceed a total of 24 hours.
- 4. Entry Categories: Field Day entries are classified according to the maximum number of simultaneously transmitted signals, followed by a designator indicating the nature of their individual or group participation. The minimum number of transmitters that must be claimed is one (1). Twenty (20) transmitters maximum are eligible for the purpose of calculating bonus points (2,000 points maximum). However, additional transmitters which may legitimately be used simultaneously will determine your entry category classification, but will not earn additional bonus points (i.e. 22 transmitters = 22A). The use of switching systems that allow for lock-outs in order to use multiple transmitters (i.e., an "octopus") in an attempt to enter a lower-number-of-transmitters class are prohibited (i.e. using 2 transmitters that can transmit simultaneously, with two operators, and a lock-out system and entering class 1A). The use of simulcasting devices which allow a single operator to key and transmit on more than one transmitter at a time, is prohibited. Bonus stations, such as the GOTA station and satellite station do not count towards determining the number of transmitters for the class and do not qualify for transmitter bonus points.
 - 4.1. (Class A) Club / non-club portable: Club or a non-club group of three or more persons set up specifically for Field Day. Such stations must be located in places that are not regular station locations and must not use facilities installed for permanent station use, or use any structure installed permanently for Field Day. A single licensee or trustee for the entry is responsible for the group entry. All equipment (including antennas) must lie within a circle whose diameter does not exceed 300 meters (1000 feet). To be listed as Class A, all contacts must be made with transmitter(s) and receiver(s) operating independent of commercial power mains. Entrants whom for any reason operate a transmitter or receiver from a commercial main for one or more contacts will be listed separately as Class A-Commercial.
 - 4.1.1. Get-On-The-Air (GOTA) Station. Any Class A (or F) entry whose transmitter classification is two or more transmitters may also operate one additional station without changing its base entry category, known as the GET-ON-THE-AIR (GOTA) station. This GOTA station may operate on any Field Day band, HF or VHF, but is limited to one GOTA station transmitted signal at any time.

- 4.1.1.1. This station must use a different callsign from the primary Field Day station. The GOTA station must use the same callsign for the duration of the event regardless if operators change. The GOTA station uses the same exchange as its parent.
- 4.1.1.2. The GOTA station may be operated by any person licensed since the previous year's Field Day, regardless of license class. It may also be operated by a generally inactive licensee. Non-licensed persons may participate under the direct supervision of an appropriate control operator. A list of operators and participants must be included on the required summary sheet to ARRL HQ.
- 4.1.1.3. As per FCC rules, this station must have a valid control operator present at the control point if operating beyond the license privileges of the participant using the station.
- 4.1.1.4. The maximum transmitter output power for the GOTA station shall be 150 watts. If the primary Field Day group is claiming the QRP multiplier level of 5, the maximum transmitter output power of the GOTA station may not exceed 5 watts.
- 4.1.1.5. A maximum of 1000 QSOs made by this station may be claimed for credit by its primary Field Day operation. In addition, bonus points may be earned by this station under rule 7.3.13.
- 4.1.1.6. The GOTA station may operate on any Field Day band. Only one transmitted signal is allowed from the GOTA station at any time.
- 4.1.1.7. The GOTA station does not affect the additional VHF/UHF station provided for under Field Day Rule 4.1.2. for Class A stations.
- 4.1.1.8. Participants are reminded that non-licensed participants working under the direction of a valid control operator may only communicate with other W/VE stations or with stations in countries with which the US has entered a third-party agreement.
- 4.1.1.9. The GOTA station does not qualify as an additional transmitter when determining the number of transmitters eligible for the 100-point emergency power bonus under Rule 7.3.1.
- 4.1.2. Free VHF Station: All Class A entries may also operate one additional transmitter if it operates exclusively on any band or combination of bands above 50 MHz (VHF/UHF) without changing its basic entry classification. This station does not qualify for a 100-point bonus as an additional transmitter. This station may be operated for the clubs Field Day period and all contacts count for QSO credit. It is operated using the primary callsign and exchange of the main Field Day group and is separate and distinct from the GOTA station.
- 4.2. (Class A Battery) Club / non-club portable: Club or non-club group of three or more persons set up specifically for Field Day. All contacts must be made using an output power of 5 Watts or less and the power source must be something other than commercial power mains or motor-driven generator (e.g.: batteries, solar cells, water driven generator). Other provisions are the same for regular Class A. Class AB is eligible for a GOTA station if GOTA requirements are met; however if a GOTA station is used in this class it must meet the 5-Watt or less power requirement of this category.
- 4.3. (Class B) One or two person portable: A Field Day station set up and operated by no more than two persons. Other provisions are the same for Class A except it is not eligible for a GOTA or free VHF station. One and two person Class B entries will be listed separately.
- 4.4. (Class B Battery) One or two person portable: A Field Day station set up and operated by no more than two persons. All contacts must be made using an output power of 5 Watts or less and the power source must be something other than commercial mains or motor-driven generator. Other provisions are the same for Class A except it is not eligible for a GOTA or free VHF station. One and two person Class B Battery entries will be

listed separately.

- 4.5. (Class C) Mobile: Stations in vehicles capable of operating while in motion and normally operated in this manner. This includes maritime and aeronautical mobile. If the Class C station is being powered from a car battery or alternator, it qualifies for emergency power but does not qualify for the multiplier of 5, as the alternator/battery system constitutes a motor-driven generating system.
- 4.6. (Class D) Home stations: Stations operating from permanent or licensed station locations using commercial power. Class D stations may only count contacts made with Class A, B, C, E and F Field Day stations. Temporary rule waivers: For Field Day 2021 only, Class D stations may work all other Field Day stations, including other Class D stations, for points. Class D stations ordinarily may only count contacts made with Class A, B, C, E, and F Field Day stations, but the temporary rule waiver for 2021 allows Class D stations to count contacts with other Class D stations for QSO credit. For 2021 only, Class D and E stations are limited to 150 W Peak Envelope Power (PEP) transmitter output.
- 4.7. (Class E) Home stations Emergency power: Same as Class D, but using emergency power for transmitters and receivers. Class E may work all Field Day stations. See 2021 power limitation above.
- 4.8. (Class F) Emergency Operations Centers (EOC): An amateur radio station at an established EOC activated by a club or non-club group. Class F operation must take place at an established EOC site. Stations may utilize equipment and antennas temporarily or permanently installed at the EOC for the event. Entries will be reported according to number of transmitters in simultaneous operation. Class F stations are eligible for a free VHF station. At Class 2F they are also eligible for a GOTA station.
 - 4.8.1. For Field Day purposes, an Emergency Operations Center (EOC) is defined as a facility established by: a) a Federal, State, County, City or other Civil Government, agency or administrative entity; or, b) a Chapter of a national or international served agency (such as American Red Cross or Salvation Army) with which your local group has an established operating arrangement;
 - 4.8.1.1. A private company EOC does not qualify for Class F status unless approved by the ARRL Field Day Manager.
 - 4.8.2. Planning of a Class F operation must take place in conjunction and cooperation with the staff of the EOC being activated.
 - 4.8.3. Other provisions not covered are the same as Class A.
 - 4.8.4. A Class F station may claim the emergency power bonus if emergency power is available at the EOC site.
 - 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.
- 5. Exchange: Stations in ARRL / RAC sections will exchange their Field Day operating Class and ARRL / RAC section. Example: a three transmitter Class A station in Connecticut which also has a GOTA station and the extra VHF station would send "3A CT" on CW or Digital, or "3 Alpha Connecticut" on Phone. DX stations send operating class and the term DX (i.e. 2A DX).
- 6. Miscellaneous Rules:
 - 6.1. A person may not contact for QSO credit any station from which they also participate.
 - 6.2. A transmitter/receiver/transceiver used to contact one or more Field Day stations may not subsequently be used under any other callsign to participate in Field Day. Family stations are exempt provided the subsequent callsign used is issued to and used by a different family member.

- 6.3. Field Day contacts are allowed using Phone, CW and Digital (non-CW) modes. Stations can be worked once per band per mode under this rule.
- 6.4. All voice contacts are equivalent.
- 6.5. All non-CW digital contacts are equivalent.
- 6.6. Cross-band contacts are not permitted (Satellite QSOs cross-band contacts are exempted).
- 6.7. The use of more than one transmitter at the same time on a single band-mode is prohibited. Exception: a dedicated GOTA station may operate as prescribed in Rule 4.1.
- 6.8. No repeater contacts are allowed.
- 6.9. Batteries may be charged while in use. Except for Class D stations, the batteries must be charged from a power source other than commercial power mains. To claim the power multiplier of five, the batteries must be charged from something other than a motor driven generator or commercial mains.
- 6.10. All stations for a single entry must be operated under one callsign, except when a dedicated GOTA station is operated as provided under Field Day Rule 4.1.1. it uses a single, separate callsign.
- 7. Scoring: Scores are based on the total number of QSO points times the power multiplier corresponding to the highest power level under which any contact was made during the Field Day period plus the bonus points. Temporary rule waiver: For Field Day 2021, an aggregate club score will also be published, which will be the sum of all individual entries indicating a specific club (similar to the aggregate score totals used in ARRL affiliated club competitions). Ordinarily, club names are only published in the results for Class A and Class F entries, but the temporary rule waiver for 2021 allows participants from any Class to optionally include a single club name with their submitted results following Field Day. For example, if Podunk Hollow Radio Club members Becky, W1BXY, and Hiram, W1AW, both participate in 2021 Field Day -- Hiram from his Class D home station, and Becky from her Class C mobile station -- both can include the radio club's name when reporting their individual results. The published results listing will include individual scores for Hiram and Becky, plus a combined score for all entries identified as Podunk Hollow Radio Club.

7.1. OSO Points:

- 7.1.1. Phone contacts count one point each.
- 7.1.2. CW contacts count two points each.
- 7.1.3. Digital contacts count two points each.
- 7.2. Power multipliers: The power multiplier that applies is determined by the highest power output of any of the transmitters used during the Field Day operation.
 - 7.2.1. If all contacts are made using a power of 5 Watts or less and if a power source other than commercial mains or motor-driven generator is used (batteries, solar cells, water-driven generator), the power multiplier is 5 (five).
 - 7.2.2. If all contacts are made using a power of 5 Watts or less, but the power source is from a commercial main or from a motor-driven generator, the power multiplier is 2. If batteries are charged during the Field Day period using commercial mains or a motor-driven generator the power multiplier is 2 (two).
 - 7.2.3. If any or all contacts are made using an output power up to 150 Watts or less, the power multiplier is 2 (two).
 - 7.2.4. If any or all contacts are made using an output power greater than 150 Watts, the power multiplier is 1 (one).
 - 7.2.5. The power multiplier for an entry is determined by the maximum output power used by any transmitter used to complete any contact during the event. (Example: a group has one QRP station running 3 Watts and a second station running 100 Watts, the power multiplier of 2 applies to all contacts made by the entire operation).
- 7.3. Bonus Points: All stations are eligible for certain bonus points, depending on their entry class. The following

bonus points will be added to the score, after the multiplier is applied, to determine the final Field Day score. Bonus points will be applied only when the claim is made on the summary sheet and any proof required accompanies the entry or is received via email or normal mail delivery.

- 7.3.1. 100% Emergency Power: 100 points per transmitter classification if all contacts are made only using an emergency power source up to a total of 20 transmitters (maximum 2,000 points.) GOTA station and free VHF Station for Class A and F entries do not qualify for bonus point credit and should not be included in the club's transmitter total. All transmitting equipment at the site must operate from a power source completely independent of the commercial power mains to qualify. (Example: a club operating 3 transmitters plus a GOTA station and using 100% emergency power receives 300 bonus points.) Available to Classes A, B, C, E, and F.
- 7.3.2. Media Publicity: 100 bonus points may be earned for attempting to obtain publicity from the local media. A copy of the press release, or a copy of the actual media publicity received (newspaper article, etc.) must be submitted to claim the points. Available to all Classes.
- 7.3.3. Public Location: 100 bonus points for physically locating the Field Day operation in a public place (i.e. shopping center, park, school campus, etc). The intent is for amateur radio to be on display to the public. Available to Classes A, B and F.
- 7.3.4. Public Information Table: 100 bonus points for a Public Information Table at the Field Day site. The purpose is to make appropriate handouts and information available to the visiting public at the site. A copy of a visitor's log, copies of club handouts or photos is sufficient evidence for claiming this bonus. Available to Classes A, B and F.
- 7.3.5. Message Origination to Section Manager: 100 bonus points for 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. The Section Manager message is separate from the messages handled in Rule 7.3.6. and may not be claimed for bonus points under that rule. Available to all Classes.
- 7.3.6. 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.
- 7.3.7. 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 norepeater 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 satellite.
- 7.3.8. Alternate Power: 100 bonus points for Field Day groups making a minimum of five QSOs without using power from commercial mains or petroleum driven generator. This means an "alternate" energy source of power, such as solar, wind, methane or water. This includes batteries charged by natural means (not dry cells). The natural power transmitter counts as an additional transmitter. If you do not wish to increase your operating category, you should take one of your other transmitters off the air while the

natural power transmitter is in operation. A separate list of natural power QSOs should be submitted with your entry [emphasis added.]. Available to Classes A, B, E, and F.

- 7.3.9. W1AW Bulletin: 100 bonus points for copying the special Field Day bulletin transmitted by W1AW (or K6KPH) during its operating schedule during the Field Day weekend (listed in this rules announcement). An accurate copy of the message is required to be included in your Field Day submission. (Note: The Field Day bulletin must be copied via amateur radio. It will not be included in Internet bulletins sent out from Headquarters and will not be posted to Internet BBS sites.) Available to all Classes.
- 7.3.10. Educational activity bonus: One (1) 100-point bonus may be claimed if your Field Day operation includes a specific educational-related activity. The activity can be diverse and must be related to amateur radio. It must be some type of formal activity. It can be repeated during the Field Day period but only one bonus is earned. For more information consult the FAQ in the complete Field Day packet. Available to Classes A & F entries and available clubs or groups operating from a club station in class D and E with 3 or more participants.
- 7.3.11. Site Visitation by an elected governmental official: One (1) 100-point bonus may be claimed if your Field Day site is visited by an elected government official as the result of an invitation issued by your group. Available to all Classes.
- 7.3.12. Site Visitation by a representative of an agency: One (1) 100-point bonus may be claimed if your Field Day site is visited by a representative of an agency served by ARES in your local community (American Red Cross, Salvation Army, local Emergency Management, law enforcement, etc.) as the result of an invitation issued by your group. ARRL officials (SM, SEC, DEC, EC, etc) do not qualify for this bonus. Available to all Classes.
- 7.3.13. GOTA Bonus. Class A and F stations operating a GOTA station may earn the following bonus points:
 - 7.3.13.1. When a GOTA operator successfully completes 20 QSOs, they receive 20 bonus points. Upon reaching an additional 20 QSOs the same operator receives a second 20 bonus points, up to a maximum of 100 Bonus points per GOTA operator. An operator may make more than 100 QSOs but the QSOs over 100 do not qualify for an additional bonus.
 - 7.3.13.1.1. Additional GOTA operators may earn the GOTA bonus points under this rule, up to the maximum of 500 bonus points. (Remember that there is a 1000-QSO limit for the GOTA station. But no single GOTA operator may earn more than 100 of the GOTA bonus points except as provided in 7.3.13.2.)
 - 7.3.13.1.2. A single GOTA operator must complete all 20 QSOs required before the bonus is earned. There is no "partial credit" for making only a portion of the 20 QSOs or "pooling" QSOs between operators.
 - 7.3.13.2. If a GOTA station is supervised full-time by a GOTA Coach, the bonus points earned for each 20 QSOs completed under Rule 7.3.13.1. will be doubled.
 - 7.3.13.2.1. The GOTA Coach supervises the operator of the station, doing such things as answering questions and talking them through contacts, but may not make QSOs or perform logging functions.
 - 7.3.13.2.2. To qualify for this bonus, there must be a designated GOTA Coach present and supervising the GOTA station at all times it is being operated.
- 7.3.14. Web submission: A 50-point bonus may be claimed by a group submitting their Field Day entry via thehttps://field-day.arrl.org/fdentry.php web app. Available to all Classes.

- 7.3.15. Field Day Youth Participation:
 - 7.3.15.1. A 20-point bonus (maximum of 100) may be earned by any Class A, C, D, E, or F group for each participant age 18 or younger at your Field Day operation that completes at least one QSO.
 - 7.3.15.2. For a 1-person Class B station, a 20-point bonus is earned if the operator is age 18 or younger. For a 2-person Class B station, a 20-point bonus is earned for each operator age 18 or younger (maximum of 40 points.) Keep in mind that Class B is only a 1 or 2 person operation. This bonus does not allow the total number of participants in Class B to exceed 1 or 2.
- 7.3.16 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 to their operation. Individual participants do not qualify for this bonus. Club websites do not qualify for this bonus. Available to all classes.
- 7.3.17 Safety Officer Bonus: A 100-point bonus may be earned by having a person serving as a Safety Officer for those groups setting up Class A stations. This person must verify that all safety concerns on the Safety Check List (found in the ARRL Field Day Packet) have been adequately met. This is an active bonus simply designating someone as Safety Officer does not automatically earn this bonus. A statement verifying the completion of the Safety Check List must be included in the supporting documentation sent to ARRL HQ in order to claim this bonus.

8. Reporting:

- 8.1. Entries may be submitted to the ARRL via:
 - 8.1.1. Field Day Web App at https://field-day.arrl.org/fdentry.php or
 - 8.1.2. USPS or other delivery service to (tracking highly recommended): Field Day Entries, 225 Main St, Newington, CT 06111.
- 8.2. Entries must be postmarked or submitted by Tuesday July 27, 2021. Late entries cannot be accepted.
- 8.3. A complete Field Day Web Applet Submission site entry consists of:
 - 8.3.1. An official ARRL summary sheet which is completed via web app at https://fieldday.arrl.org/fdentry.php;
 - 8.3.2. Supporting information uploaded via web app. Supporting information must include:
 - 8.3.2.1. An attached list of stations worked by band/mode during the Field Day period (dupe sheet or an alpha/numeric list sorted by band and mode a Cabrillo log can be submitted in lieu of a Dupe Sheet/Calls list by band/mode); and
 - 8.3.2.2. Proof of all bonus points claimed (copies of visitor logs, press releases, NTS messages handled, photographs, etc).
 - 8.3.2.3 The web app will display a confirmation number and email a confirmation of your Field Day entry to the email address entered via the app. Please be sure to record this confirmation number and/or save the confirmation email.
- 8.4 While the preferred method of submitting entries is via the Web Applet, entries and/or supporting documentation may alternately be submitted via email to fieldday@arrl.org. A complete non-web-app email submission consists of:
 - 8.4.1. An electronic copy of an ARRL summary sheet completely and accurately filled out;

- 8.4.2. An attached list of stations worked by band/mode during the Field Day period (dupe sheet or an alpha/numeric list sorted by band and mode); and
- 8.4.3. Proofs of bonus points claimed (copies of visitor logs, press releases, NTS messages handled, photographs, etc).
- 8.5. A complete land/postal-mail or delivery non-electronic submission consists of:
 - 8.5.1. A complete and accurate ARRL summary sheet;
 - 8.5.2. An accompanying list of stations worked by band/mode during the Field Day period (dupe sheet or an alpha/numeric list sorted by band and mode); and 8.5.3. Proofs of bonus points claimed (copies of visitor logs, press releases, NTS messages handled, photographs, etc).
- 8.6. Complete station logs are NOT required for submission, and ARRL does not use the logs. The club should maintain log files for one year in case they are requested by ARRL HQ. However, a list of stations worked sorted by band and mode (dupe sheet) is required.
- 8.7. Cabrillo format log files are NOT required for Field Day entries, but they will be accepted in lieu of the dupe sheets (but do not constitute an entry unless the web app (or a corresponding summary sheet with complete mailed entry) is also submitted.
- 8.8. Digital images of proof of bonus points are acceptable.
- 8.9. Electronic submissions are considered signed when submitted.

9. Miscellaneous:

- 9.1. The schedule of bulletin times for W1AW is included in this announcement. While W1AW does not have regular bulletins on weekends, the Field Day message will be sent according to the schedule included with this announcement. The W1AW bulletins will be transmitted on the regular W1AW frequencies listed in QST. The PSK31 bulletin will be transmitted on the W1AW teleprinter frequencies. The special Field Day bulletin will be transmitted from station K6KPH on the West Coast as included in the bulletin schedule.
- 9.2. See "General Rules for All ARRL Contests," "General Rules for All ARRL Contests on Bands Below 30 MHz," and "General Rules for All ARRL Contests on Bands Above 50 MHz" for additional rules (www.arrl.org/contest-rules) that may cover situations not covered in these Field Day rules. Decisions of the ARRL Awards Committee are final in adjudicating Field Day problems.
- 9.3. The complete Field Day information package may be obtained by: 9.3.1. Sending a SASE with 5 units of postage to: Field Day Information Package, ARRL, 225 Main St., Newington, CT 06111; or 9.3.2. By downloading from the Field Day home page at: www.arrl.org/field-day 9.4. For more Field Day information/questions contact: fdinfo@arrl.org or phone (860) 594-0232