

2021 FIELD DAY



arrrl.org

Field Day 2021



- **June 26-27**
- **Setup: Friday, June 25**
- **Concord Rod & Gun Club**
 - **74 Strawberry Hill Rd,
Concord, MA**

Concord Rod & Gun Club

74 Strawberry Hill Rd, Concord

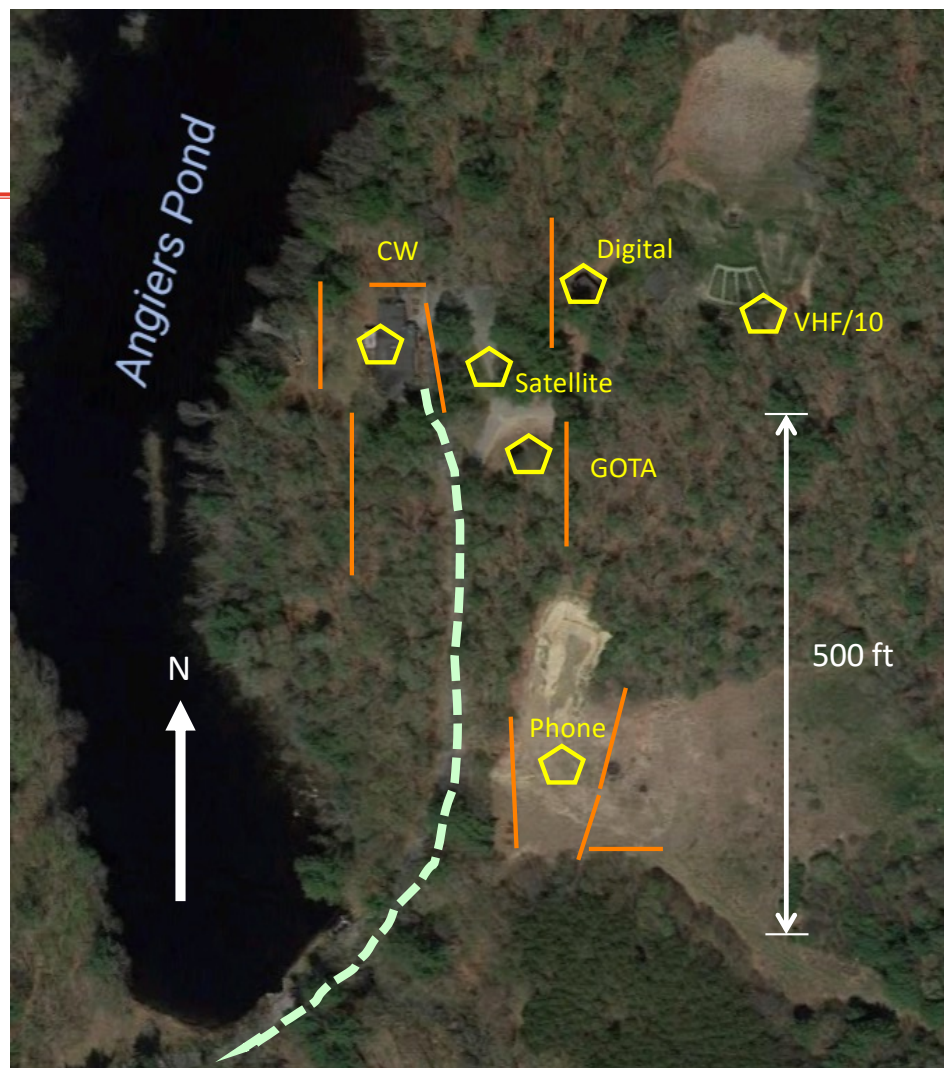


Stations & Leads



- CW
 - Bob, W1IS
- VHF/10 Meters
 - Allison, KB1GMX
- Digital
 - Rich, AB1HD
- Satellite
 - Bob, KB1SWZ
- Phone
 - George, K1IG
- GOTA
 - Andy, KB1OIQ

Responsible for: rig, connectors, power supply, power distribution, antenna switch, headsets, office supplies, computer, logging SW, lighting, fire extinguisher, first aid kit, spare parts, control operators



Site Plan

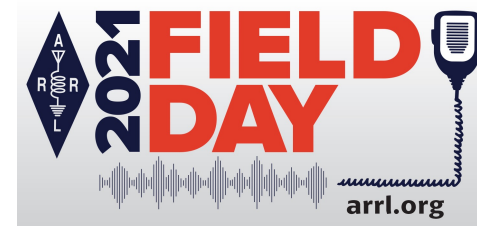
Antenna
locations are
approximate

Infrastructure Leads



- **HF Antennas**
 - Bob, W1IS
- **Food**
 - Charlie, W1ADL
 - Rick, N1RAG
- **Site Liaison**
 - Dale, KB1ZKD
- **Safety**
 - Dale, KB1ZKD
- **Finance**
 - Alan, W1AHM
- **Signage**
 - Alan, W1AHM

Schedule



Friday June 25

10:00 AM – Sunset
Antenna Setup

Saturday June 26

8:00 AM
Rig Setup & Check
11:00 AM
Training
12:30 PM
Lunch
2:00 PM
Operations Begin
6:00 PM
Dinner

Sunday June 27

12:00 PM
Lunch
2:00 PM
Operations End
Teardown

Weather



- Too soon to know – could be hot or cold or rain (or all three)
- Cool nights – bring a jacket
- Hydrate!
- Don't forget sunscreen!

Attendance Sheet



PART of Westford Field Day 2021 Attendance Sheet

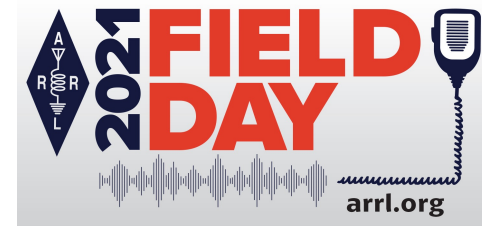
Please sign in here once and only once for the weekend,
whether you are a ham operator or a visitor.

Age <= 18

						Member	
Nr	Name	Call Sign	Email	City, ST	PART	ARES	Minor
Friday							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

EVERYBODY signs in
Once, and **ONLY** once!

Food!



- We need an accurate head count
- Saturday Lunch
- Saturday Dinner
- Sunday Breakfast

No Mandatory COVID Restrictions

Field Day Operations



- Safety
- 446.025 simplex for site coordination
- Visitors — Possible
 - Wear your badge
 - Invite your neighbors



We're selling Amateur Radio! Greet all the visitors and explain what you're doing!

Bonus Points



- Emergency Power (400 points)
- Media Publicity
- Satellite QSO
- Alternate Power
- W1AW Bulletin
- Educational Activity
- Youth Participation
- Web Submission
- Public Location
- Public Info Table
- Safety Officer
- Site Visit by Elected Official
- Site Visit by Agency Rep
- Social Media
- Message Handling
- Message to Section Mgr.
- GOTA Station

Most Items Are Worth Up To 100 Points

Contacts and Logging



- Exchange: Class and ARRL section
- We are: “4A EMA” or “4A Eastern Massachusetts”
- Stations can be worked once per band - mode
- Don’t say “Please copy”

United States			
Alabama	AL	North Texas	NTX
Alaska	AK	Northern Florida	NFL
Arizona	AZ	Northern New Jersey	NNJ
Arkansas	AR	Northern New York	NNY
Colorado	CO	Ohio	OH
Connecticut	CT	Oklahoma	OK
Delaware	DE	Orange	ORG
East Bay	EB	Oregon	OR
Eastern Massachusetts	EMA	Pacific	PAC
Eastern New York	ENY	Puerto Rico	PR
Eastern Pennsylvania	EPA	Rhode Island	RI
Eastern Washington	EWA	Sacramento Valley	SV
Georgia	GA	San Diego	SDG
Idaho	ID	San Francisco	SF
Illinois	IL	San Joaquin Valley	SJV

Canada	
Alberta	AB
British Columbia	BC
Greater Toronto Area	GTA
Manitoba	MB
Maritime	MAR
Newfoundland/Labrador	NL
Northern Territories	NT
Ontario East	ONE
Ontario North	ONN
Ontario South	ONS
Quebec	QC
Saskatchewan	SK

} **Canada**

DX	
DX	DX

Operator Signup



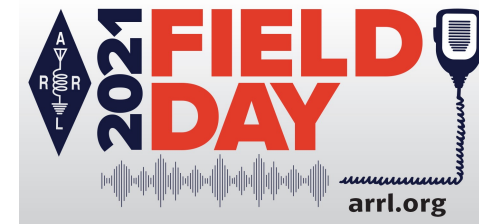
PART Field Day Station Operators

CW

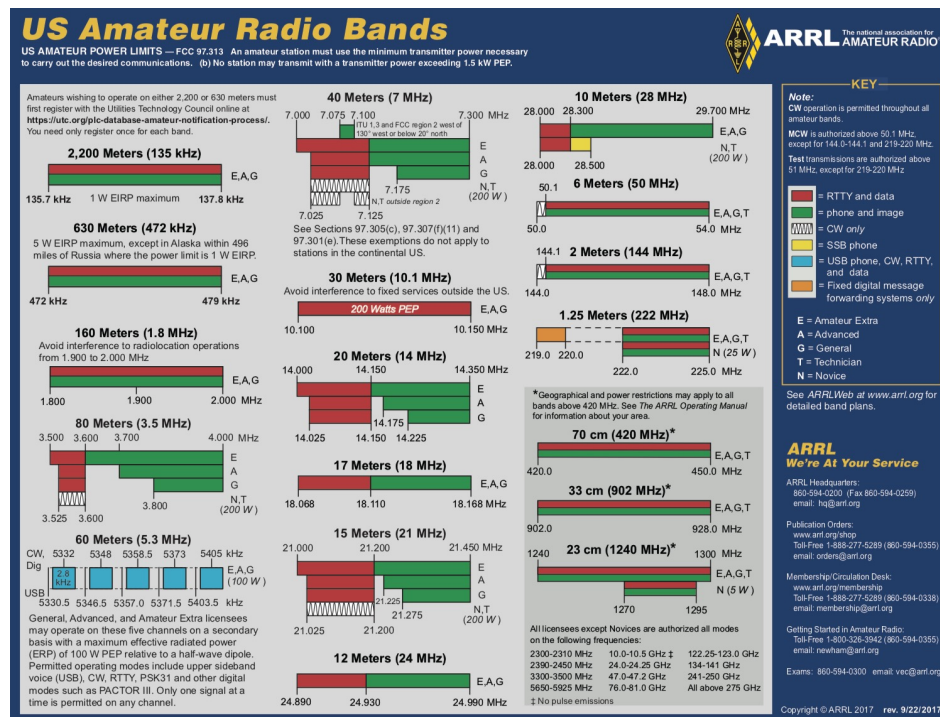
Saturday		Sunday	
Time	Call	Time	Call
1400		0000	
1430		0030	
1500		0100	
1530		0130	
1600		0200	
1630		0230	
1700		0300	
1730		0330	
1800		0400	

**Optional but,
Those who
sign up have
priority!**

Field Day Operations

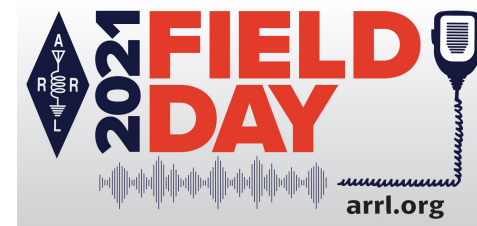


The Control Operator's license class determines the band limits

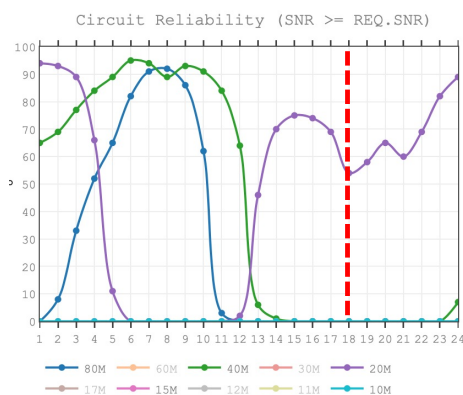


Every station will have a copy of the band plan.

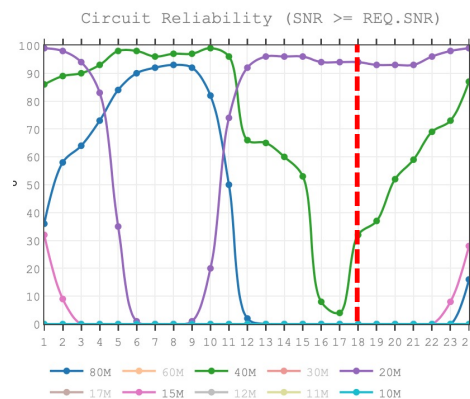
Propagation Forecast



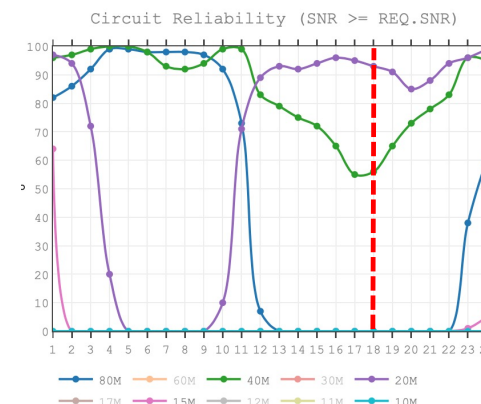
West Coast



Central



South



Takeaways:

- There's a path open to somewhere all the time
- Best bands: 80M, 40M, & 20M. Worst: 10M, 15M
- Midnight - morning operations are very productive
- Try 80 meters! Look for openings on 10 meters!
- Best for HI/AK: 20M (Day), 40M (Night) (Check DX spots)

Colors

80 Meters

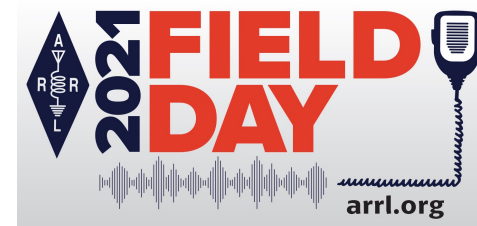
40 Meters

20 Meters

15 Meters

10 Meters

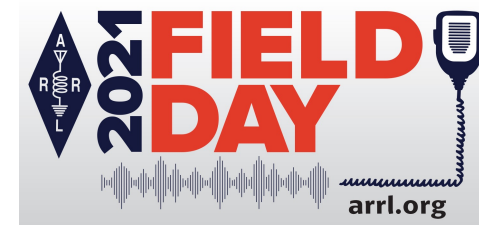
W1AW Field Day Bulletin





Day	Mode	Local	UTC
Friday	CW	8:00 PM	0000
	Digital	9:00 PM	0100
	Phone	9:45 PM	0145
	CW	11:00 PM	0300
Saturday	CW	10:00 AM	1400
	Phone	11:00 AM	1500
	CW	8:00 PM	0000
	Digital	9:00 PM	0100
	Phone	9:45 PM	0145
Sunday	CW	10:00 AM	1400
	Phone	11:00 AM	1500
	Digital	12:00 PM	1600

- CW frequencies are 1.8025, 3.5815, 7.0475, 14.0475, and 18.0975 MHz.
- Digital frequencies are 3597.5, 7.095, 14.095, and 18.1025 MHz. (PSK31 and MFSK16 are now included in the regular Digital runs.)
- Phone frequencies are 1.855, 3.990, 7.290, 14.290, and 18.160 MHz.

Messages

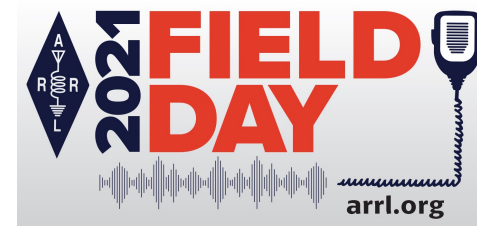


- George, K1IG & John, WB2OSZ
- One radiogram to Section Manager and 10 others

 ARRL — the national association for Amateur Radio™ 							
RADIOGRAM							
NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
	R	G	K1IG	ARL 5			
TO				THIS RADIO MESSAGE WAS RECEIVED AT			
				AMATEUR STATION _____ PHONE _____			
				NAME _____ E-MAIL _____			
				STREET _____			
				CITY, STATE, ZIP _____			
PHONE NUMBER _____							
E-MAIL _____							
ARL		FIFTY		ONE		* FIELD DAY	
FROM		DATE		TIME		TO	
REC'D				SENT			
<small>This message was handled at no charge by a licensed Amateur Radio operator, whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio may be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org.</small>				<small>The ARRL is the national association for Amateur Radio and the publisher of QST magazine. One of its functions is promotion of public service communication among Amateur Radio operators. To that end, the ARRL has organized the National Traffic System for daily nationwide message handling.</small>			
				1320 2/11			

* “Greetings by Amateur Radio. This message is sent as a free public service by ham radio operators at Field Day. Am having a wonderful time.”

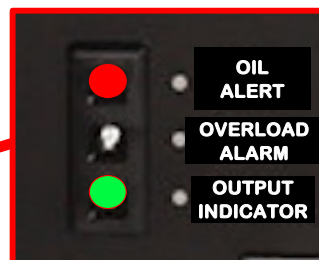
Generator Operations



- Generators can run about six hours on one fill-up (longer with aux tank).
- Recommend refueling every four hours — “Graceful Shutdown”
- Generators **CANNOT** be refueled while running



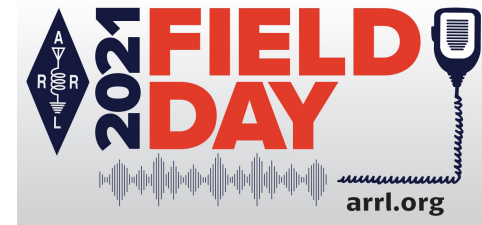
If red light comes on,
generator shuts down!



Status Lights



Generator Operations



Generator Refueling Log

Oncoming operator is responsible for ensuring adequate fuel is in generator!
Recommend refueling every four hours

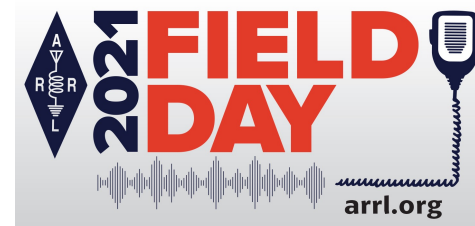
Refueling Procedure:

1. Turn off rig
2. Turn off power supply
3. If generator is running, turn it off
4. Refuel generator
5. CHECK OIL
6. Restart generator
7. Turn on power supply
8. Turn on rig
9. Notify generator team to replenish fuel supply
10. Make lots of contacts

**If rig has battery backup you
can continue operations —
just turn off the power
supply while refueling**

Local Time	Name	Gen Team Notified	Comments





Antennae

Bob, W1IS

Materials to Launch Antennae



- 2,000 ft Rope
- 1300 ft RG-8X
- Bow and Arrows
- Air Guns
- Twine
- Safety Tape to mark ends in the woods & trip zones
- At least 15 energetic hams to launch & tear-down!

SSB, GOTA & Digital



SSB

- 600 ft rope, ~400 ft RG-8X
- Multi-Band OCF designed & built by KC1DSQ
- 2 element tri-band beam 20, 15 & 10 M, built by Allison, KB1GMX
- 2 element 40 M beam designed by W1IS
- Receiving loop – 100 ft wire, vertical loop, 9:1 balun
- Safety tape

GOTA – G5RV (200 ft rope, 100 ft RG-8X)

Digital

- Multi-Band OCF designed by KC1DSQ & built by W1IS
- 300 ft rope, 100 ft RG-8X
- Safety Tape

CW & VHF/10 Stations



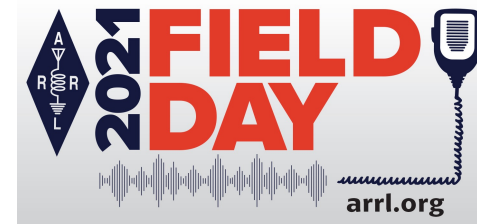
CW

- 600 ft rope, ~ 400 ft RG-8X
- G5RV
- 2 element 40M Beam designed by W1IS
- 2 element tri-band beam, 20, 15, & 10 M built by W1IS
- Receiving loop - 100ft wire, vertical loop, 9:1 balun

10M & VHF

- 300 ft rope, ~300 ft RG-8X
- 6M loop suspended from tree
- 2M small beam up ~ 20 ft
- 2M vertical on pole for FM
- 10M half wave vertical suspended from tree

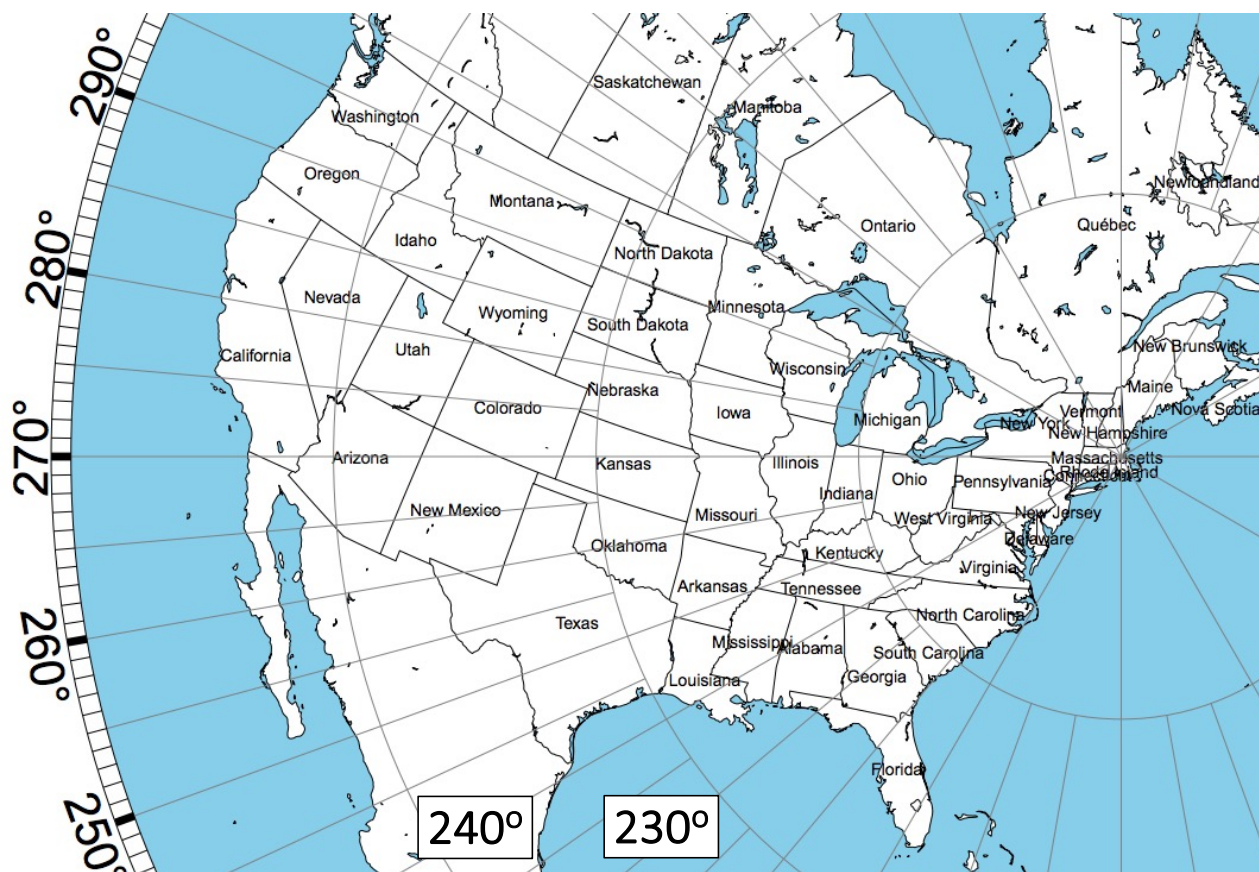
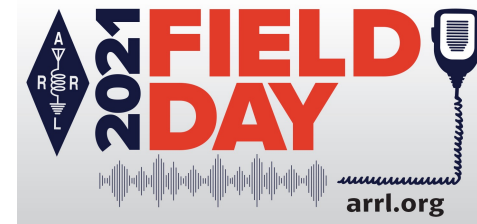
Guidelines for Set-Up



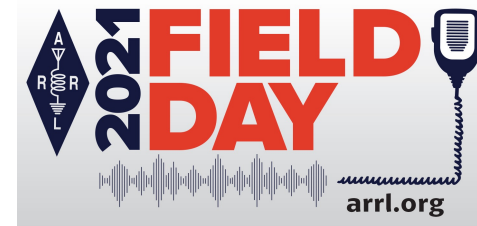
- Milk crates: SSB, CW, GOTA/Digital
- 10M & VHF: Allison's truck
- Crates top to bottom: ropes - antenna - coax, repeat.
- Antennas, coax and most ropes labeled. Default L = 100 ft.
- 2 people to un-roll and roll-up wire beams, *Please*
- Put up multi-band antennas first, OCFs & G5RVs
- Beams point WEST to cover the whole country.



Aiming the Beams – West to Dallas



Aiming the Beams – West to Dallas



City	Great Circle Heading from MA	Direction
Seattle	312	WNW
San Francisco	296	WNW
Buffalo	294	WNW
Denver	291	WNW
Chicago	289	WNW
San Diego	286	WNW
Phoenix	284	WNW
Oklahoma City	275	W
Dallas	269	W
New Orleans	257	WSW
Atlanta	249	WSW
Miami	222	SW

3 dB Beam Width 20 M beam
70 Degrees

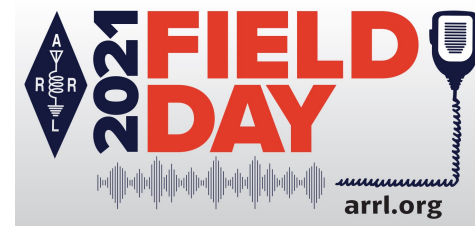
3dB Beam Width 40 M beam
99 Degrees

Miami Heading – Seattle
90 degrees

Guidelines for Tear-Down



- Rolling up wires & ropes neatly will save time next year.
- 2 people to roll up beams – one spreader at a time.
 - Start at one end & roll towards center
 - Roll up other end rolling in the same direction
 - Watch the ends – they tend to slip off when rolling up
- Return cables & ropes to their owners
- Names/Calls on coax really helps, otherwise it's probably W1IS's.



**Thank You & Let's
Have Fun This
Weekend**



Field Day Stations

Information Packets



Each station will be given a packet with:

1. Station Identifier Sign
2. Band Plan
3. ARRL Section List
4. Generator Log
5. Exchange Information Sign
6. Operator Sign-Up Sheet
7. ARRL Bulletin Schedule

Get On The Air



Andy, KB10IQ

Get On The Air (GOTA)



- Station Lead: Andy, KB1OIQ
- Rig: IC-7300 (Provided by Andy KB1OIQ)
- Antenna: G5RV (Provided by Bob W1IS)
- Power: 100 Ahr battery, recharged via 130W solar panel & generator
- Tent: Provided by Andy, KB1OIQ
- Logging Computer: Provided by Andy (KB1OIQ)



GOTA Station Rules



- 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.
- When GOTA operators complete 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.
- Full-time coach doubles bonus points

CW Station

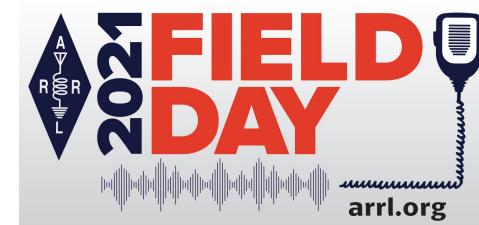


Bob, W1IS

Field Day Preparation



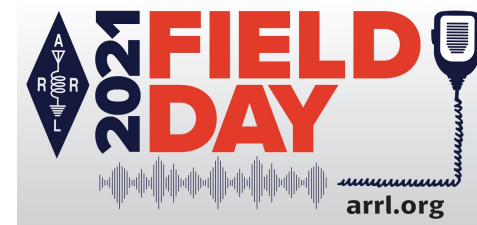
Field Day Preparation



Field Day List				
Antennas		Rigs	General	Personal
Bullets (6)	100 ft Dacron Black	K3	Station Signs	Hat
2- 2 el 40 M Wire Beams	65 ft Dacron Black	K3 Key	Quiet Please	Name Tag
2- 2 El 3-Band Wire Beams	50 ft Dacron Black	Microphone	Bug zapper	Bug stuff
4 - G5RVs	130 ft Paracord 450 lbs	MFJ SWR Meter	Clip Boards (2)	Bug killer
2- 102 ft rcv antenna	160 ft Paracord 450 lbs	P3 Panadaptor	Tool Box - Tools	Water
2- 9:1 Baluns	115 ft Paracord 450 lbs	USB Cable	Fan	Rain Gear
2 - 100 ft RG-8X	75' Paracord 450 lbs	Key Cables		Meds
2- 30ft RG8-X	98' Paracord 450 lbs	Headsets (2)		Snacks
62ft RG-8U Foam	2-70 ft Paracord 450 lbs	Headphone Amp, cabls		Shorts or Jeans
2- 45ft RG-58AU	50 ft Paracord 450 lbs	Hearing Amp & Cables		
50 ft RG-58U	55 ft Paracord 450 lbs	Sennheiser Headset		
40 ft RG-8X	2-23 ft Paracord 450 lbs	Monoprice Headset		
2-100ft RG-8X (Grey)	150 ft Verizon Tape 1k lbs	Power Supply		
2 - 100' Red Poly 300 lbs	Bow & Arrows	Power cables		
2-100ft RG-8X (Black)	Antenna kit	Power splitter K3, Amp		
73ft RG-58 Foam	Antenna Switch	Antenna Cable With Bullet		
40ft RG-58u	Masking Tape	Pads		
50ft RG-58 Foam	Tent Stakes	Pencils/Pens		
50ft RG-8X (new)	Small Sledge Hammer	Speakers & Power Cable		
100ft RG-8X (new)	Bungee Cords	3 PowerPole Cables & splitter		
2- 100'Blue Poly 100 lbs	Inverter 120 VAC	Fused Power Pole lead		
2 - 100' Yellow poly 95 lbs	Hot Iron Rope cutter	LED Lamp		
		Reading Lamp		
		Exstension Cord (2)		
		Power Strip 120V		
		Cube taps or equiv.		
		HT 446.025 Charger etc		
		Yaesu RX-1 HT		
		MacBookPro kit		
		Instruction Sheets K3		
		Instruction Sheet Rumlog NG		
		Rig Expert		



K3 Controls for CW at FD



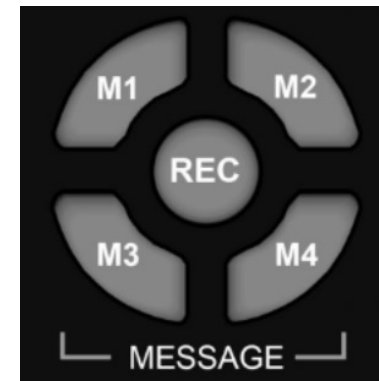
1. Main Tuning
2. Width Control: Don't Push - changes filter type – leave in Band-Pass
3. Speed Control: Internal Keyer Speed Adjustment
4. Volume control
5. ATU: Push & Hold to turn on tuner – Momentary Push to Tune
6. Band Change Buttons
7. Pre-ATT: Push for Pre-Amp, Push & Hold for Attenuator (ATT helps with QRM, QRN especially on 80 & 40 M)
8. NB: Push for Noise Blanker, Hold to set Blanker Level w/VFO B knob
9. Spot: Zero beats signal, very handy
10. CWT: CWT turns on tuning meter – tune to center to zero beat
11. RIT Control: Receiver offset tuning (Use when running a perch)



12 – K3 Memory Keyer

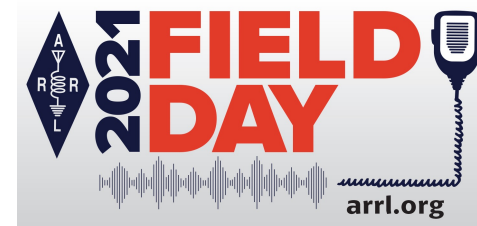


- M1 sends K1IG
- M2 sends 4A EMA
- M3 sends CQ FD K1IG
- Same & more also on
Keyboard / RumLogNG
- Please don't touch the "Rec" button!



Note that pro-signs like K and AR are rarely used in the heat of "the battle" unless you are dealing with a new operator at the other end. Then do what you can to make it easier for them.

X



- Don't touch any button with an X unless you are sure what it does. FD is not the time to experiment.
- If you accidentally hit an X button, please contact: George - K1IG or Bob - W1IS.
- If all else fails – READ THE MANUAL!

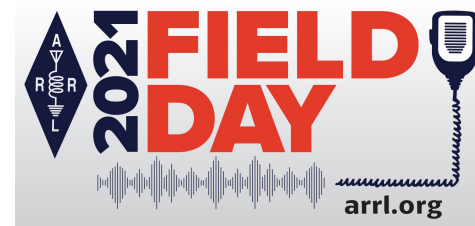


Don't Be Overwhelmed!



- **Several here to help**
We will walk you through a few QSOs
- **You can do QSOs with keyer, straight key or keyboard.**
- **Most importantly –**

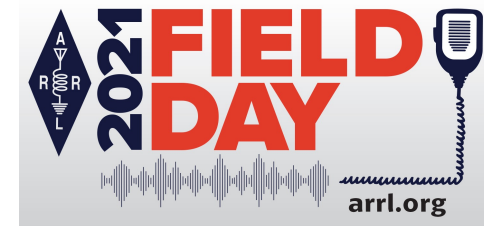
HAVE FUN!



RumLogNG Contest Logger

W1IS, K1IG

Logging Window



Mode & Band

Exchange Window

Put your Call here before you operate

Call Window

Stats

Current Band

Similar Calls
SPC – Super Check
Partial

Go/No-Go Window

W1CCE

0 QSO(s) 0 dupe(s)

160 80m 40m 30m 20m 17m 15m 12m 10m 6m 2m 70cm

My SR: 0841z-0914z My SS: 0009z-0042z (Civil)

Follow trx

CW

40m

7,024.3

5/25/17 19:14:14

599

3A EMA

599

Call sign

rst sent

Number sent

rst rcvd

Number rcvd

Save QSO

K1IG

op: Callsign

All time on: 0.0 h

All time off: 2.5 h

Op time on: 0.0 h

Op time off: 2.5 h

Band change: > 1 hour

This hour: 0 x

Last 10: ???

Last 100: ???

Last hour: 3 QSOs/h

CW speed: 23 wpm

Last id: Don't forget!

ESM

S&P

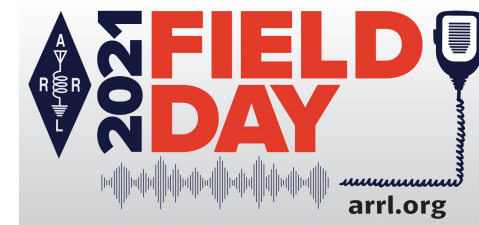
Split is off

Date	Time	Call sign	Band	...	Sent	Rcvd	Op	Q
5/25/17	16:40:24	W1IS	40m	CW	3A EMA	1D EMA		1
5/25/17	19:02:26	W1ZMB	40m	CW	3A EMA	1D ENY		2
5/25/17	19:03:04	W1MGA	40m	CW	3A EMA	1D EMA		3
5/25/17	19:13:50	W1CCE	40m	CW	3A EMA	1D EMA		4

CW Data Phone All QSOs

Band	DXCC	CQ	QSOs	Dupes	Total
160m:	0	0	0	0	0
80m:	0	0	0	0	0
40m:	1	1	4	0	4
30m:	0	0	0	0	0
20m:	0	0	0	0	0
17m:	0	0	0	0	0
15m:	0	0	0	0	0
12m:	0	0	0	0	0
10m:	0	0	0	0	0
6m:	0	0	0	0	0
2m:	0	0	0	0	0
70cm:	0	0	0	0	0
Total:	1	1			
Sum	1	1	4	0	4

Good S&P Contact



1. Enter Call in Call Window
2. "Space" to go to Exchange Window – Green means not a Dupe
3. Enter Exchange Received in Exchange Window
4. F6 to send our Exchange or send it by hand
5. "Return" to Log QSO

Call Window

Good Contact

QSO Count

The screenshot shows the General Contest software interface. The top section displays the current station's information: K, United States Of America, NA. The bottom section shows the contact details: W7CCE, 599, 3A EMA, 599, 1D AZ. The status bar indicates "*** Needed station ***". The QSO Count table at the bottom shows the following data:

Date	Time	Callsign	Band	Mode	Sent	Rcvd	Op	Q
5/25/17	16:40:24	W1IS	40m	CW	3A EMA	1D EMA	1	
5/25/17	19:02:26	W1ZMB	40m	CW	3A EMA	1D ENY	2	
5/25/17	19:03:04	W1MGA	40m	CW	3A EMA	1D EMA	3	
5/25/17	19:13:50	W1CCE	40m	CW	3A EMA	1D EMA	4	

“DUPE”



1. Identify Dupe in RED
2. If in “Run,” Complete QSO – SW will remove it before submittal
3. If in “S&P” quickly move on

/Users/Bob/Documents/Ham Radio/Field Day/FD 2017/Untitled.rpd - General Contest

K, United States Of America, NA X..
CQ: 5 ITU: 8 Sunrise: 0852z Sunset: 0003z 245 mi. 43°
160 80m 40m 30m 20m 17m 15m 12m 10m 6m 2m 70cm
... .. X..
My SR: 0841z-0914z My SS: 0009z-0042z (Civil)

W1MGA X..
1 QSO(s), 0 dupe(s)
160 80m 40m 30m 20m 17m 15m 12m 10m 6m 2m 70cm
... .. X..

All time on: 0.0 h
All time off: 3.0 h
Op time on: 0.0 h
Op time off: 3.0 h
Band change: > 1 hour
This hour: 0 x
Last 10: ???
Last 100: ???
Last hour: 4 QSOs/h
CW speed: 23 wpm
Last id: Don't forget!

Follow trx ☒ CW 40m 7,024.3 5/25/17 19:45:30

Callsign rst sent Number sent rst rcvd Number rcvd

K1IG
op: Callsign

Save QSO

W1RGA

***** DUPE *****

ESM ☐ S&P ☐ Split is off

Date	Time	Callsign	Band	...	Sent	Rcvd	Op	Q
5/25/17	19:03:04	W1MGA	40m	CW	3A EMA	1D EMA		1

Band	DXCC	CQ	QSOs	Dupes	Total
160m:	0	0	0	0	0
80m:	0	0	0	0	0
40m:	1	2	5	0	5
30m:	0	0	0	0	0

DUPE!!!

Send Canned Messages

Function Keys



F1 – CQ FD K1IG

F2 - QRZ

F3 – (Empty for technical reasons)

F4 - K1IG

F5 – Sends Call entered in Call Window

F6 – Sends 4A EMA

F7 - TU

F8 - AGN

Hints



1. Enter Your Call in the “Op” window below K1IG
2. **CRITICAL** - Always Check Band & Mode when Starting and Changing Bands
3. If RUMlogNG doesn't show same frequency as the rig, follow steps below
 1. Transceiver > Reset CAT #1
 2. If that doesn't Exit RUMlogNG – RUMLog>Exit Rumped or ⌘Q
 3. Restart RUMlogNG – Click “Book Icon” on bottom screen menu
 4. If that doesn't work continue.
 5. Restart Computer – Click Apple Icon in upper left >Restart or Hold on-off button for 10 seconds.
 6. If that doesn't work – SEEK HELP from K1IG or W1IS

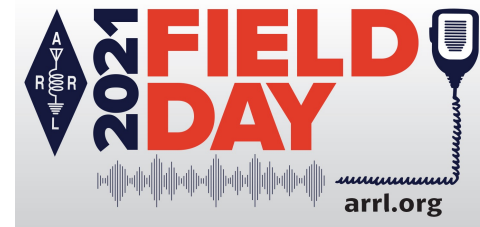


In Case of Difficulty



- To Edit a QSO – Double click, Edit in new window and SAVE
- Incorrect Band or Frequency – Menu at top of screen > Transceiver> Reset CAT #1
- Accidentally get into RST or Number Sent Windows – Fix them by hand and Tab to Number Received and complete entry
- Delete QSO – Menu on top > QSO>Delete QSO

Phone Station



George, K1IG

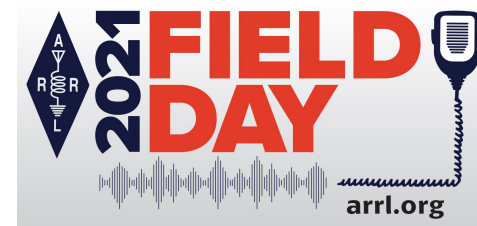
Elecraft K3



- Battery backup (35 Ah)
- Headsets & mic / speakers
- PTT: pistol grip/footswitch
- 3 antennas – manual switching



Keypad Control

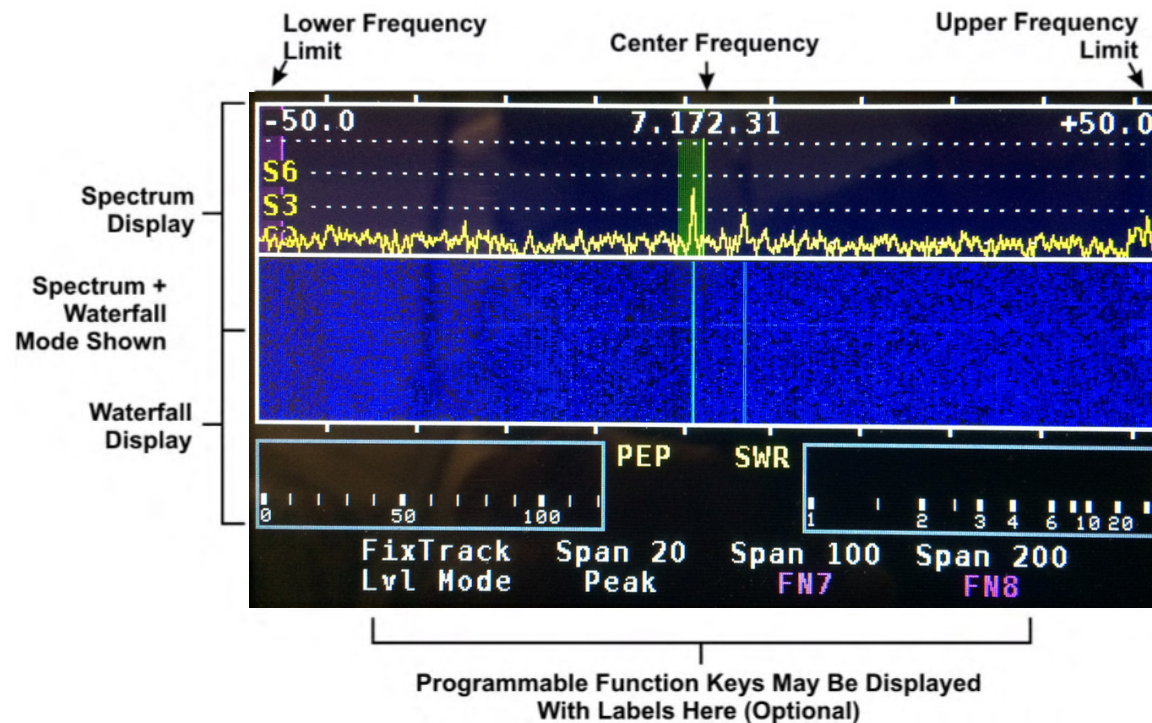
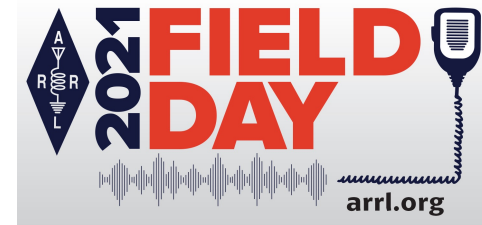


80 CW	40 CW	30 CW	20 CW	17 CW	15 CW	12 CW	10 CW
80 SSB	40 SSB	20 SSB	17 SSB	15 SSB	12 SSB	10 SSB	Ant Tune
PSK 40	PSK 20	PSK 15	PWR 20	PWR 110	Split + 2	Split + 5	No Split
CW	USB	LSB	DATA A	AFSK A	WWV 10	DVRS ON	DVRS OFF
DBW 4K	VBW 2.4K	VBW 1.8K	CBW 1K	CBW 400	CBW 250		UP 50kH
K1IG	3A EMA	CQ FD	MEM 4				

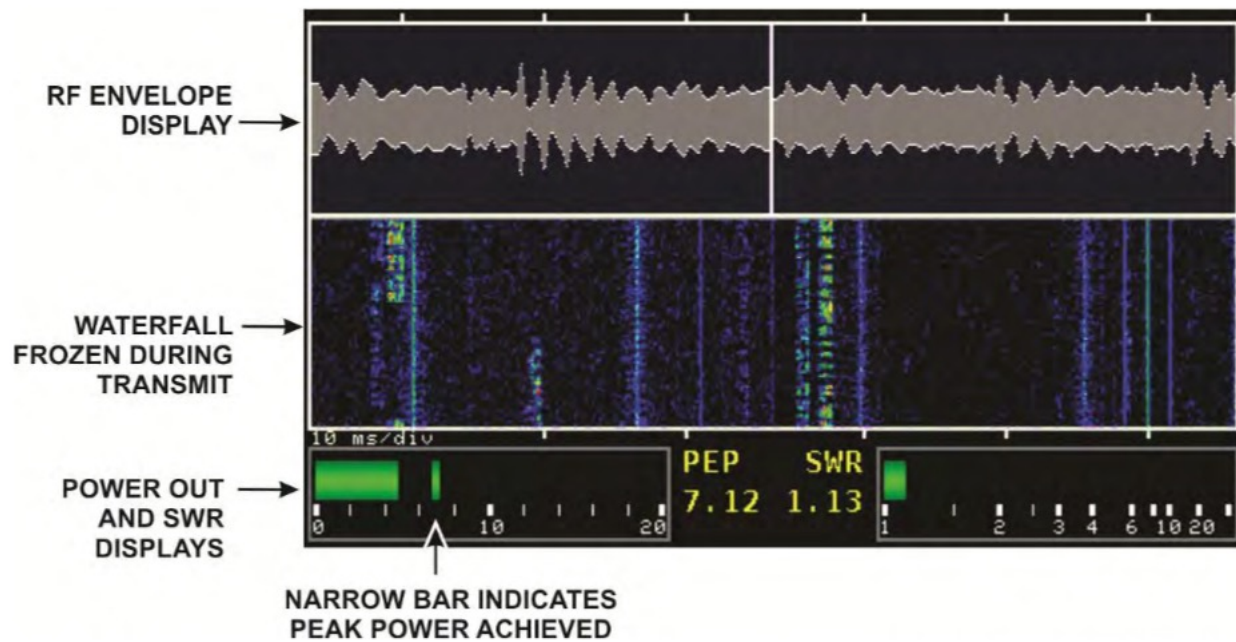


- Single button selects band, mode, frequency (bottom of Extra class phone band), sets filter and bandwidth
- For phone operations, just use the yellow buttons (mostly)
- Switch antenna manually – then **ANT TUNE** button!!!

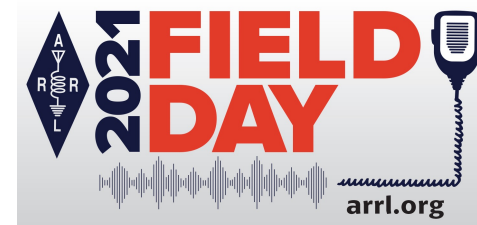
Panadapter - Receive



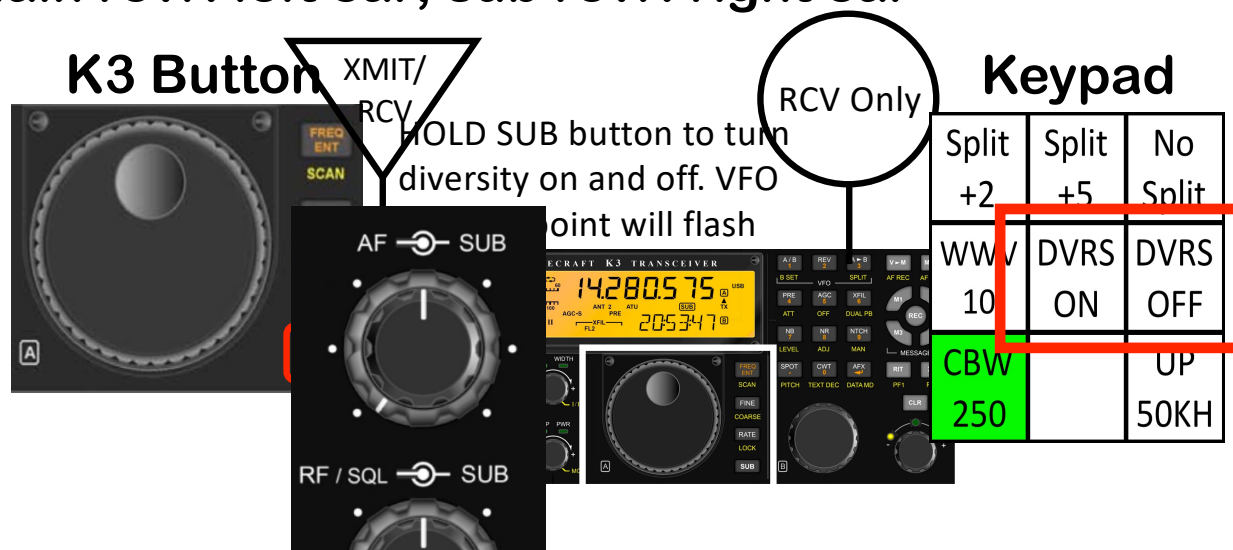
Panadapter - Transmit

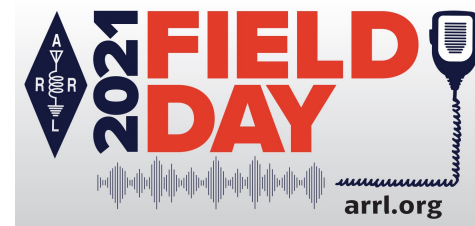


K3 Diversity Reception



- The K3 has two receivers — in diversity mode, each can be on a different receive antenna
- The two receivers are on the same frequency and both are controlled by the same VFO
- Main rcvr: left ear; sub rcvr: right ear

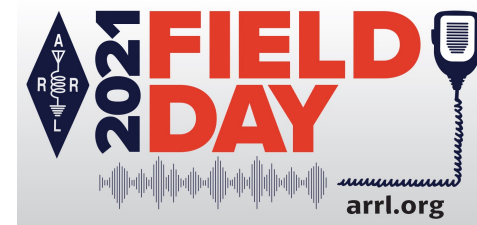




Digital Station

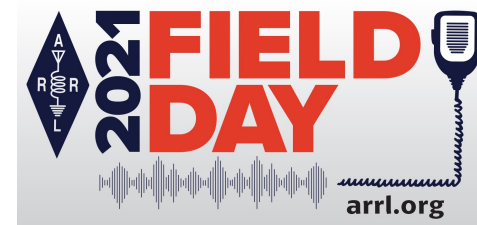
Rich, AB1HD

ICOM 7300 With FT8



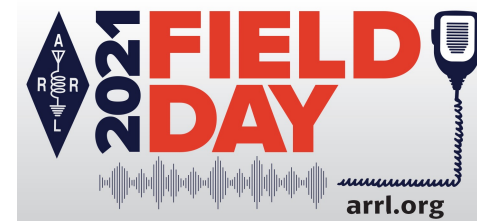
1. Turn on the external 12 volt DC power supply
2. Press the Power button on the IC 7300 (Upper Left)
3. Press the MENU button on the bottom left
4. Touch Load Settings
5. Select either 20M or 40M FT8 (touch Screen)
6. Turn power off wait 1 second and turn it back on
7. The main display should now show your operating frequency, e.g., 14.074 MHz for 20 meters and USB-D

ICOM 7300 With FT8

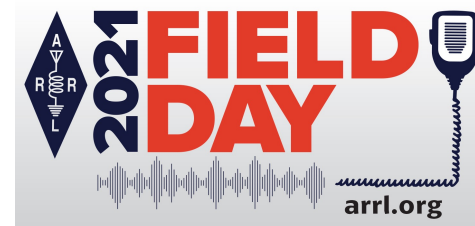


8. Press the multipurpose knob (Upper right side of panel)
9. Make sure power is set to 25% or less. Compression is automatically disabled in digital modes.
10. Set monitor to off or set the volume level you like.
11. Start WSJT-X software on the laptop
12. Make lots of contacts...

WSJT-X Using FT8



Band Activity		Rx Frequency				
Message		UTC	dB	DT	Freq	Message
VE6EY W5ZIT RRR	QSO #1	225630	-6	0.6	282	W1CAM NA2U R-11
N7MJ KK4MZR FM05		225645	-2	0.3	282	NA2U W1CAM RRR
W8VVE K9BO R-08		225700	-4	0.8	282	W1CAM NA2U 73
N2IGW KG5LLO 73		225715	-4	0.3	282	NA2U W1CAM 73
PY4KP W4IMD R-19		225734	Tx		282	W1CAM VE6EY DO20
NE8Z K4MY R+08		225745	-2	0.3	282	CQ W1CAM EN11
W1KOK JJ2LPV PM85		225800	Tx		282	W1CAM VE6EY DO20
NOGTO JA2FSM RRR		225815	-3	0.3	282	VE6EY W1CAM -06
----- 20m		225830	Tx		282	W1CAM VE6EY R-03
VE6EY W5ZIT 73		225845	-5	0.3	282	VE6EY W1CAM -06
AG9S NA4EA +08	QSO #2	225900	Tx		282	W1CAM VE6EY R-05
W8VVE K9BO -03		225915	-8	0.3	282	VE6EY W1CAM RRR
CQ KG5LLO EM54		225930	Tx		282	W1CAM VE6EY 73
PY4KP W4IMD 73		225945	-5	0.3	282	VE6EY W1CAM 73
TI4DJ KD9TZ R-10		230000	1	0.4	1688	CQ W5ZIT DM42
NE8Z K4MY R+08		230019	Tx		1688	W5ZIT VE6EY DO20
W1KOK JJ2LPV PM85		230030	5	0.4	1688	VE6EY W5ZIT -06
HC7AE AE4VJ R-06		230045	Tx		1688	W5ZIT VE6EY R+05
W0MU PY2WND GG68		230100	5	0.3	1688	VE6EY W5ZIT RRR
CQ KQ4OA EM63		230115	Tx		1688	W5ZIT VE6EY 73
NOGTO JA2FSM RRR		230130	-3	0.4	1688	VE6EY W5ZIT 73



VHF/10 Station

Allison, KB1GMX

VHF/10M Station



- What's new this year?
- Less is still more.
- We add 10M for interest!

VHF/10M Antennas



- VHF 6M Rectangle loop, really high! An easy antenna to make!
- VHF 2M Square
- 10M vertical end fed half wave. It's an antenna your can build easily.
- 2m horizontal and vertical for 2M on mast strapped to shed.

VHF Radio



Easy radio to use, things do as marked, no menus.



Tentec Eagle



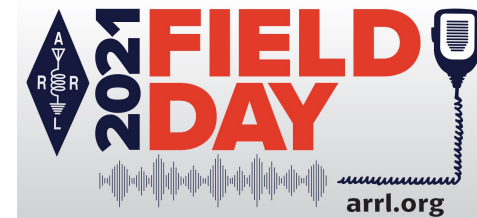
Tentec Eagle



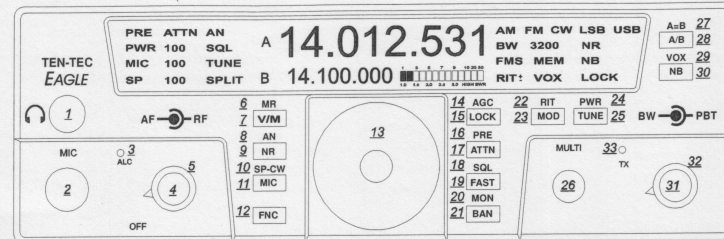
- This will be the 10M 100W radio for phone
- The Quick start card will be on hand for reference.
- Easy radio to use, no menus.



Tentec Eagle



TEN-TEC EAGLE QUICK START GUIDE



- | | |
|---|--|
| 1. Headphone Connector | 15. LOCK – Lock Main Frequency |
| 2. Microphone Connector | 16. PRE – (FNC) Pre Amp (ON/OFF) |
| 3. ALC Indicator | 17. ATTN – Attenuator (ON/OFF) |
| 4. AF Gain / Power– Audio Level Adjustment POT | 18. SQL – (FNC) Squelch (ON/OFF) |
| 5. RF Gain – Level Adjustment POT | 19. FAST – Step Size Adjustment |
| 6. MR – (FNC) Memory Record/Recall | 20. MON – (FNC + TX) Transmit Audio Monitor |
| 7. V/M – VFO to/from Memory | 21. BAN – Band Up/Down |
| 8. AN – (FNC) Automatic Notch (DSP ON/OFF) | 22. RIT – (FNC) RIT On/Off/adjust |
| 9. NR – Noise Reduction (DSP 1..10) | 23. MOD – Mode Adjust (AM/FM/CW/LSB/USB) |
| 10. SP-CW – (FNC) Mode Dependent | 24. PWR – (FNC) Transmit Power Level |
| 10.1. CW – CW Features * | 25. TUNE – Manual/Auto Tune Start/Stop |
| 10.2. Voice – Speech Processor | 26. Multi Encoder, Multi Purpose |
| 11. MIC – MIC Gain Adjust / Front/Rear Select | 27. A=B – (FNC) A Frequency -> B Frequency |
| 12. FNC – Primary/Secondary Function Toggle | 28. A/B – A Swap B, Held=SPLIT ON/OFF |
| 13. Main Tuning Knob | 29. VOX – (FNC) VOX Controls ** ON/OFF |
| 14. AGC – (FNC) Automatic Gain Control (F/M/S) | 30. NB – Noise Blanker ON/OFF, Held=Level |
| | 31. BW – Bandwidth POT |
| | 32. PBT – Pass Band Tuning POT |

Tentec Eagle



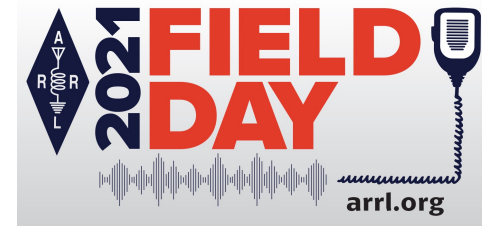
6M

- CW only from 50.000 to 50.100
- SSB from 50.100 to 50.275
- Data above 50.250
- SSB DX window is 50.100 to 50.125
- CW is allowed and does occur anywhere!

2M

- CW only from 144.000, 144.100
- SSB from 144.100 to 144.300
- From 144.100 to 144.150 data is often used there
- CW is used everywhere in the band!

Operation



Why 10M?

- **10M**
 - **Band is 28 to 29.700 Mhz**
 - **Tech section is 28 to 28.5 Mhz**
 - **BANDPLAN**
 - **28 to 28.3 CW, Data, Beacons**
 - **28.300 to 28.500 tech SSB phone**
 - **above 29 Mhz is repeaters and FM**

The tech phone section is also home to 28.4 MHz the calling frequency and the most active SSB portion of the band.

Power



- If the sun shines 150W of solar power plus battery
- The back up to that is the battery 60AH and genset.
- Note on genset... its TBD but I'll have something.

Logging



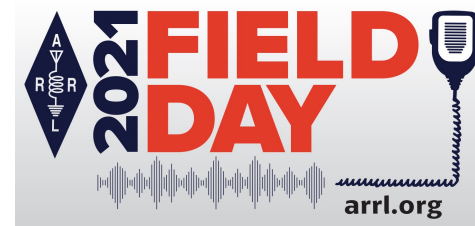
- **Logger will be Xlog on Linux.**
- **Really easy to use, point type and add.**
- **It will be setup by me and have a dupe screen.**
- **We will log 10M phone contacts, only...**

If All Else Fails



- Operating is more fun than listening to me yammer about it.
- At the site I will answer questions about the gear.
- Have fun.

Satellite Station



We Need



- **Antenna Crew**
 - **Friday, June 25**
 - **10:00 AM to 6 PM (show up any time)**
 - **At least 12**
 - **Launcher**
- **Attendance Helper**
- **Ambassadors**
- **Cleanup Crew on Sunday**

Operating From Home



- You can operate from home, portable, or mobile and have your score added to the PART score
- 150 watts max
- Use your own call sign & exchange (e.g., 1D EMA)
- Submit your own entry
- If you operate at the PART station, you can't contact the PART station for points.

K1IG Will Email Further Info

Safety Briefing

**PART Field Day
2019**

Credits to Steve N1BDA (2016)

Since 2017 Dale KB1ZKD

Safety Risks



- Fires
- Critters & plants: ticks, poison ivy
- Weather: lightning, heat
- Generators & fuel
- Tripping hazards
- Guy wires
- Overhead wires
- Antennas

Checklist (1)



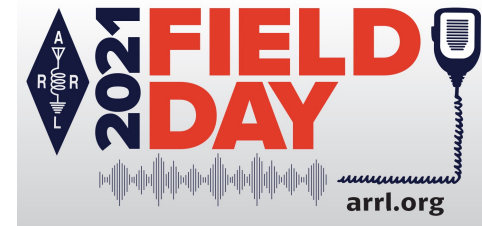
- Safety Officer (or asst.) on site for entire event
- Fuel for generators properly stored
- Fire extinguisher on hand at each location
- First Aid kit(s)
- First Aid, CPR and AED trained participant/s on site for full Field Day period (**Send me an email please**)
- Access to NWS alerts to monitor for inclement weather

Checklist (2)



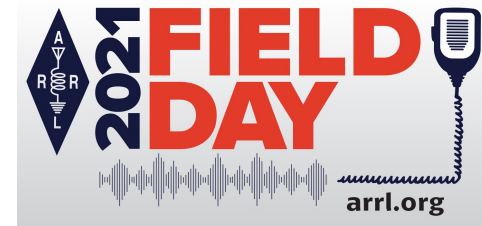
- Tent stakes properly installed and marked
- Temporary antenna structures properly secured and marked
- Site secured from tripping hazards
- Site set up in a **neat and orderly manner** to reduce hazards
- Stations and equipment properly grounded
- Access to means to contact police/fire/rescue if needed

Checklist (3)



- Safety Officer is designated point of contact for public safety officials (**Need more assistants**)
- Minimize risks and control hazards to ensure no injuries to public
- As necessary, monitoring participants for **hydration** and ensure an **adequate water supply** is available (but we can't drink it for you.)

Risk: Fire



- Most likely sources are generators and kitchen
 - Fire extinguisher locations (at each site)
 - At first signs of fire, smoke, or burning odor alert folks, and call the Concord Fire Dept.

911 (wired phone)
Mobile: 978-318-3400
Site: 446.025 MHz, simplex

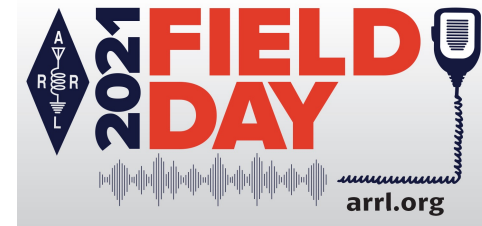
Risk: Critters (1)



Bees, wasps, ticks, and mosquitos pose serious health risks

- Mosquitos
 - (treated) long pants & sleeves, light colors
 - Repellant on skin (next slide)
- Ticks
 - (treated) long pants & sleeves esp. outdoors
 - Check often (dark nooks and crannies)
- Bees and wasps
 - Carry your EpiPens and antihistamine pills (let folks around you know about potential problems)

Risk: Critters (2)



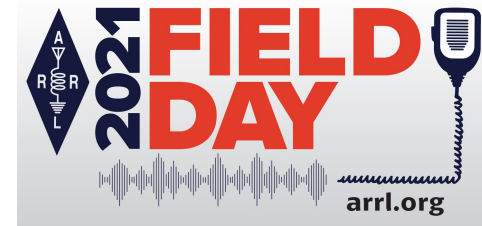
- Skin treatment
 - Be aware of other's personal concerns (e.g. DEET)
 - There are facts and data:
 - <https://www.cdc.gov/ncezid/dvbd/about/prevent-bites.html>
 - <https://www.consumerreports.org/insect-repellent/how-safe-is-deet-insect-repellent-safety/>
- Clothing and gear treatment
 - Permethrin works (read the precautions, use it correctly, pre-treat clothes and let them dry)
- Check often
 - Particularly in dark nooks and crannies

Risk: Weather



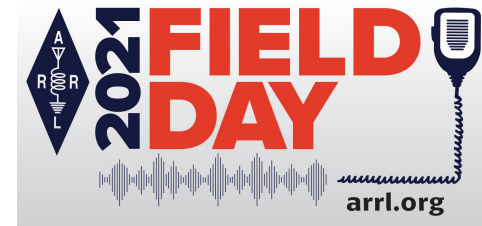
- The primary danger is lightning
 - It can occur miles from a storm under clear skies and up to 30 minutes after the storm “ends”
 - We will monitor SKYWARN & NOAA radio
 - All antennas will be disconnected during a storm and we will go inside
 - Old school – counting seconds is a myth
 - If you can hear thunder you are at risk - we will stop and go inside the club house

Risk: Weather (2)



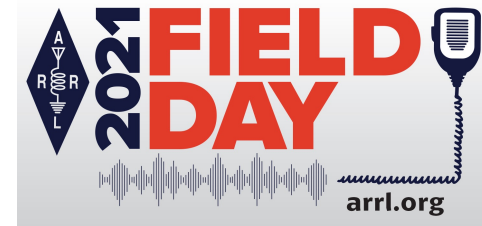
- Heat - dehydration is a risk
 - There will be bottled water, but bring a water bottle (please) and use it
 - Over hydration (hyponatremia) is also a risk
 - “Clear and copious” means too much water
- Cold – onset of hypothermia is the brain making bad decisions
 - You can become hypothermic in warm weather. Don't wait for shivering to start!

Risk: Slips & Trips



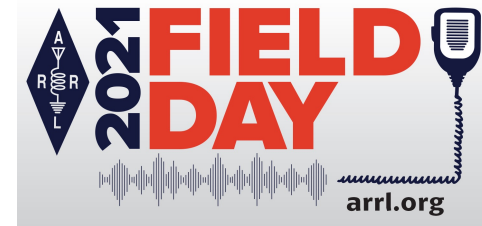
- Cables, extension cords, guy wires
- Cables (antennas, power,....)
 - Taped down (indoors), pegged down
 - Marked with colored flagging
- Tent pegs
 - Marked with colored flagging
- Be careful entering and leaving the clubhouse – some steps are odd

Guy Wires: Antennas & Tent



- Be watchful around masts and poles
- Avoid tent corners
- Don't run
- Guy wires marked with colored flagging
- Danger areas flagged off

Risk: Overhead Wires



- There are several around the grounds
- Be careful during antenna setup
- Note where the wires are, especially if you have a tall antenna on your vehicle
 - Lower your antenna
 - Find another route

Risk: Antennas



- Line launchers: slingshots, arrows, and pneumatic “potato” guns
 - Clear area down-range
 - Be sure you have a safety observer
 - Wear safety glasses
- Ropes and wires
 - Avoid fish lines, small cordage, ropes unless you are handling them
 - Look overhead, not just in front of you

Don't Be Deterred!



- With all these dangers lurking, don't be discouraged from participating
- All these *potential* dangers can be managed if we are aware of them
- Keys:

Common Sense (is rare)
Patience (is a virtue)

Emergency Gear



- Wired phone in the bar
- Life Rings around the pond
- AED in the clubhouse (bar area)
- Trauma kits
 - On me (Dale)
 - Tan bag under the back seat of my van
 - Above the driver's visor in my van