



Field Day 2024



- **June 22-23**
- **Setup: Friday, June 21,
8:30 AM**
- **Concord Rod & Gun Club**
 - **74 Strawberry Hill Rd,
Concord, MA**



Field Day 2024



- PART will operate at 5 watts
- Solar power and batteries
- Wedding reception on Saturday
- Parking and food service in the big field
- Bring lawn chairs if you have any
- Be aware of heat stress!



Stations & Leads



- **CW**
 - Bob, W1IS
- **VHF Meters**
 - Allison, KB1GMX
- **Digital**
 - Carl, WG1V
- **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, RF exposure calculations, control operators



Infrastructure Leads

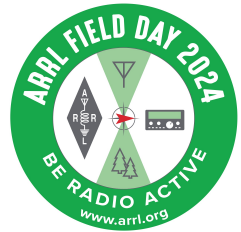


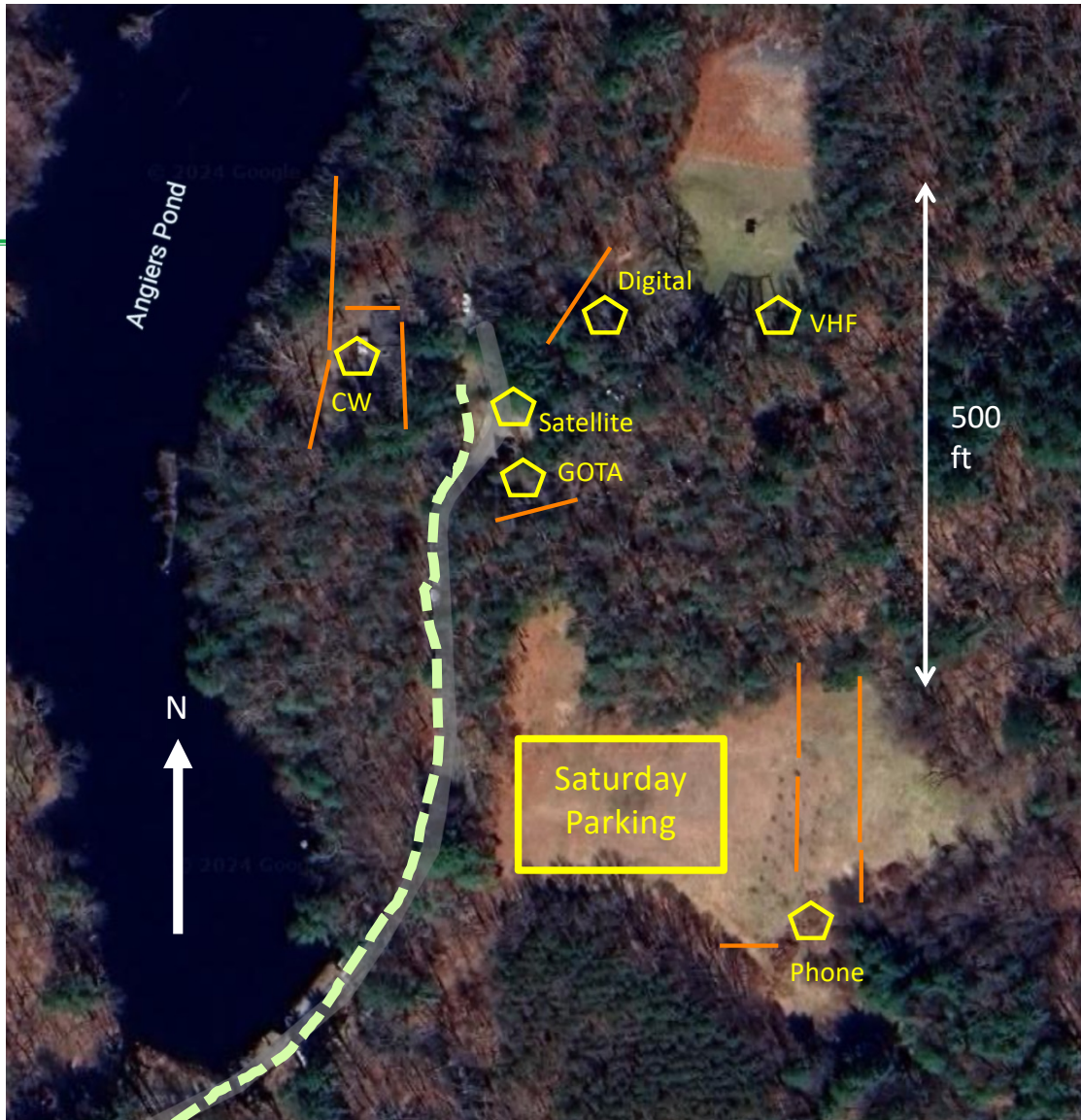
- **HF Antennas**
 - Bob, W1IS
- **Food**
 - Sue, WB2OSY
- **Site Liaison**
 - Dale, KB1ZKD
- **Safety**
 - Dale, KB1ZKD
- **Finance**
 - Alan, W1AHM
- **Signage**
 - Alan, W1AHM



Concord Rod & Gun Club

74 Strawberry Hill Rd, Concord



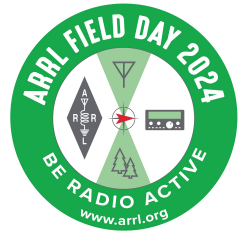


Site Plan

Antenna locations are approximate



Schedule



Friday June 21

8:30 AM – ?
Antenna Setup

Saturday June 22

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 23

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



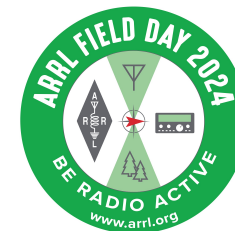
Weather



- **Very hot on Friday: antenna setup begins at 8:30 AM**
- **Possible thunderstorms**
- **Cool nights – bring a jacket**
- **Hydrate!**
- **Don't forget sunscreen!**



Attendance Sheet



PART of Westford Field Day 2024 Attendance Sheet

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

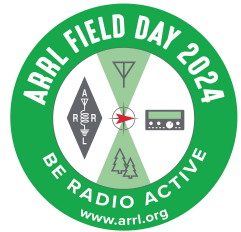
Age \leq 18

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

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



Food!



- Saturday Lunch
 - Saturday Dinner
 - Sunday Breakfast
 - Sunday Lunch
- } Served in the big field

Field Day Site Operations



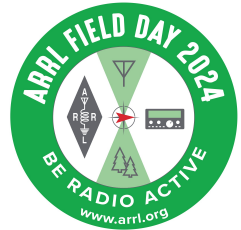
- Safety
- 446.025 simplex for site coordination
- Visitors — Likely
 - Wear your badge
 - Invite your neighbors



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



Bonus Points

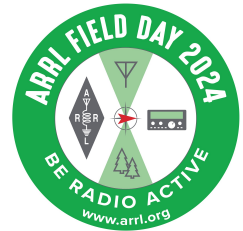


- Emergency Power (400 points)
- Media Publicity
- Satellite QSO
- Alternate Power
- W1AW Bulletin
- Educational Activity
- Youth Participation
- Web Submission
- Site Responsibilities
- Public Location
- Public Info Table
- Safety Officer
- Site Visit by Elected Official
- Site Visit by Agency Rep
-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

Most Items Are Worth Up To 100 Points



Contacts and Logging

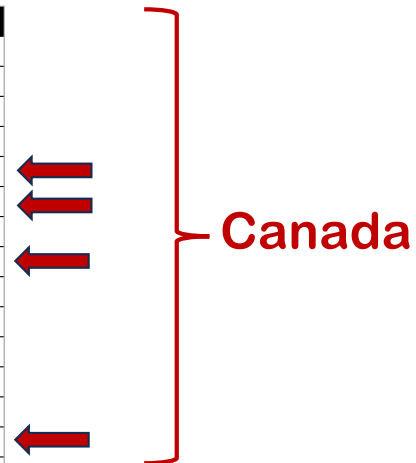


- Exchange: Class and ARRL section
- We are: “4A EMA” or “4A Eastern Massachusetts”
- Stations can be worked once per band - mode
- Don't say “Please copy”

W1	
Connecticut	CT
Eastern Massachusetts	EMA
Maine	ME
New Hampshire	NH
Rhode Island	RI
Vermont	VT
Western Massachusetts	WMA
W2	
Eastern New York	ENY
New York City - Long Island	NLI
Northern New Jersey	NNJ
Northern New York	NNY
Southern New Jersey	SNJ
Western New York	WNY
W3	

W6	
East Bay	EB
Los Angeles	LAX
Orange	ORG
Santa Barbara	SB
Santa Clara Valley	SCV
San Diego	SDG
San Francisco	SF
San Joaquin Valley	SJV
Sacramento Valley	SV
Pacific	PAC
W7	
Arizona	AZ
Eastern Washington	EWA
Idaho	ID
Montana	MT
Nevada	NV

Canada	
Alberta	AB
British Columbia	BC
Manitoba	MB
New Brunswick	NB
Newfoundland and Labrador	NL
Nova Scotia	NS
Ontario East	ONE
Ontario Golden Horseshoe	GH
Ontario North	ONN
Ontario South	ONS
Prince Edward Island	PE
Quebec	QC
Saskatchewan	SK
Territories	TER
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	

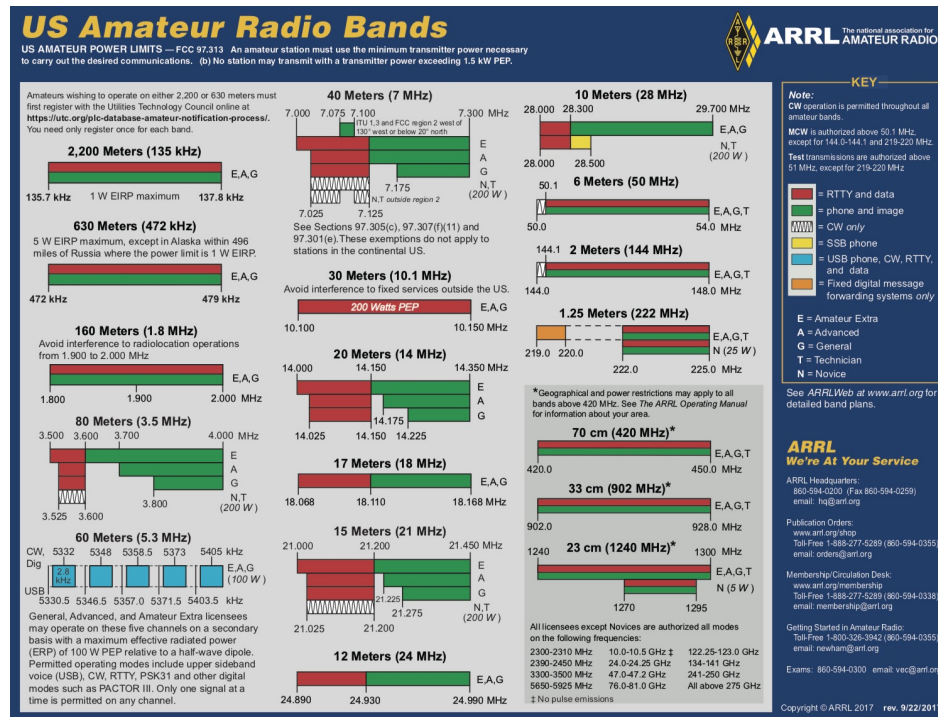
**Optional but,
Those who
sign up have
priority!**



Field Day Operations



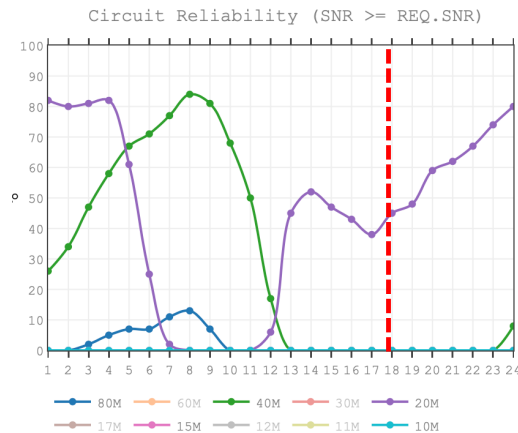
The Control Operator's license class determines the band limits



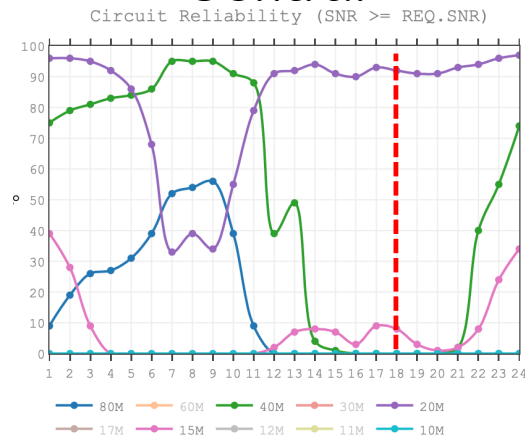
Every station will have a copy of the band plan.

Propagation Forecast

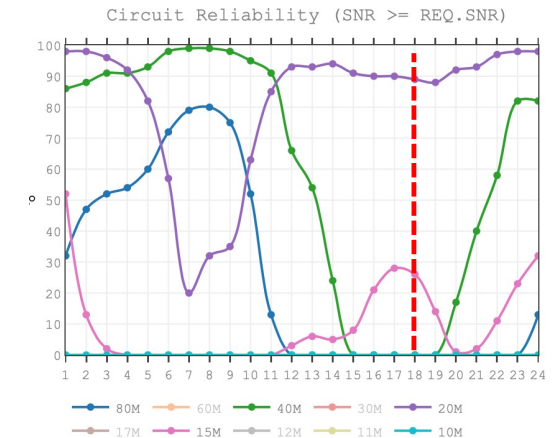
West Coast



Central



South



Takeaways:

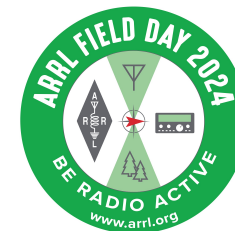
- There's a path open to somewhere all the time, even at 5 W
- All bands look good
- Midnight - morning operations are very productive
- Try 80 meters! Look for openings on 10 meters!
- Best for HI/AK: 20M (Day), 40M (Night) (Check DX spots)

Colors

- 80 Meters
- 40 Meters
- 20 Meters
- 15 Meters
- 10 Meters



W1AW Field Day Bulletin

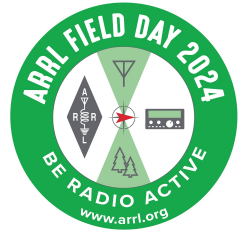


Day	Mode	Local	UTC
Friday	CW	8:00 PM	0000
	Digital	9:00 PM	0100
	Phone	9:45 PM	0145
	CW	11:00 PM	0300
Saturday	CW	10:00 AM	1400
	Phone	11:00 AM	1500
	CW	8:00 PM	0000
	Digital	9:00 PM	0100
	Phone	9:45 PM	0145
Sunday	CW	10:00 AM	1400
	Phone	11:00 AM	1500
	Digital	12:00 PM	1600

- 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			
PHONE NUMBER				AMATEUR STATION		PHONE	
E-MAIL				NAME		E-MAIL	
				STREET			
				CITY, STATE, ZIP			
ARL		FIFTY		ONE		*	FIELD
							DAY
FROM				TO			
DATE				DATE			
TIME				TIME			
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			

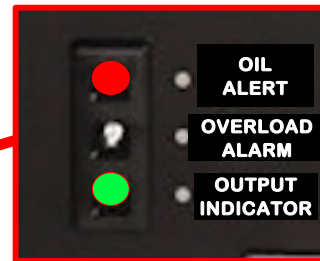
* “Greetings by Amateur Radio. This message is sent as a free public service by ham radio operators at Field Day. Am having a wonderful time.”

Generator Operations

- The phone station will have a generator for fans, lighting, and computer
- Generator can run 24 hours with aux tank



If red light comes on,
generator shuts down!



Status Lights





Antennas

Bob, W1IS



Materials to Launch Antennas



- 1,700 ft Rope
- 1,400 ft RG-8X, 150 ft RG-58au (receive antennas)
- 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

- 800 ft rope, ~400 ft RG-8X, 200 ft RG-213
- 80M-6M End Fed
- 3 element tri-band wire antenna
- 2 element 40 M beam
- 10 M Stacked Dipoles
- Receiving loop – 100 ft wire, vertical loop, 9:1 balun
- Safety tape

GOTA – 40M-6M End Fed (200 ft rope, 100 ft RG-8X)

Digital

- Multi-Band 80M OCF
- 300 ft rope, 100 ft RG-8X
- Safety Tape



CW & VHF/10 Stations



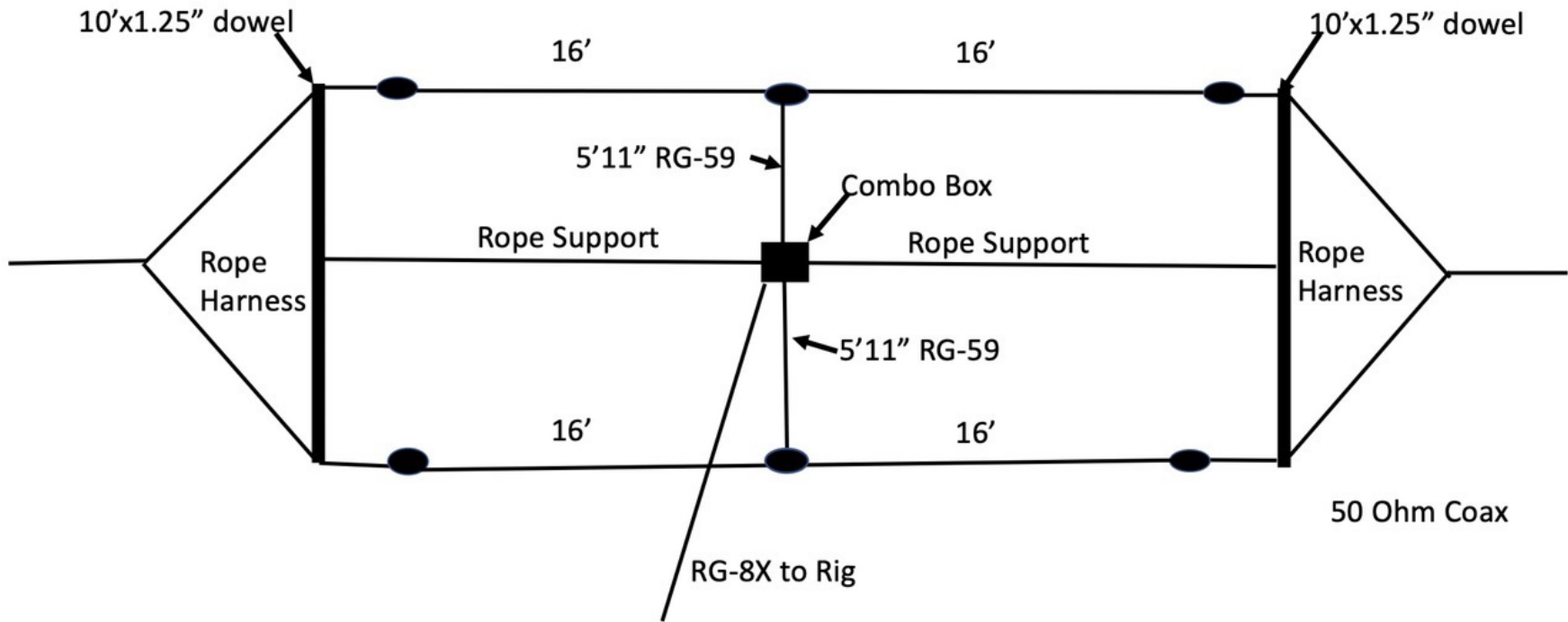
CW

- 600 ft rope, ~ 400 ft RG-8X
- 80M end-fed
- 2 element 40M Beam
- 2 element 20M Phased Dipoles
- Receiving loop - 100ft wire, vertical loop, 9:1 balun

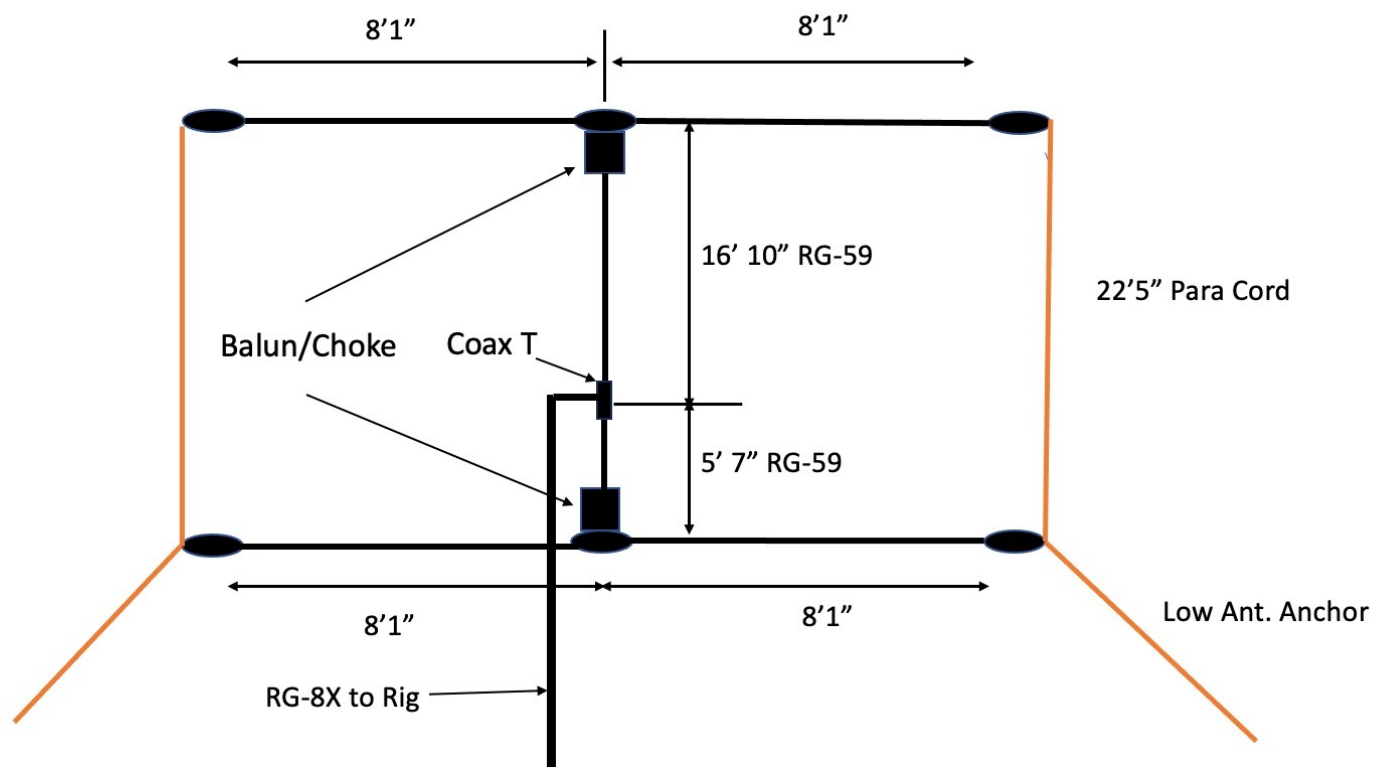
VHF

- 300 ft rope, ~300 ft RG-8X
- 6M loop suspended from tree
- 2M small beam up ~ 20 ft
- 2M vertical on pole for FM
- Whatever else Allison, KB1GMX, can get in her truck!

20 Meter Antenna



10 Meter Antenna



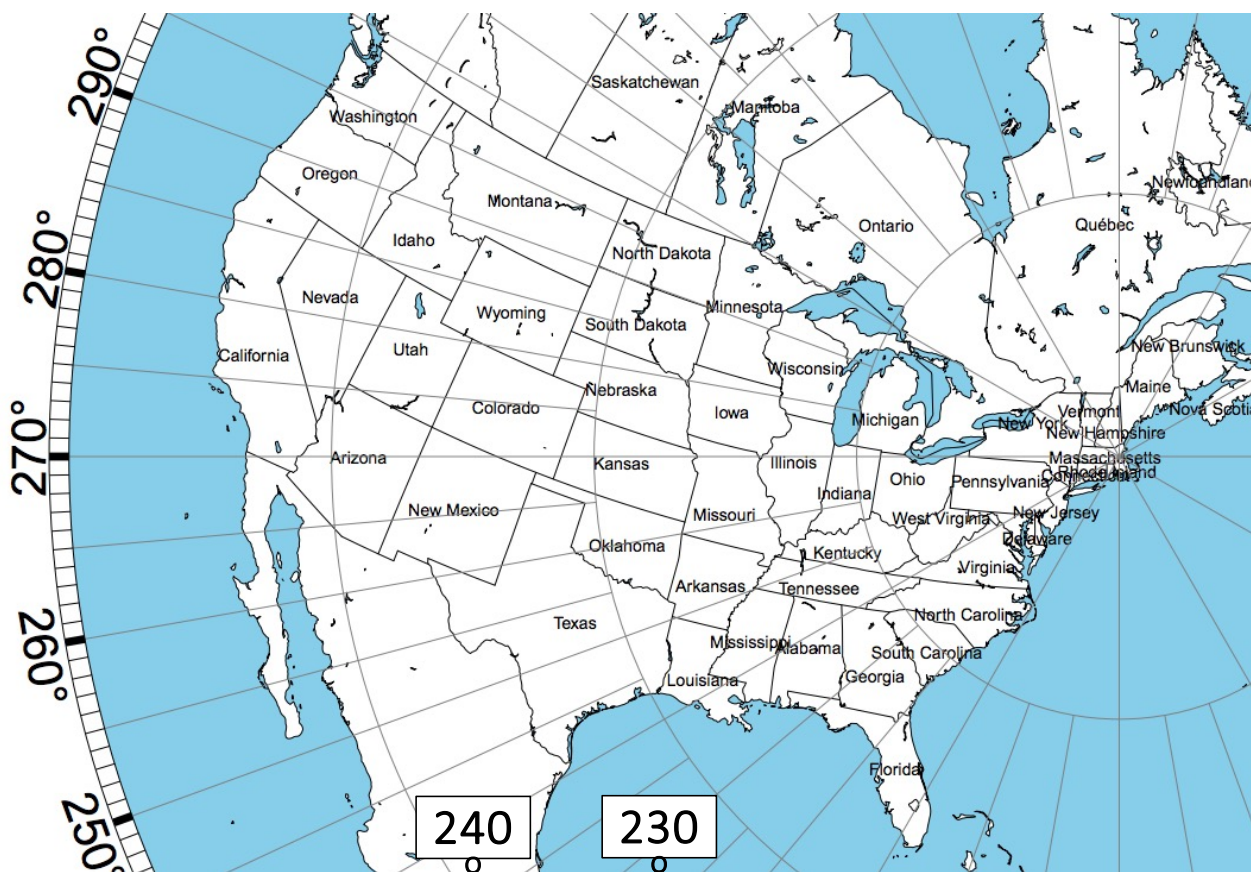
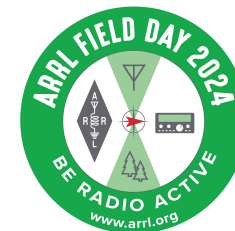
Guidelines for Set-Up

- Milk crates: SSB, CW, GOTA/Digital
- 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 & End Feds
- Beams point WEST to cover the whole country.





Aiming the Beams – West to Dallas





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. Exchange Information Sign
5. Operator Sign-Up Sheet
6. ARRL Bulletin Schedule

Get On The Air



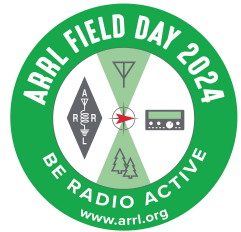
Get On The Air (GOTA)

- Station Lead: Andy, KB1OIQ
- Rig: IC-703 (Provided by Andy KB1OIQ)
- Antenna: Multi-band dipole (Provided by Bob W1IS)
- Power: Solar panels
- 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.
- Each GOTA contact is worth 5 points – no limit.
- Full-time coach adds 100 bonus points – coach can't make contacts or log them.

CW Station



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		

Elecraft K3

6



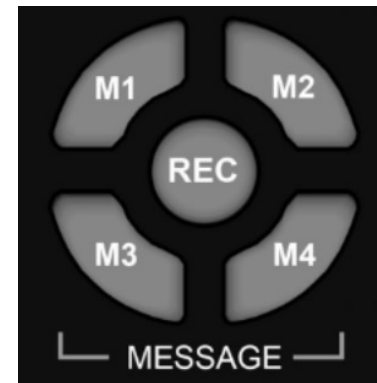
K3 Controls for CW at FD

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.



- 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!

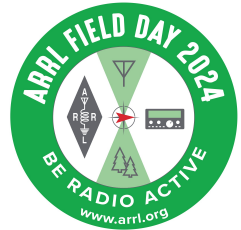


RumLogNG Contest Logger

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

The screenshot shows a logging window with the following components and data:

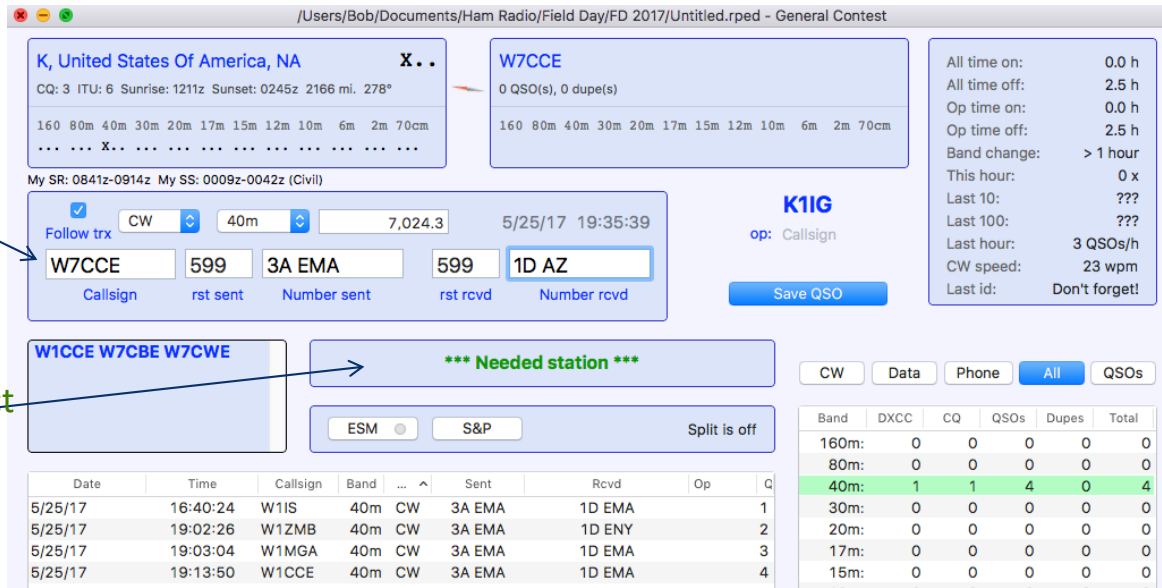
- Call Window:** Includes fields for "Follow trx" (checked), "CW" mode, "40m" band, frequency "7,024.3", and date/time "5/25/17 19:14:14". Below are fields for "Callsign", "rst sent", "Number sent", "rst rcvd", and "Number rcvd".
- Exchange Window:** Shows "W1CCE" and "0 QSO(s) 0 dupe(s)".
- Stats:** A panel on the right showing statistics: 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!
- Current Band:** A table at the bottom right showing QSO counts by band. The 40m band is highlighted in green.
- Table:** A log table with columns: Date, Time, Callsign, Band, Mode, Sent, Rcvd, Op, Q.

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
- Band Summary Table:**

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



The screenshot shows the General Contest software interface. The main window displays a contact window for W7CCE. The contact window includes fields for Call sign (W7CCE), RST sent (599), Number sent (3A EMA), RST rcvd (599), and Number rcvd (1D AZ). The status bar shows "*** Needed station ***".

Annotations on the screenshot:

- Call Window:** Points to the contact window fields.
- Good Contact:** Points to the "*** Needed station ***" status bar.
- QSO Count:** Points to the log table.

The log table shows the following data:

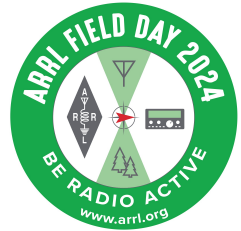
Date	Time	Call sign	Band	...	Sent	Rcvd	Op	Q
5/25/17	16:40:24	W1IS	40m	CW	3A EMA	1D EMA		1
5/25/17	19:02:26	W1ZMB	40m	CW	3A EMA	1D ENY		2
5/25/17	19:03:04	W1MGA	40m	CW	3A EMA	1D EMA		3
5/25/17	19:13:50	W1CCE	40m	CW	3A EMA	1D EMA		4

The summary table on the right shows the following data:

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



“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

The screenshot shows a ham radio software interface with the following elements:

- Station Information:** K, United States Of America, NA. CQ: 5 ITU: 8 Sunrise: 0852z Sunset: 0003z 245 mi. 43°. Frequency: 7,024.3. Date/Time: 5/25/17 19:45:30.
- QSO Log:** A table with columns: Date, Time, Callsign, Band, Mode, Sent, Rcvd, Op. The entry for 5/25/17 at 19:03:04 shows a QSO with W1MGA on 40m CW, sent 3A EMA, received 1D EMA, and operated for 1 minute.
- QSO Summary:** A table with columns: Band, DXCC, CQ, QSOs, Dupes, Total. The 40m band is highlighted in green, showing 1 QSO, 2 Dupes, and a Total of 5.
- Warning:** A red box with the text "*** DUPE ***" is displayed above the log entry, with a red arrow pointing to it.
- Controls:** Buttons for "CW", "Data", "Phone", "All", "QSOs", "ESM", "S&P", and "Split is off".

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

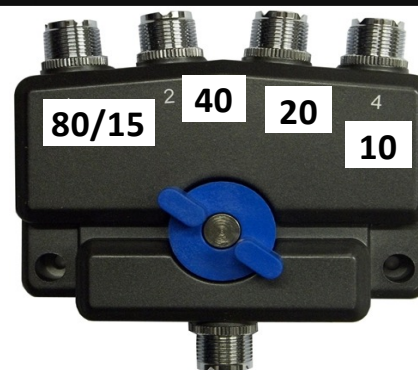


George, K1IG

Elecraft K3



- Battery backup (100 Ah)
- 100 Watt solar panel
- Headsets & mic / speakers
- 4 antennas – manual switching



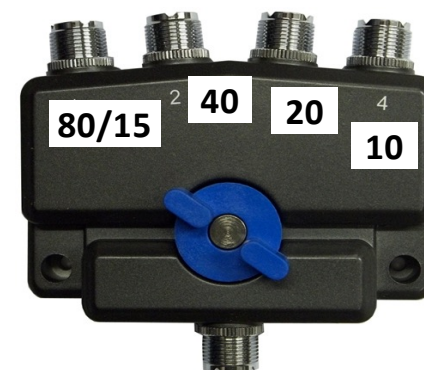
Keypad Control



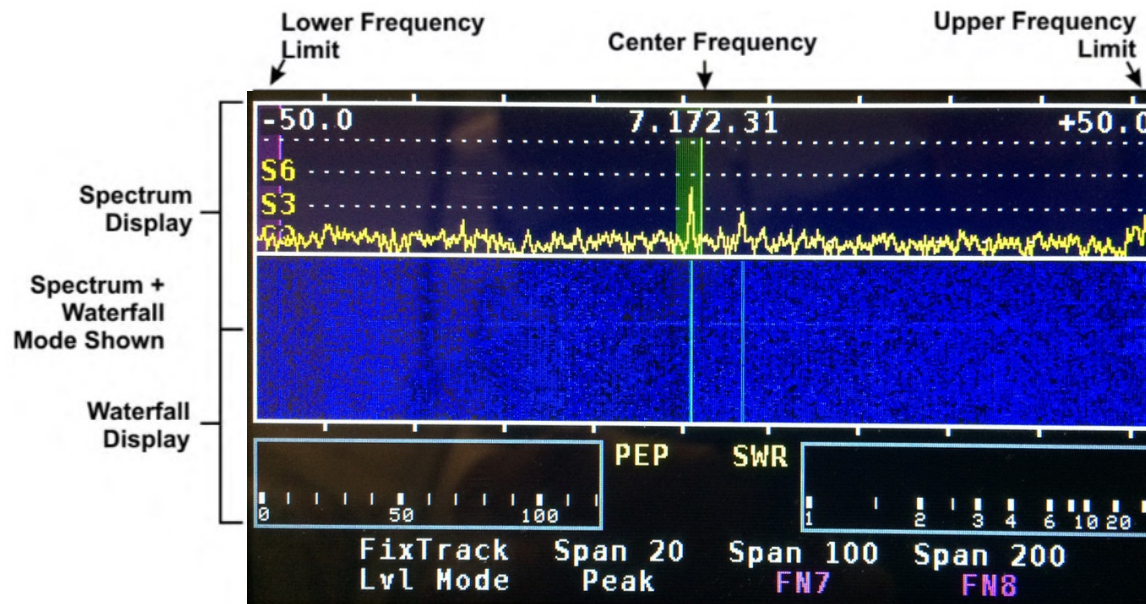
80 CW	40 CW	30 CW	20 CW	17 CW	15 CW	12 CW	10 CW
80 SSB	40 SSB	20 SSB	17 SSB	15 SSB	12 SSB	10 SSB	Ant Tune
PSK 40	PSK 20	PSK 15	PWR 20	PWR 110	Split + 2	Split + 5	No Split
CW	USB	LSB	DATA A	AFSK A	WWV 10	DVRS ON	DVRS OFF
DBW 4K	VBW 2.4K	VBW 1.8K	CBW 1K	CBW 400	CBW 250		UP 50kH
K1IG	3A EMA	CQ FD	MEM 4				



- Single button selects band, mode, power, 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!!!

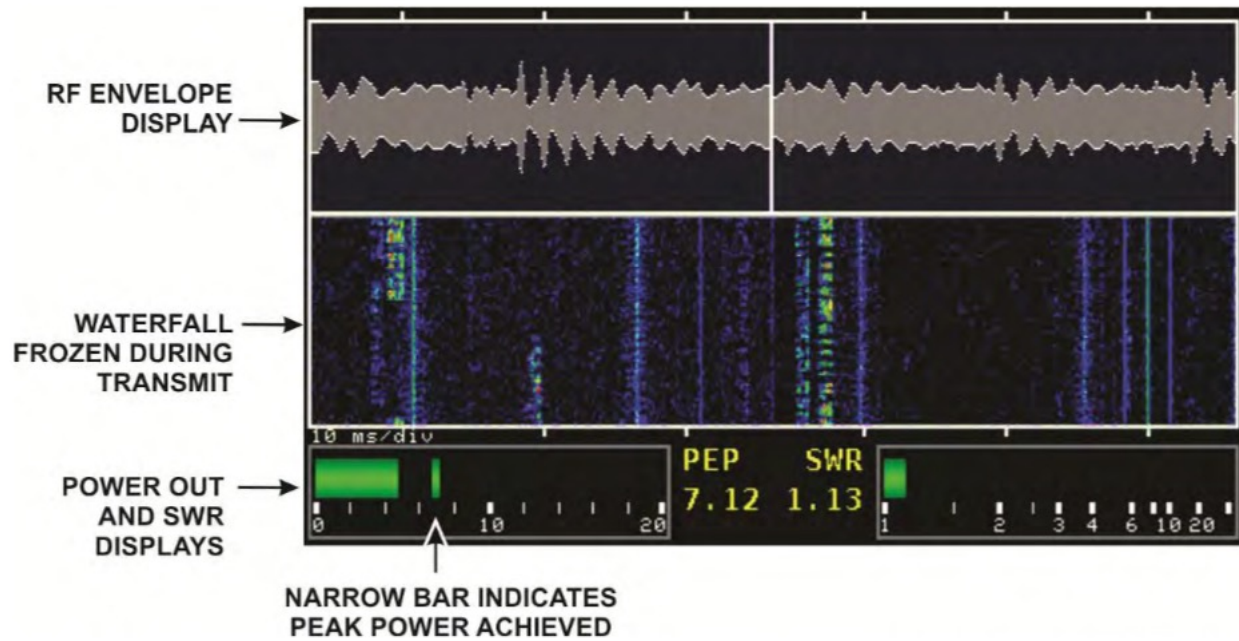


Panadapter - Receive



Programmable Function Keys May Be Displayed
With Labels Here (Optional)

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

K3 Button XMIT/RCV

HOLD SUB button to turn diversity on and off. VFO point will flash

Keypad

Split +2	Split +5	No Split
WWV 10	DVRS ON	DVRS OFF
CBW 250		UP 50KH





Digital Station

Carl, WG1V

Icom IC-705

- All-band 160m-70cm SDR transceiver
- Antenna should be a good match for 80m-6m
- 10 watts max output, which we'll run at 50% (5 watts)
- Very similar menus to the IC-7300
- Most functions will be computer controlled via USB

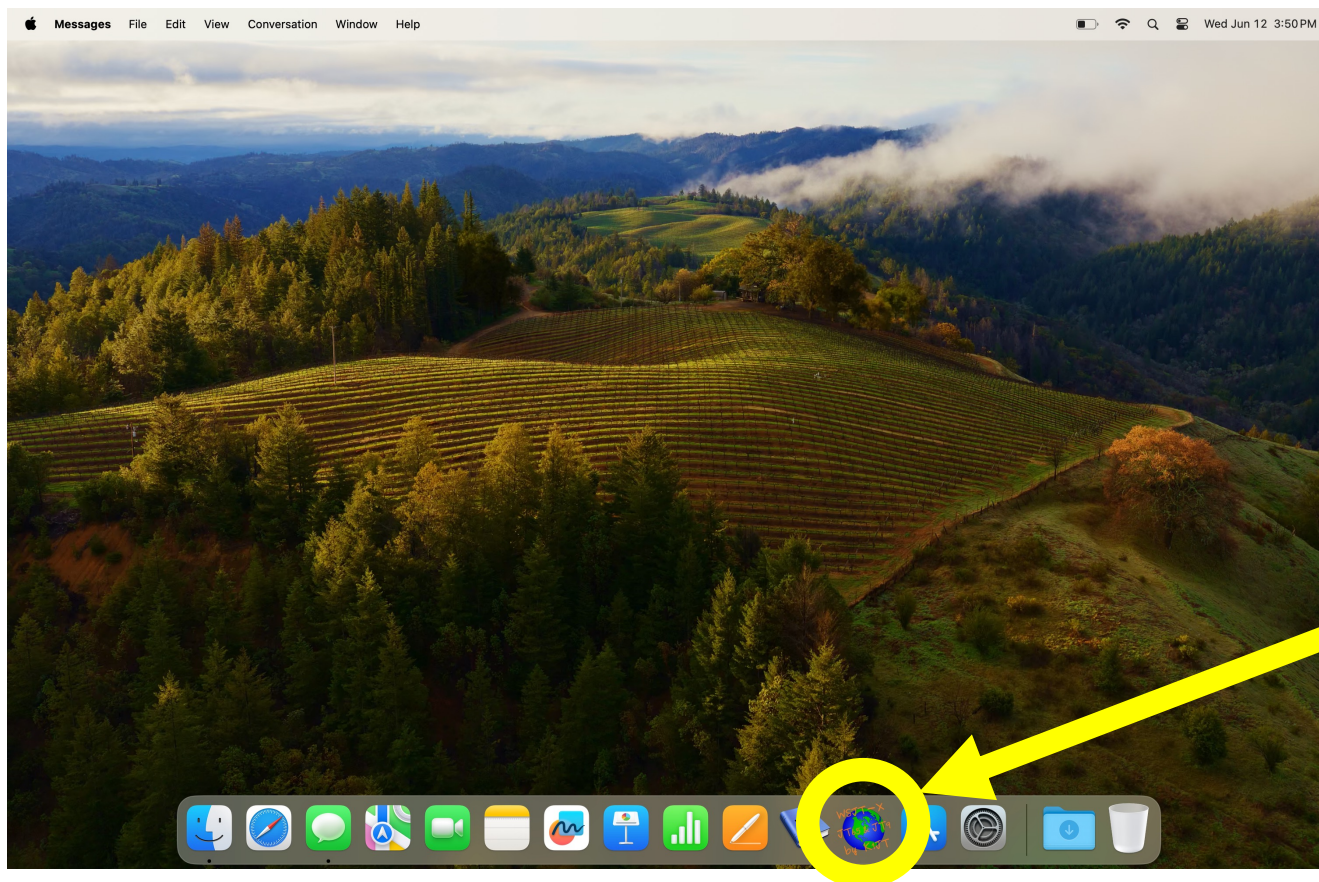
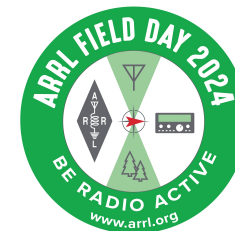
Press and hold to power on



Audio volume control



MacBook Pro Desktop



Login credentials:

- user name: *part*
- password: *fieldday*

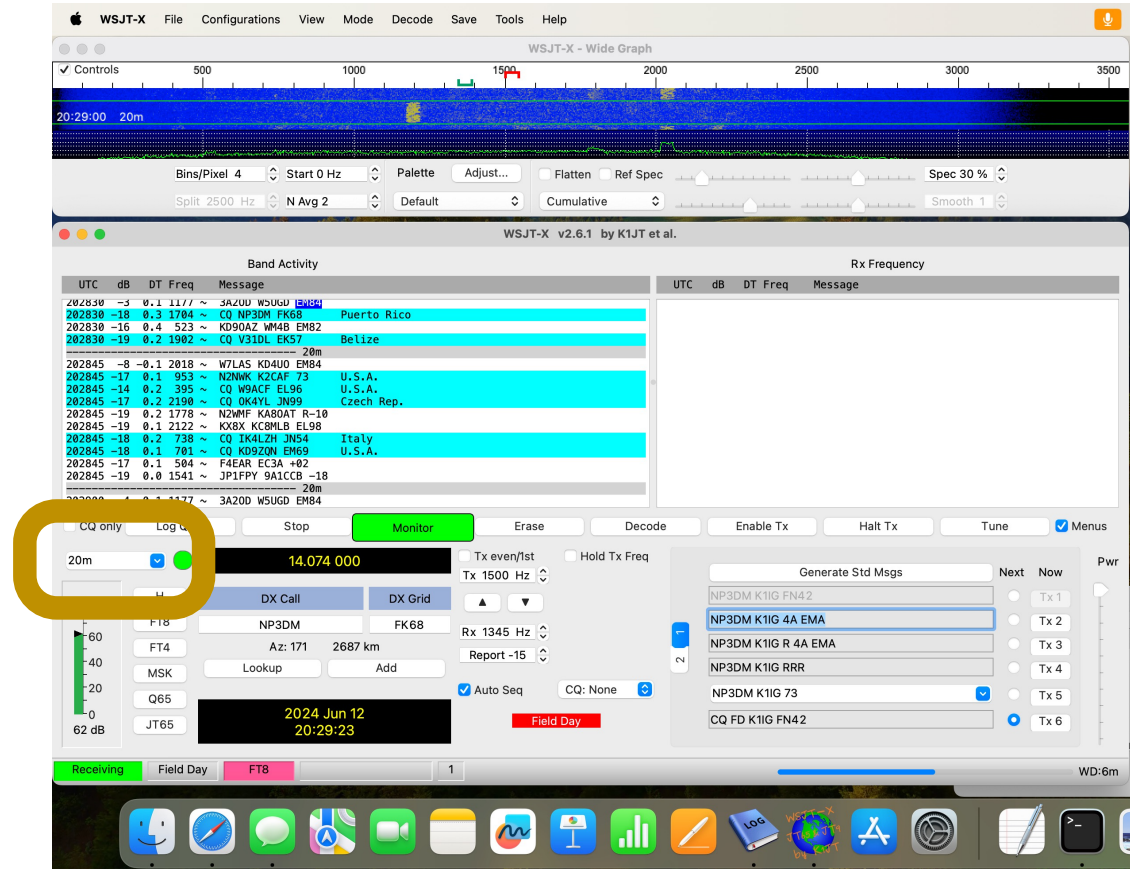
**External keyboard
and mouse will be
provided**

**Double-click to start
WSJTX if it isn't
already running**

Band Selection



- Use the drop-down menu
- You should never need to touch the radio itself!



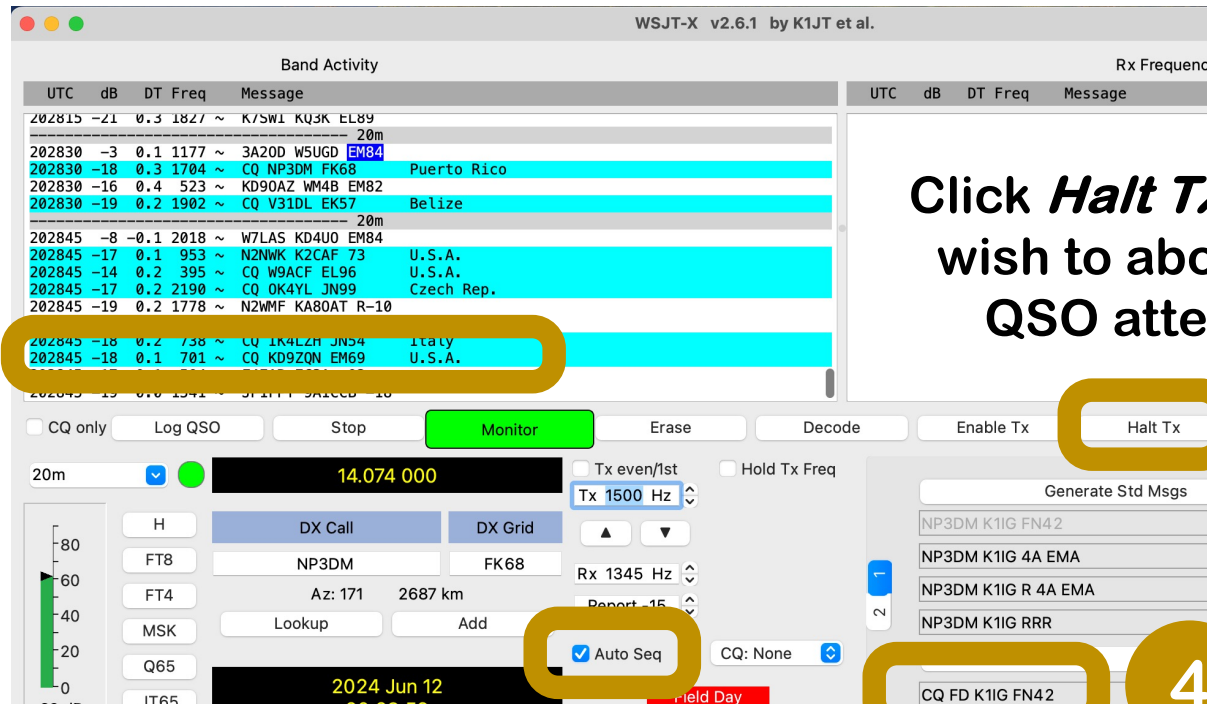
The screenshot shows the WSJT-X software interface. At the top, there's a wide graph showing signal activity across a frequency range from 500 to 3500 Hz. Below the graph, there are controls for Bins/Pixel (set to 4), Start 0 Hz, Palette, Adjust..., Flatten, Ref Spec, and Spec 30%. The main window displays a table of Band Activity with columns for UTC, dB, DT, Freq, and Message. A yellow box highlights the 'CQ only' dropdown menu in the bottom left corner, which is currently set to '20m'. The interface also shows various control buttons like 'Monitor', 'Erase', 'Decode', 'Enable Tx', 'Halt Tx', and 'Tune'. On the right, there's a 'Generate Std Msgs' section with a list of message templates and a 'Next' button. The bottom status bar shows 'Receiving', 'Field Day', 'FT8', and 'WD:6m'.

UTC	dB	DT	Freq	Message
202830	-5	W.1	1177	3A2UB WSUKU [CQ]
202830	-16	0.4	523	KD9OAZ WM4B EM82 Puerto Rico
202830	-19	0.2	1902	CQ V31DL EK57 Belize
202845	-8	0.1	2018	W7LAS KD4UO EM84
202845	-17	0.1	953	N2NWK K2CAF 73 U.S.A.
202845	-14	0.2	395	CQ W9ACF EL96 U.S.A.
202845	-17	0.2	2198	CQ OK4YL JN99 Czech Rep.
202845	-19	0.2	1778	N2MNF KABOAT R-10
202845	-19	0.1	2122	KX8X KC8MLB EL98
202845	-18	0.2	738	CQ IK4LZH JN54 Italy
202845	-18	0.1	701	CQ KD9ZON EM69 U.S.A.
202845	-17	0.1	584	F4EAR EC3A +02
202845	-19	0.0	1541	JP1FFY 9A1CCB -18
202800	-1	0.1	1177	3A2OD WSUGD EM84

Working A Station

Double-click
highlighted
station

Click *Halt TX* if you
wish to abort the
QSO attempt



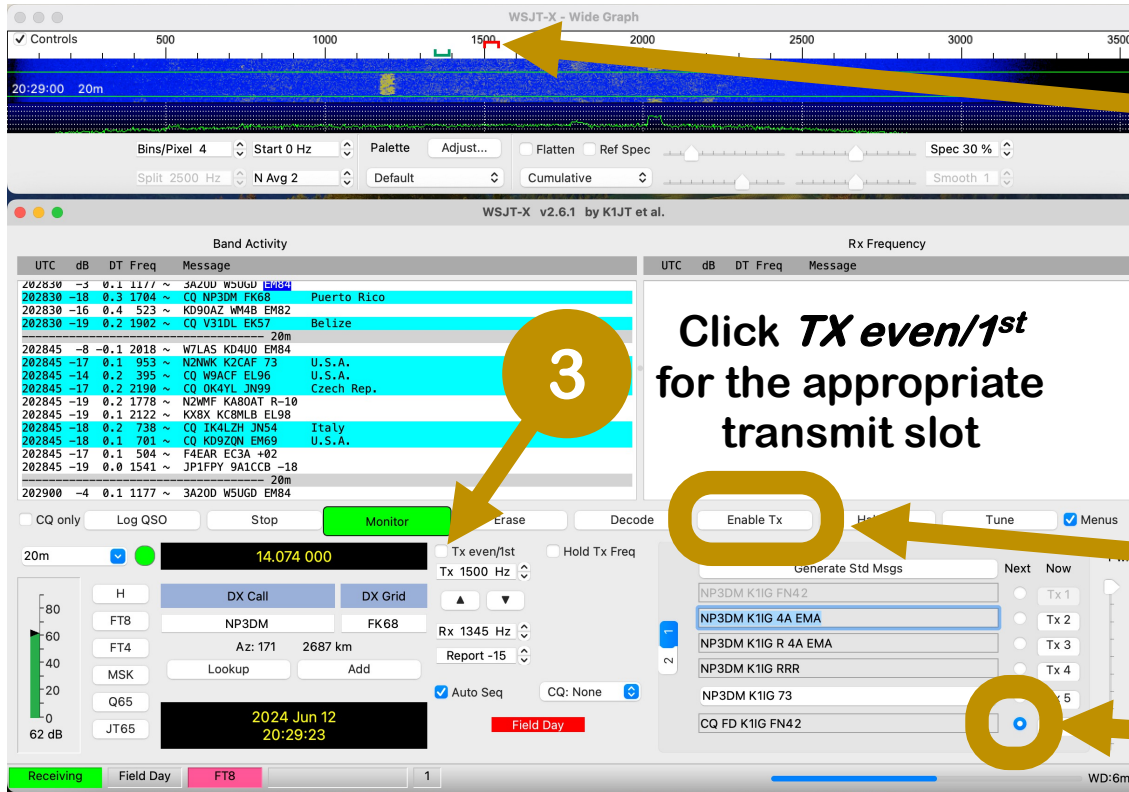
The screenshot shows the WSJT-X v2.6.1 interface. The 'Band Activity' window is open, displaying a list of stations. The station 'CQ NP3DM FK68 Puerto Rico' is highlighted in cyan. A yellow circle with the number '1' and an arrow points to this station. Below the list, the 'Auto Seq' checkbox is checked, highlighted with a yellow circle and the number '2'. The 'Halt Tx' button is highlighted with a yellow circle and the number '3'. The 'Generate Std Msgs' window is open, showing a list of messages, with 'CQ FD K1IG FN42' highlighted by a yellow circle and the number '4'. The main interface shows a frequency of 14.074 000 and a 'Tx 1500 Hz' setting.

UTC	dB	DT	Freq	Message
202815	-21	0.3	1827	~ K7SWI KU3K EL89
202830	-3	0.1	1177	~ 3A20D W5UGD EM84
202830	-18	0.3	1704	~ CQ NP3DM FK68 Puerto Rico
202830	-16	0.4	523	~ KD90AZ WM4B EM82
202830	-19	0.2	1902	~ CQ V31DL EK57 Belize
202845	-8	-0.1	2018	~ W7LAS KD4UO EM84
202845	-17	0.1	953	~ N2NWK K2CAF 73 U.S.A.
202845	-14	0.2	395	~ CQ W9ACF EL96 U.S.A.
202845	-17	0.2	2190	~ CQ OK4YL JN99 Czech Rep.
202845	-19	0.2	1778	~ N2WMF KA80AT R-10
202845	-18	0.2	738	~ CQ 1R4LZL JN54 Italy
202845	-18	0.1	701	~ CQ KD9ZQN EM69 U.S.A.

So long as the *Auto Seq* box is
checked, the QSO exchange will
proceed automatically

The contact will be auto-logged
if and when 73 is received

To Call CQ



The screenshot shows the WSJT-X v2.6.1 interface. At the top is a waterfall plot labeled 'WSJT-X - Wide Graph' with a frequency scale from 500 to 3500 kHz. Below it are various control panels including 'Band Activity' and 'Rx Frequency'. The 'Band Activity' table lists stations with their UTC, dB, DT, and Freq. The 'Rx Frequency' table lists stations with their UTC, dB, DT, and Freq. At the bottom, there are transmit controls including 'Enable Tx', 'Tx 1500 Hz', and a 'Generate Std Msgs' list with buttons for 'Tx 1' through 'Tx 5'. A 'Field Day' button is also visible.

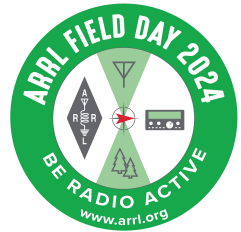
UTC	dB	DT	Freq	Message
202830	-3	0.1	1177	3A20D W5UGD EM84
202830	-18	0.3	1704	CQ NP3DM FK68 Puerto Rico
202830	-16	0.4	523	KD90AZ W4MB EM82
202830	-19	0.2	1902	CQ V31DL EK57 Belize
202845	-8	-0.1	2018	W7LAS KD4UO EM84
202845	-17	0.1	953	N2NWK K2CAF 73 U.S.A.
202845	-14	0.2	395	CQ W9ACF EL96 U.S.A.
202845	-17	0.2	2190	CQ OK4YL JN99 Czech Rep.
202845	-19	0.2	1778	N2WVF KA80AT R-10
202845	-19	0.1	2122	KX8X KC8MLB EL98
202845	-18	0.2	738	CQ IK4LZH JN54 Italy
202845	-18	0.1	701	CQ KD9ZQM EM69 U.S.A.
202845	-17	0.1	504	F4EAR EC3A +02
202845	-19	0.0	1541	JP1FPY 9A1CCB -18
202900	-4	0.1	1177	3A20D W5UGD EM84

1 Right-click to select a clear transmit frequency in the waterfall

3 Click *TX even/1st* for the appropriate transmit slot

4 Click *Enable TX*

2 Select the *CQ* message button



VHF Station

Allison, KB1GMX



VHF Station



- What's new this year?
- Less is still more.
- No 10 meters.



VHF Station



- **Setup for 5W on two bands using battery/solar.**
- **Opportunity to experience weak signal operation.**
- **Opportunity for techs to explore VHF.**
- **If we are lucky, experience 6M E skip.**
- **USA, Islands, maybe the world!**



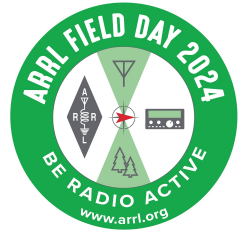
VHF Antennas



- VHF 6M Rectangle loop, really high!
An easy antenna to make!
- VHF 2M Square
- 2m horizontal and vertical for 2M on
mast strapped to shed.



Operation



- **6M**
 - CW only from 50.000 to 50.00
 - 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!

Power

- If the sun shines 150W of solar power plus battery
- The backup to that is the battery (100AH LIFePo4)



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.**



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



Bob, KB1SWZ

Fox Hunts

- 2 meter & 80 meter
- Demos before lunch on Saturday
- Bring your own gear or use ours





We Need



- **Antenna Crew**
 - **Friday, June 21**
 - **8:30 AM to ~2:00 PM (show up any time)**
 - **At least 15**
 - **Launcher/slingshot/bow & arrow**
 - **Major rewards!**
- **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
- 100 watts max (Don't have to be QRP)
- Use your own call sign & exchange (e.g., 1D EMA)
- Submit your own entry on ARRL FD website
- If you operate at the PART station, you can't contact the PART station for points.

Safety Briefing

**PART Field Day
2024**

Credits to Steve N1BDA (2016)

Since 2017 Dale KB1ZKD



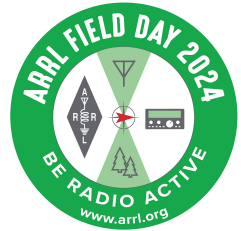
What's New?



- RF Exposure Calculations
- FCC rule effective May 3, 2023
- Station Leads are responsible for calculations
- No hazards when antennas are raised



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 KB1ZKD 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





Risk: Fire



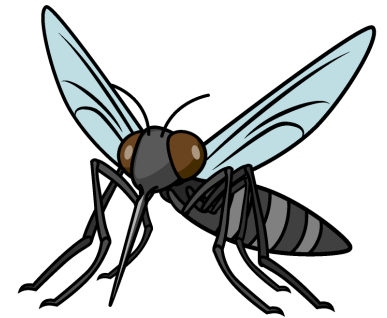
- Most likely sources are generators and kitchen
 - Fire extinguisher locations (at each site)
 - At first signs of fire, smoke, or burning odor alert folks, and call the Concord Fire Dept.

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)



©DESIGNALIKIE



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

DEET vs. Electronics*



- * Includes:
- Radios
 - Computers
 - Mice
 - Keyboards
 - Headphones

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 to the club house basement**



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
- Solar panels
- 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**
 - **Dale, KB1ZKD, has one**
 - **Tan bag under the back seat of his van**
 - **Above the driver's visor in my van**