

Bonner County Amateur Radio Club

July 9, 2025

VFW Post

1325 Pine Street, Sandpoint, ID 83864

18:00 hrs. – Informal Get Together

18:30 hrs. - Meeting

Welcome & Pledge of Allegiance

- Welcome
 - New/Upgraded Amateur Radio Operators
 - “Around the room”
- Please use a mic!



Understanding FT8 and FT4 Functionality

Joe Mauk W7KMJ & John Kludt
K7SYS

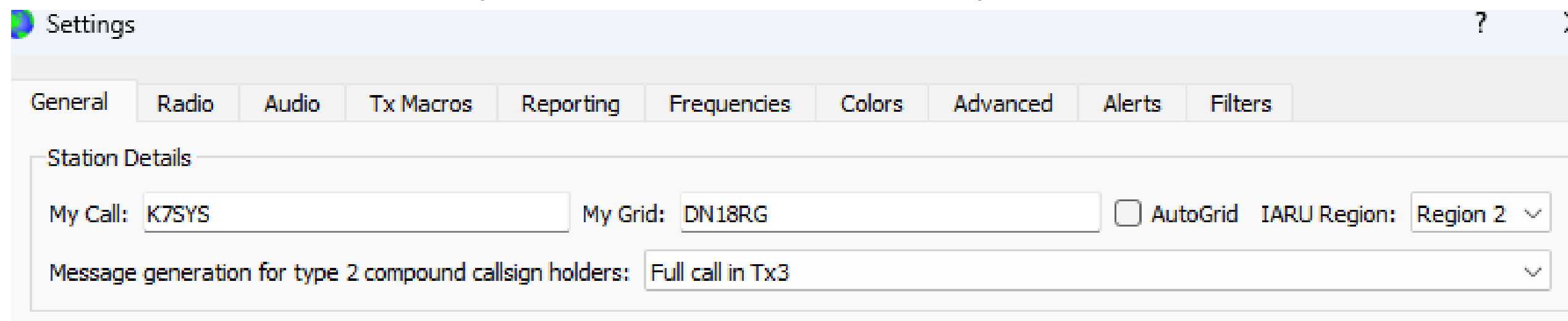
WSJT-X v2.8.0 improved PLUS edition									
File Configurations View Filters Mode Decode Save Tools Help									
Band Activity					Rx Frequency				
UTC	dB	DT	Freq	Message	UTC	dB	DT	Freq	Message
163130	-17	0.7	922 ~	VU2ORO JA3SIA PM74	----- 20m -----				
163130	-17	0.1	1000 ~	CQ KB5JW EM32 U.S.A.	162745	-12	0.2	202 ~	KK7YBL JH7APL QM08
163130	-13	0.2	1691 ~	K2E KF7MCQ DM33	162845	-14	0.2	201 ~	N7RLK JH7APL QM08
163130	-18	0.3	1193 ~	9W2BVB KK7EHJ -21	162830	-20	0.2	1239 ~	NOQK RR73; W9KCJ <K2A> +00
163130	-15	0.2	1748 ~	WW6WWW KJ7SLF DM26	162915	Tx		2759 ~	K2A K7SYS DN18
----- 2025-07-02 - 16:32:00 UTC - 20m - FT8 -----					162945	Tx		2759 ~	K2A K7SYS DN18
163200	4	0.5	1051 ~	W0DHT N7PIB CM88	163015	Tx		2759 ~	K2A K7SYS DN18
163200	-11	-0.0	2579 ~	KF5I KO4YIN RR73	163100	-17	0.3	1238 ~	CQ K2A FN21 U.S.A.
163200	-10	0.2	1451 ~	KF0PSC AE6CH 73	163145	Tx		2759 ~	K2A K7SYS DN18
163200	-11	0.1	1700 ~	WW6WWW K6ESS 73	163215	Tx		2759 ~	K2A K7SYS DN18
163200	-12	0.2	1905 ~	R6WA JN1XVA RR73	163245	Tx		2759 ~	K2A K7SYS DN18
163200	-17	0.3	1193 ~	9W2BVB KK7EHJ -21					
163200	-17	0.2	1989 ~	K7TCH JA9ELE -14					
163200	-14	0.7	921 ~	VU2ORO JA3SIA PM74					
163200	-13	0.1	1000 ~	WB4QOC KB5JW EM32					
163200	-17	0.2	1692 ~	K2E KF7MCQ DM33					
163200	-17	2.2	1024 ~	WM3PEN KV4JN EM60					
163200	-18	0.2	603 ~	HI6WWA KE8UXT -02					
163200	-20	0.1	2241 ~	KF0PSC K3KLB EN91					
----- 2025-07-02 - 16:32:30 UTC - 20m - FT8 -----									
163230	-2	0.5	1051 ~	W0DHT N7PIB CM88					
163230	-12	-0.0	2579 ~	WB0WAO KO4YIN -14					
163230	-13	0.3	1193 ~	9W2BVB KK7EHJ -21					
163230	-12	0.1	1000 ~	WB4QOC KB5JW EM32					
163230	-14	0.2	1989 ~	K7TCH JA9ELE -14					
163230	-14	1.3	764 ~	WH6S W2OSR FN30					
163230	-18	0.5	1618 ~	K2E KE0PX DM67					

What is FT8?

- Part of the WSJT-X Suite of programs
 - Written by Joe Taylor, K1JT
 - Nobel Laureate , Princeton, in Physics
- What is the point of FT8?
 - It stands for “Franke-Taylor design, 8-frequency shift keying”. FT8 uses sophisticated coding and signal processing to decode signals that are **10 to 15 dB below the noise floor. This allows hams to make contacts even when band conditions are poor and signals are weak.**
- FT8 signals are always the first to appear and the last to leave the band

Focus on FT8 Function

- Tonight, will not focus on installation or setup
 - **W**eak **S**ignal communications system **k1JT**
 - Download <https://wsjt.sourceforge.io/wsjtx.html>
 - WSJT-X 2.7.0 original program
 - WSJT-X 2.8.0 Improved – same core but an improved user interface



The screenshot shows the 'Settings' window of the WSJT-X software. The 'General' tab is selected, and the 'Station Details' section is visible. The 'My Call' field contains 'K7SYS', the 'My Grid' field contains 'DN18RG', and the 'IARU Region' is set to 'Region 2'. The 'AutoGrid' checkbox is unchecked. The 'Message generation for type 2 compound callsign holders' dropdown is set to 'Full call in Tx3'.

Settings

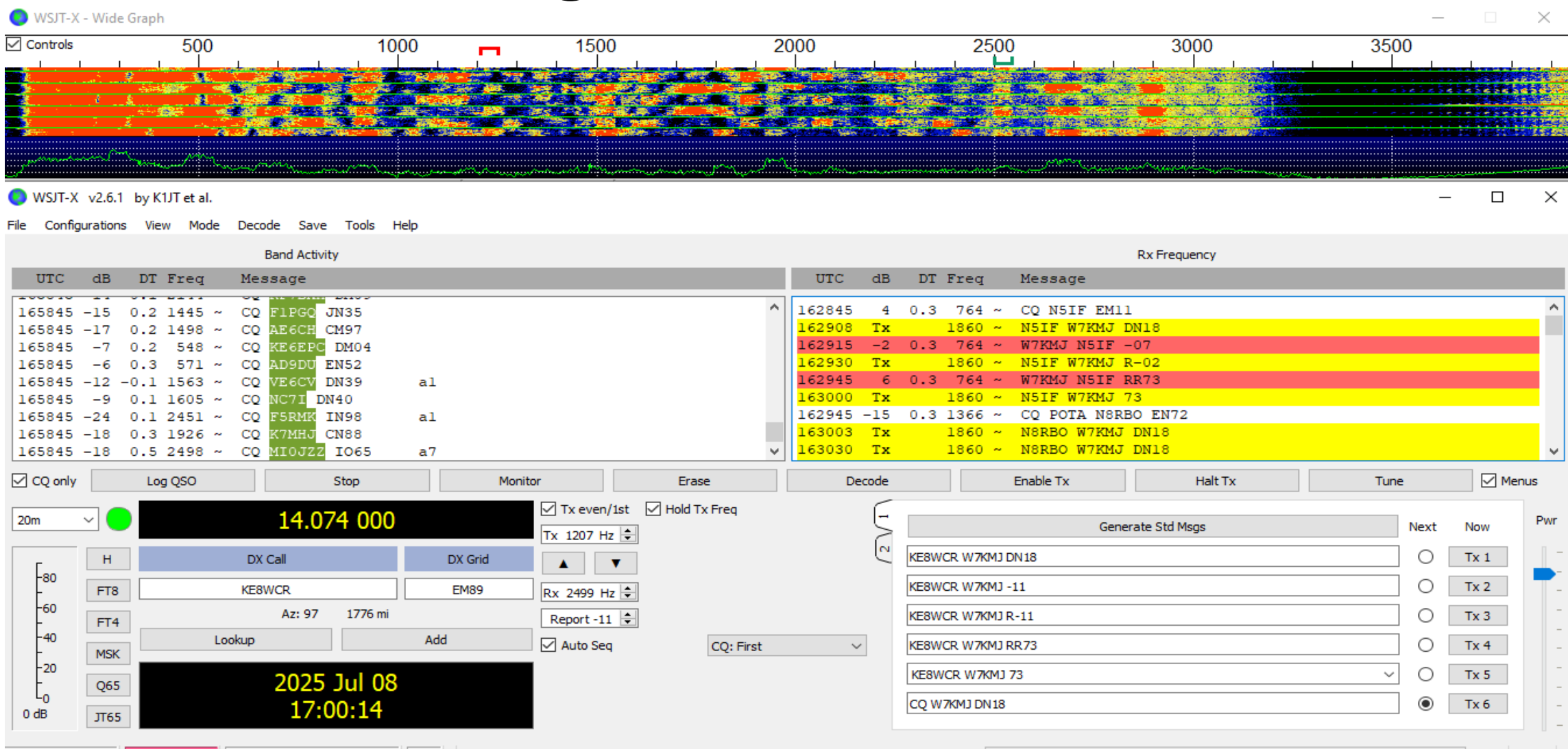
General Radio Audio Tx Macros Reporting Frequencies Colors Advanced Alerts Filters

Station Details

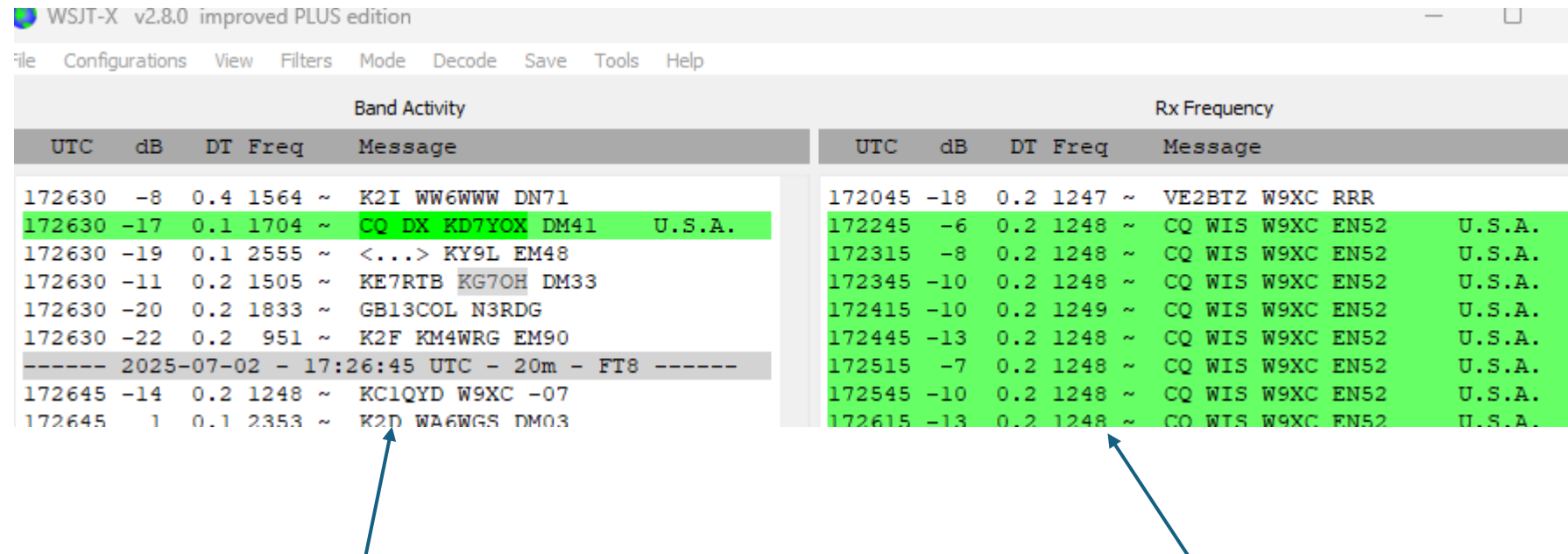
My Call: K7SYS My Grid: DN18RG ☐ AutoGrid IARU Region: Region 2

Message generation for type 2 compound callsign holders: Full call in Tx3

WSJT-X – The Big Picture



General Layout – Upper Part of Screen



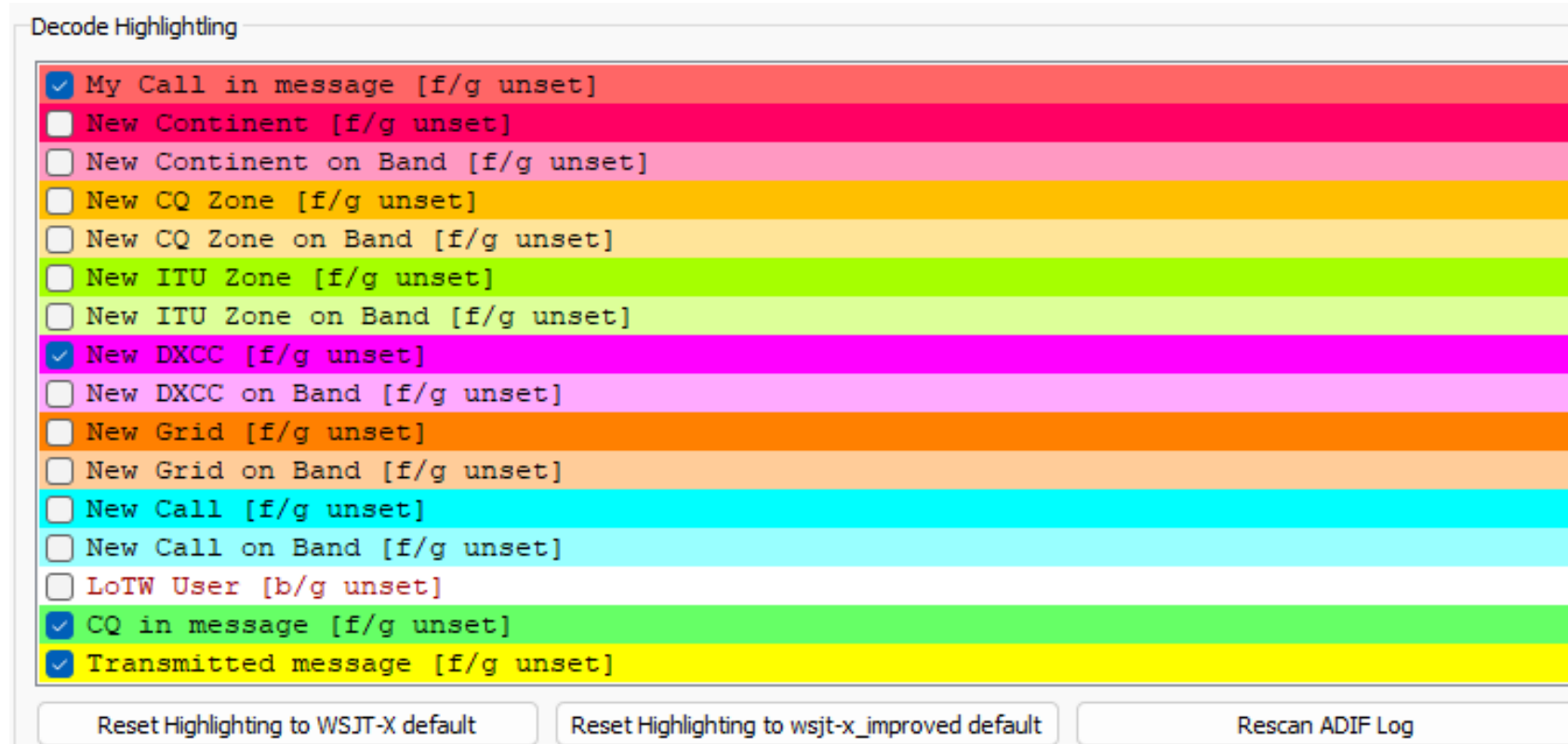
The screenshot shows the WSJT-X v2.8.0 improved PLUS edition interface. It features two main data tables: 'Band Activity' on the left and 'Rx Frequency' on the right. The 'Band Activity' table lists signals across various frequencies, with a specific entry for 172630 -17 0.1 1704 ~ CQ DX KD7YOX DM41 U.S.A. highlighted in green. The 'Rx Frequency' table shows a list of signals at 1247 Hz, with multiple entries for CQ WIS W9XC EN52 U.S.A. also highlighted in green. A blue arrow points from the text 'Everything happening on RF frequency (in this case 20m, 14.074MHz)' to the 'Band Activity' table. Another blue arrow points from the text 'All signals on monitored audio frequency (in this case 1247 Hz +/-)' to the 'Rx Frequency' table.

Band Activity					Rx Frequency				
UTC	dB	DT	Freq	Message	UTC	dB	DT	Freq	Message
172630	-8	0.4	1564	~ K2I WW6WWW DN71	172045	-18	0.2	1247	~ VE2BTZ W9XC RRR
172630	-17	0.1	1704	~ CQ DX KD7YOX DM41 U.S.A.	172245	-6	0.2	1248	~ CQ WIS W9XC EN52 U.S.A.
172630	-19	0.1	2555	~ <...> KY9L EM48	172315	-8	0.2	1248	~ CQ WIS W9XC EN52 U.S.A.
172630	-11	0.2	1505	~ KE7RTB KG7OH DM33	172345	-10	0.2	1248	~ CQ WIS W9XC EN52 U.S.A.
172630	-20	0.2	1833	~ GB13COL N3RDG	172415	-10	0.2	1249	~ CQ WIS W9XC EN52 U.S.A.
172630	-22	0.2	951	~ K2F KM4WRG EM90	172445	-13	0.2	1248	~ CQ WIS W9XC EN52 U.S.A.
----- 2025-07-02 - 17:26:45 UTC - 20m - FT8 -----					172515	-7	0.2	1248	~ CQ WIS W9XC EN52 U.S.A.
172645	-14	0.2	1248	~ KC1QYD W9XC -07	172545	-10	0.2	1248	~ CQ WIS W9XC EN52 U.S.A.
172645	1	0.1	2353	~ K2D WA6WGS DM03	172615	-13	0.2	1248	~ CQ WIS W9XC EN52 U.S.A.

Everything happening on RF frequency (
in this case 20m, 14.074MHz)

All signals on monitored *audio*
frequency (in this case 1247 Hz +/-)

A Quick Word On Color Codes



File>Settings> Colors - There is a default setting, but you can change everything (right click) [f/g unset]

So, what does it all mean?

Time – 1st :00 & :15 or 2nd :15 & :45

Signal Strength (Relative to 2.7 KHz bandpass)

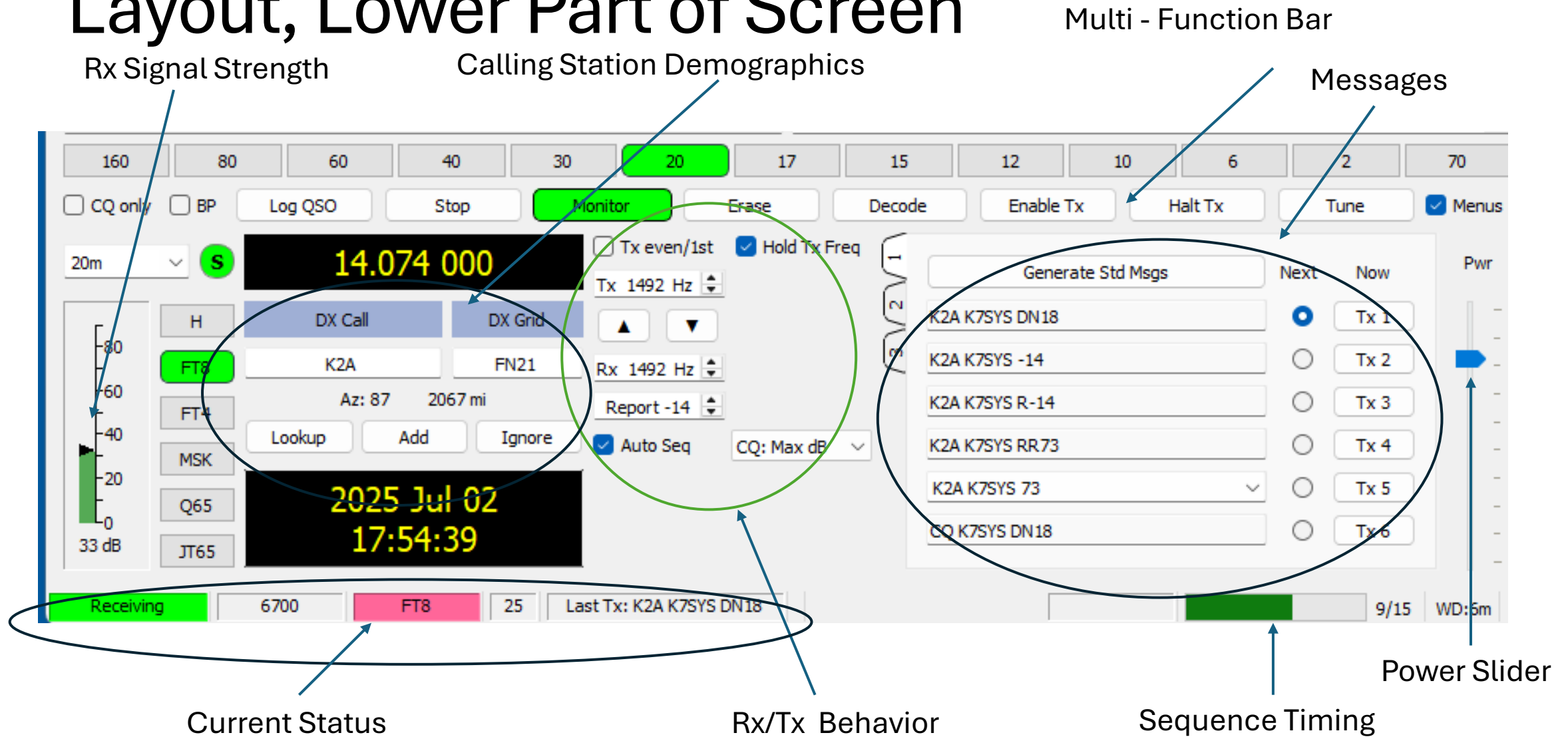
Band Activity							
UTC	dB	DT	Freq	Message			
170215	-12	0.4	1934	~	OZ4EDR	V31DL	EK57
170215	-17	0.2	817	~	W7LCV	KJ7SLF	R-19
170215	-16	0.2	2320	~	AB5GC	WA0TDA	-17
170215	-15	-0.3	1083	~	9M4WWA	K7ADB	DM04
170215	-19	0.1	1756	~	CQ	WA4TED	EM75 U.S.A.
170215	-18	0.2	1094	~	AD4K	KG0KG	RRR
----- 2025-07-02 - 17:02:30 UTC - 20m - FT8 -----							
170230	2	0.1	1424	~	K5DPY	N7FDX	-17

Formatted 13-character message

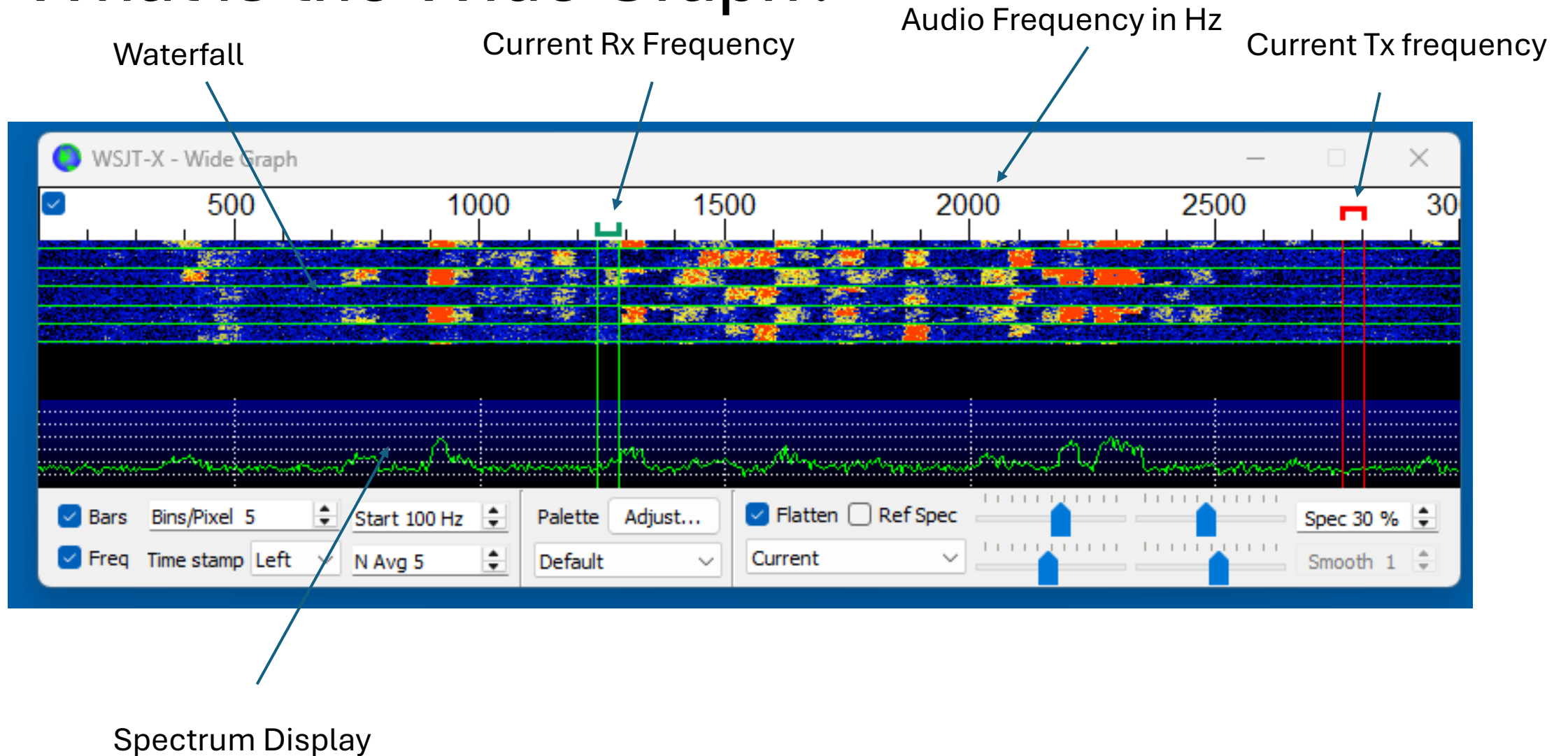
Cumulative time difference between signal received and your computer clock (should be < 1.0 sec)

Audio frequency (sometimes called *DF*)

Layout, Lower Part of Screen



What is the Wide Graph?



Demonstration – Joe Mauk W7KMJ

WSJT-X v2.8.0 improved PLUS edition

File Configurations View Filters Mode Decode Save Tools Help

Band Activity

UTC	dB	DT	Freq	Message
185800	-13	0.1	2307	~ K7AGE KJ7SLF DM26
185800	-16	0.1	466	~ VE1ZZ W3BLT R-17
185800	-16	0.1	1757	~ CQ TNOWWA IN96 France
185800	-20	0.2	1660	~ DJ0YI 8A1K RR7
185800	-21	0.1	1052	~ K1STKV WB5BI EM34
185800	-20	0.1	501	~ KI4MRC KFOX DM42
185800	-21	0.3	1021	~ CQ KN6KBS CM87 U.S.A.
----- 2025-07-02 - 18:58:15 UTC - 20m - FT8 -----				
185815	-5	-0.2	1498	~ K2K AE2V EM85
185815	-7	0.1	2671	~ WA6HBR KO6CAV R-16
185815	4	0.1	2301	~ KF5I KK4DUP -07
185815	-2	0.1	1006	~ CQ K6LCN DM03 U.S.A.
185815	-7	0.2	906	~ W5RL KEONRE R-12
185815	-13	0.2	1900	~ ER3CT VA2CNE FN35
185815	-5	0.1	391	~ KD1PE N6YG CM98
185815	-11	0.1	1677	~ W3JWK KX9DX EN70
185815	-14	0.2	2929	~ CQ KZ6B CM99 U.S.A.
185815	1	0.5	2248	~ K2H W6INO CM97
185815	-17	0.2	532	~ K2A N3RDG FN00
185815	-8	0.2	311	~ K2I W9GY EN57
185815	-17	0.2	2027	~ CQ K2FZB EL88 U.S.A.
185815	-15	0.1	1437	~ K2A WU6K CM87
185815	-19	0.1	1581	~ VA3YK KY9L R-08
185815	-21	0.3	1490	~ N7RLK KD6EFQ 73
185815	-8	0.2	351	~ K2K N6ZDH CM97
185815	-17	0.2	1028	~ N9REG KG7OH DM33
185815	-17	0.2	1140	~ K2I N2UMV EM74
185815	-16	0.4	1440	~ K2I KF9NL EN70
185815	-20	0.4	2442	~ K2D N4HAI EM89
185815	-15	0.1	372	~ TMOWWA K8BJ EN91
185815	-20	0.1	1933	~ CQ NI6BB DM03 U.S.A.
185815	-21	0.1	2819	~ K2K KC4YAO EL98

Rx Frequency

UTC	dB	DT	Freq	Message
185130	5	0.1	1492	~ NORVS NU6T CM98
185200	6	0.1	1492	~ NORVS NU6T CM98
185230	1	0.1	1492	~ NORVS NU6T R-18
185245	-17	0.2	1498	~ K2D N5SLY EM13
185300	-5	0.2	1491	~ NORVS NU6T R-18
185315	-17	-0.2	1499	~ K2K AE2V EM85
185315	-19	0.2	1499	~ K2D N5SLY EM13
185330	0	0.3	1500	~ CQ AE6CH CM97 U.S.A.
185330	-4	0.2	1492	~ NORVS NU6T R-18
185400	2	0.2	1492	~ NORVS NU6T R-18
185400	-2	0.3	1500	~ CQ AE6CH CM97 U.S.A.
185430	3	0.1	1491	~ NORVS NU6T R-18
185430	-5	0.3	1500	~ CQ AE6CH CM97 U.S.A.
185430	-10	0.2	1491	~ KD6EFQ KD1PE DM56
185445	-18	-0.2	1498	~ K2K AE2V EM85
185500	2	0.2	1493	~ NORVS NU6T R-18
185500	-1	0.3	1500	~ W7EAZ AE6CH -17
185515	-10	-0.2	1498	~ K2K AE2V EM85
185530	1	0.2	1493	~ NORVS NU6T R-18
185530	0	0.3	1500	~ W7EAZ AE6CH -17
185545	-8	-0.2	1498	~ K2K AE2V EM85
185600	0	0.3	1500	~ W7EAZ AE6CH RR73
185600	-4	0.1	1493	~ NORVS NU6T R-18
185630	2	0.3	1500	~ CQ AE6CH CM97 U.S.A.
185630	-3	0.1	1493	~ NORVS NU6T R-18
185700	-4	0.3	1500	~ CQ AE6CH CM97 U.S.A.
185715	-19	0.3	1490	~ N7RLK KD6EFQ DM12
185730	-7	0.3	1500	~ CQ AE6CH CM97 U.S.A.
185730	-20	0.1	1491	~ KM4AEM K2J -07
185745	-18	-0.2	1498	~ K2K AE2V EM85
185800	-7	0.3	1500	~ CQ AE6CH CM97 U.S.A.
185815	-5	-0.2	1498	~ K2K AE2V EM85
185815	-21	0.3	1490	~ N7RLK KD6EFQ 73

160 80 60 40 30 20 17 15 12 10 6 2 70

☐ CQ only ☐ BP Log QSO Stop Monitor Erase Decode Enable Tx Halt Tx Tune ☒ Menus

20m ☒ S 14.074 000 ☐ Tx even/1st ☒ Hold Tx Freq
Tx 1492 Hz

80
60
40
20
0
32 dB

H

FT8

FT4

MSK

Q65

JT65

Dx Call

K2A

Az: 87 2067 mi

Lookup Add Ignore

Dx Grid

FN21

Report -14

☒ Auto Seq CQ: Max dB

Generate Std Msgs

K2A K7SYS DN18

K2A K7SYS -14

K2A K7SYS R-14

K2A K7SYS RR73

K2A K7SYS 73

CQ K7SYS DN18

Next

Now

Tx 1

Tx 2

Tx 3

Tx 4

Tx 5

Tx 6

Pwr

Receiving

6700

FT8

24

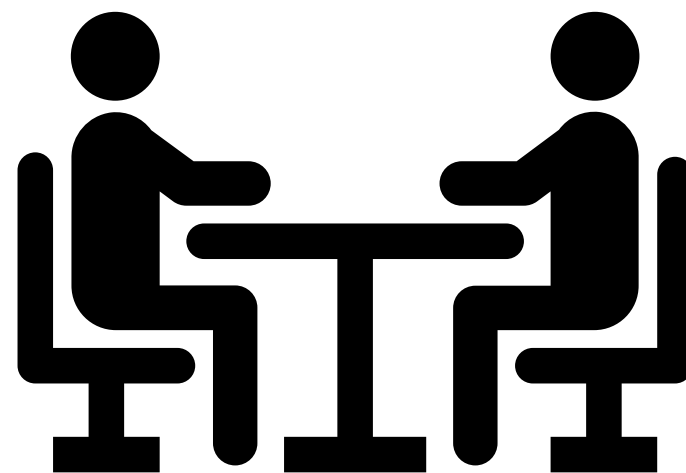
Last Tx: K2A K7SYS DN18

3/15

WD:6m



BCARC Announcements



ARRL Field Day Preliminary Results

Daryl Baird, K6KRG

Bonner County Amateur Radio Club President

2025 ARRL Field Day Chairman

ARRL FIELD DAY

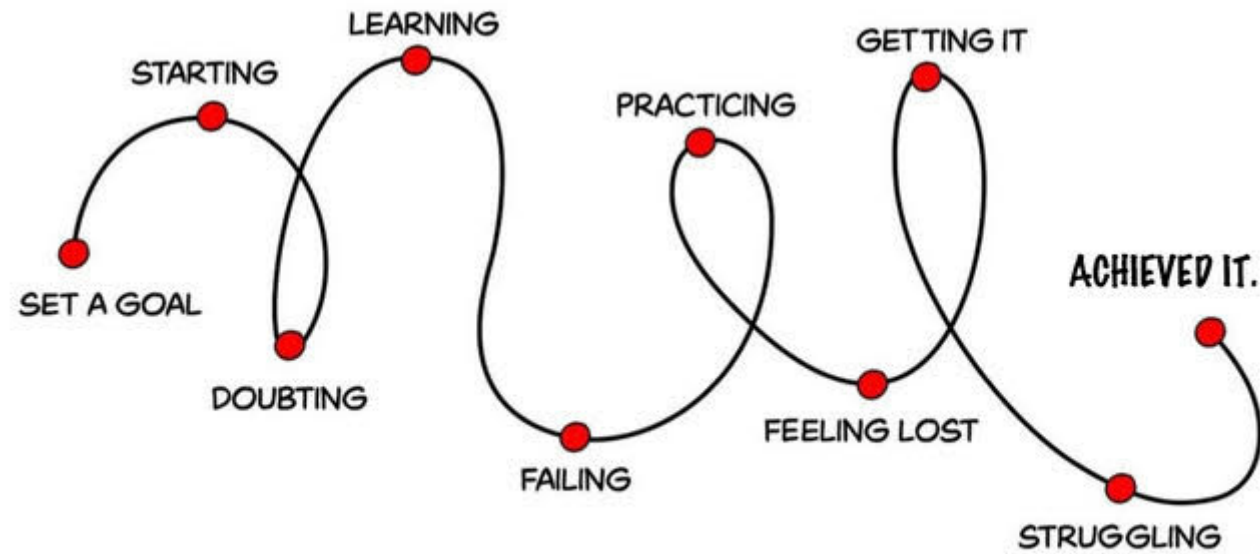


www.arrl.org

HOW I HOPE FIELD DAY 2025 WOULD GO.



HOW IT ACTUALLY WENT.



Year-over-year BCARC Field Day Scores

Year	GOTA	CW	Digi	SSB	Total QSO's	Bonus Points	Final score
2022	No	4	0	174	178	970	1334
2023	Yes	50	120	260	430	1310	2550
2024	Yes	0	259	321	580	1990	3668
2025 est.	Yes	0	479	373	852	1780	4882

2025 Field Day Operators per N3FJP

First Name	Call sign	QSO Total
Joe	W7KMJ	208
Mark	K7MEE	172
Dave	K7ZDP	127
Jim	KJ7SEN	109
Keith	K7NEB	97
Daryl	K6KRG	76
John	K7BSV	33
Paul (out of state visitor)	K6PVZ	12
Chris (out of state visitor)	WB6CDF	12
Richard	K7HUM	6

2025 Field Day GOTA Operators

First Name	Call sign	QSO Total
Alden	KN0APP	20
Kim	No call	54
Jonah	No call	9
Wayne	No call	13
Ron	No call	10
Jean	No call	4



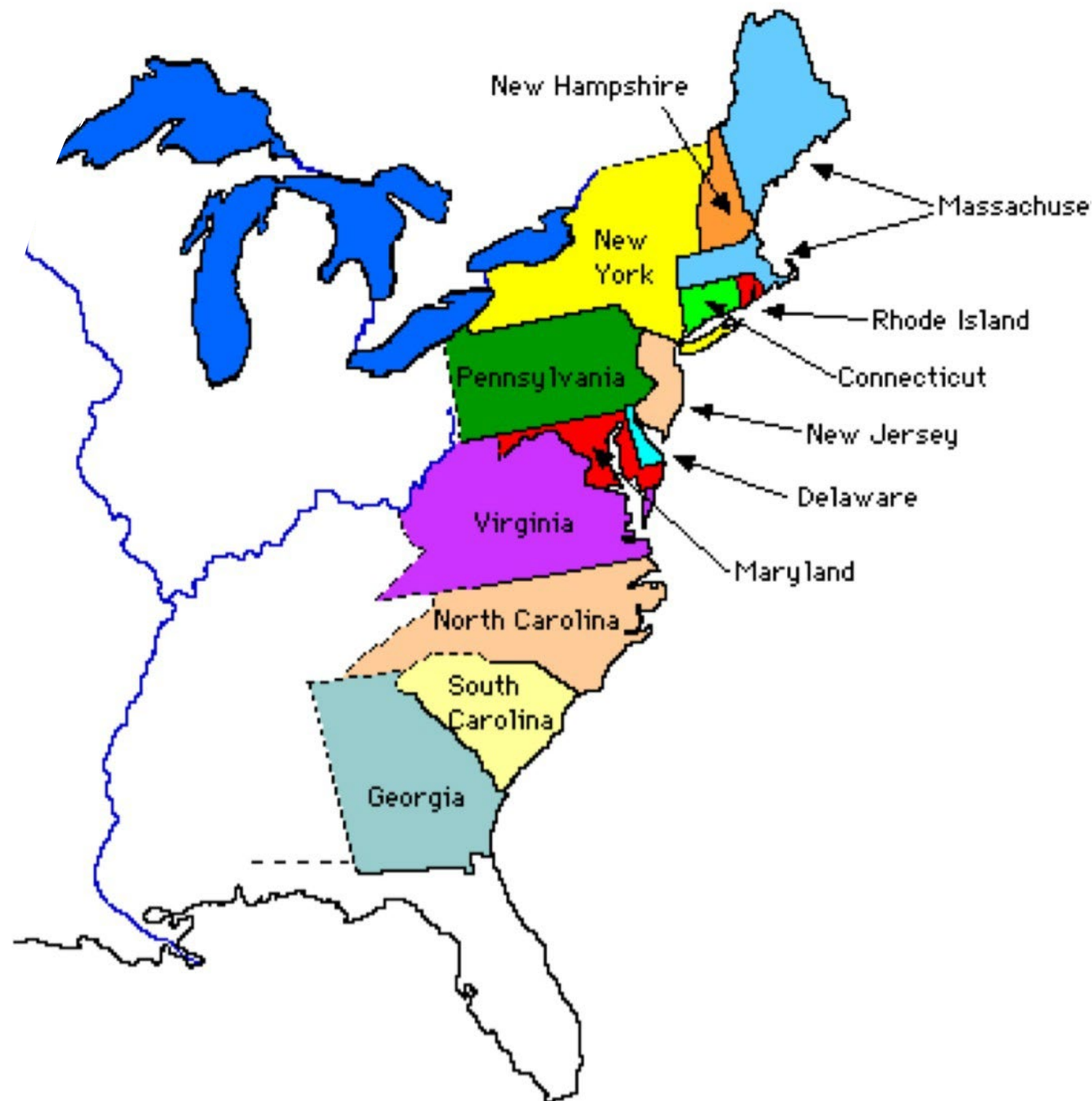
BCARC Parade Crew – Thank You!

- John – K7BSV
- Ken – K7FDN
- Gary – K2KKB
- Judy – AC6DY (plus one)
- Terry – N7BDL
- Dan – W7BID
- Doug – W6AXR
- Keith – AI6OO
- Colleen – KK7KNL



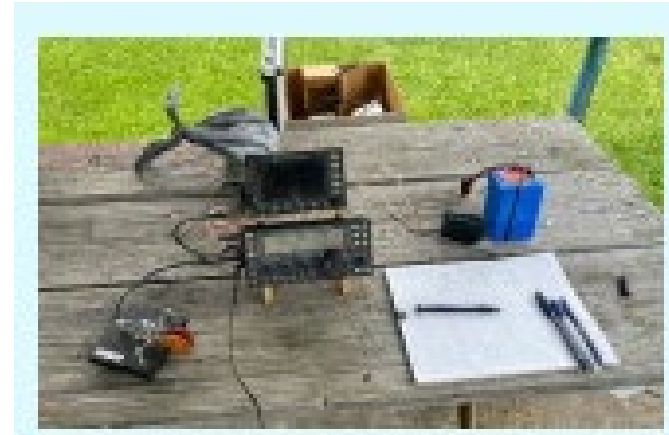
13 Colonies – Stories!

- Annual event week of July 4th
 - Work the 13 original colonies
 - Bonus station WM3PEN, GB13COL, TM13COL
- Who all played in this one?
- The tough ones
 - K2E – Delaware
 - K2F – Maryland
 - K2K – New Hampshire
- What's your story?



Upcoming Events

- BCARC Activity Day
 - August 30th
 - Round Lake Pavilion
 - Bring your portable rig or Go Box
 - For POTA People: US-2247
 - Or just play radio outdoors!
 - Must abide by park rules with antennas – more information to follow
- See The COAX for other activities in the next month or two



Breakfast at Connie's Cafe
323 Cedar Street, Sandpoint ID
July 26, 2025, 09:00 hrs.
(Third Saturday is VEC Testing)

Next Meeting
August 13, 2025
VFW Post, Sandpoint, ID
18:00 hrs. Informal Discussions and Eyeball QSO's
18:30 hrs. Meeting
Topic
Dxpeditons In Review
Wes Lamboley, W3WL

The background of the image is a close-up, shallow depth-of-field shot of several wooden Tic Tac game pieces. The pieces are light-colored wood, with some showing a natural grain. They are shaped like the letters 'X' and 'O'. The 'X' pieces are cross-shaped, and the 'O' pieces are ring-shaped. They are scattered across a light-colored, textured surface. The lighting is soft, creating gentle shadows and highlights on the edges of the pieces. The overall tone is clean and minimalist.

Tic Tac Code

MC, Dan Parkin W7BID