

WD2XSH status report: March 1 - May 31, 2013**Prepared by Fritz Raab, W1FR, Experiment Coordinator****June 30, 2013****1. SUMMARY OF OPERATIONS**

This report provides a summary of WD2XSH activity during the Spring 2013. The key statistics of our operations during this period are:

- Number of QSOs: 0 additional, total 504;
- Number of reports via web site: 34 additional, total 16,008;
- Operating hours: 5,545 additional, total 149,332; and
- Number of interference complaints: 0.

All statistics are based upon the end of the reporting period (05/31/13). Only transmitting hours are included.

2. ADMINISTRATIVE

Rudy Severns, N6LF, has taken over tallying the operating hours and QSOs. As a result of this transition, communications records (Appendic) that were formerly compiled by Ralph Walio are no longer being updated.

3. COMMUNICATIONS

Activity has continued into the spring quarter. The locations of currently licensed 600-m and 630-m stations are shown in Figure 1.

Three stations are conducting daytime communication tests. WD2XSH/14 (W1FR) in Colchester, VT and WG2XPJ (W1IR) in Milton Vermont are transmitting for about an hour near solar noon. WG2XKA (WA3ETD) in Benson Vermont is monitoring the signals. The distances are about 60 and 80 miles. So far, signals have been steady and well above the daytime noise level, although not as strong as at night (Figure 2).

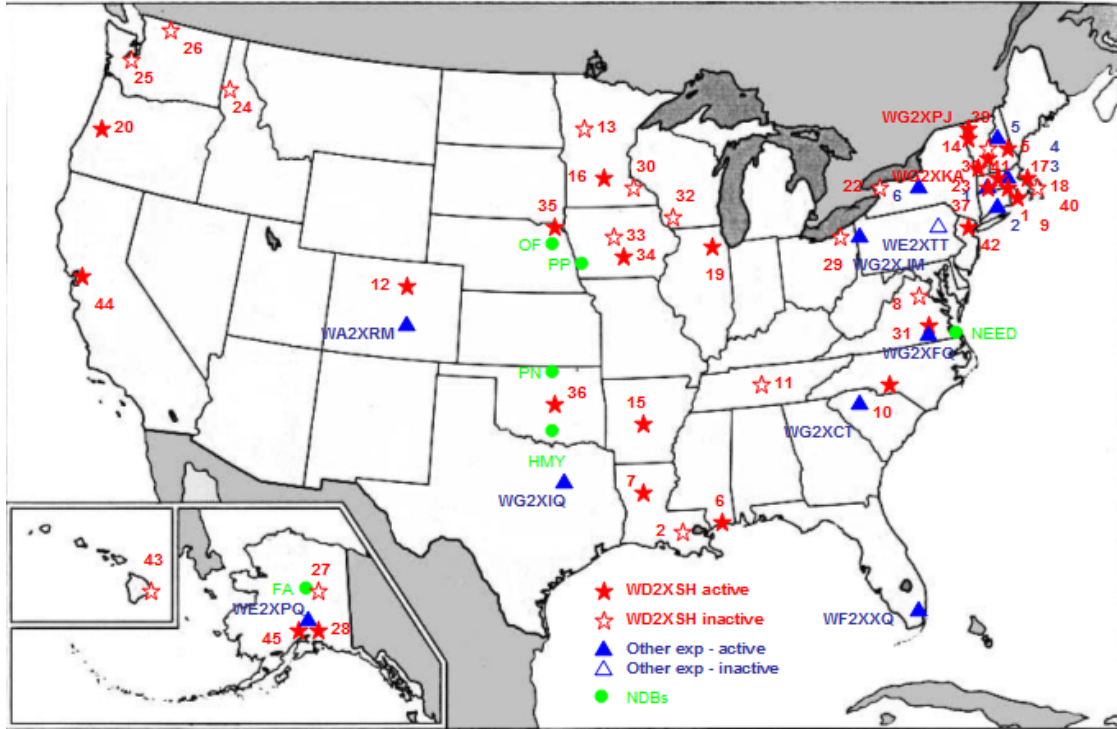


Figure 1. Locations and status of US 500-kHz experimental stations.

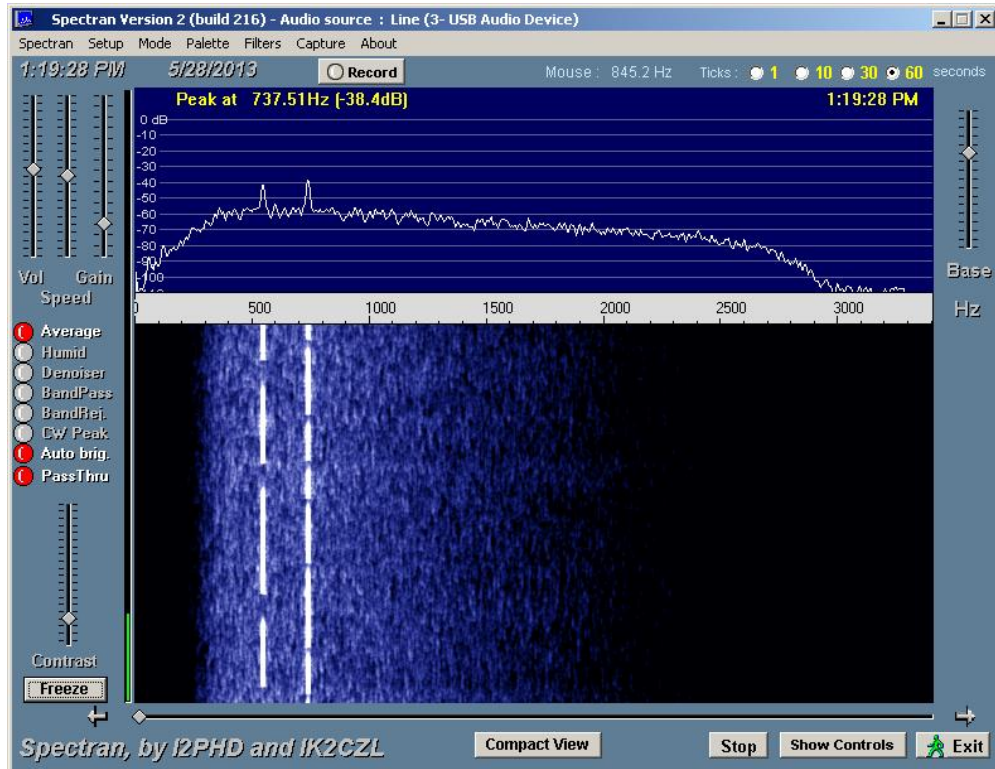


Figure 2. WD2XSH/14 (right) and WG2XPJ received in Benson, VT by WG2XKA.

WD2XSH/14 uses a 43-ft vertical antenna with no top loading. WG2XPJ uses a quarter-wavelength horizontal dipole elevated about six feet above the ground. Both are running 75 W RF input to the antenna system. The received signal levels are within a dB of each other.

The soil in Vermont has very low conductivity. The horizontal dipole acts as a loop antenna, with current returning through the earth effectively at the electrical skin depth. As a result, the maximum radiation is off the ends of the dipole, rather than perpendicular to the dipole. WG2XPJ's antenna is oriented to put maximum signal strength in the direction of WG2XKA.

4. ACTIVITIES

John Molnar WA3ETD/WG2XKA and John Langridge WG2XIQ have launched "MF Solutions". This venture will sell kits for downconverters and other hardware for the 630-meter band.

John Langridge KB5NJD/WG2XIQ gave a presentation at HAM-CON in Plano, Texas on his impressions of getting a 630-meter station on the air.

Mike Mussler AI8Z - WD2XSH/12 gave a presentation on 630 meters at the Rocky Mountain Convention on the last weekend in June.

5. INTERFERENCE

There have been no reports of interference, however, we are continuing to monitor three potential interference problems:

- NDB OF continues to operate on 510 kHz.
- We continue to hear NEED on 505 kHz from time to time.
- NDB FA continues to operate on 510 kHz.

6. OTHER US EXPERIMENTAL LICENSES

The frequency bands of US and foreign amateur and experimental licenses are shown in Figure 3. Some of the foreign allocations have been terminated as national regulators approve amateur operation in the 630-meter band. The parameters of U.S. experimental licenses are given in Appendix B, and the known unlicensed (part-15) operators are given in Appendix E.

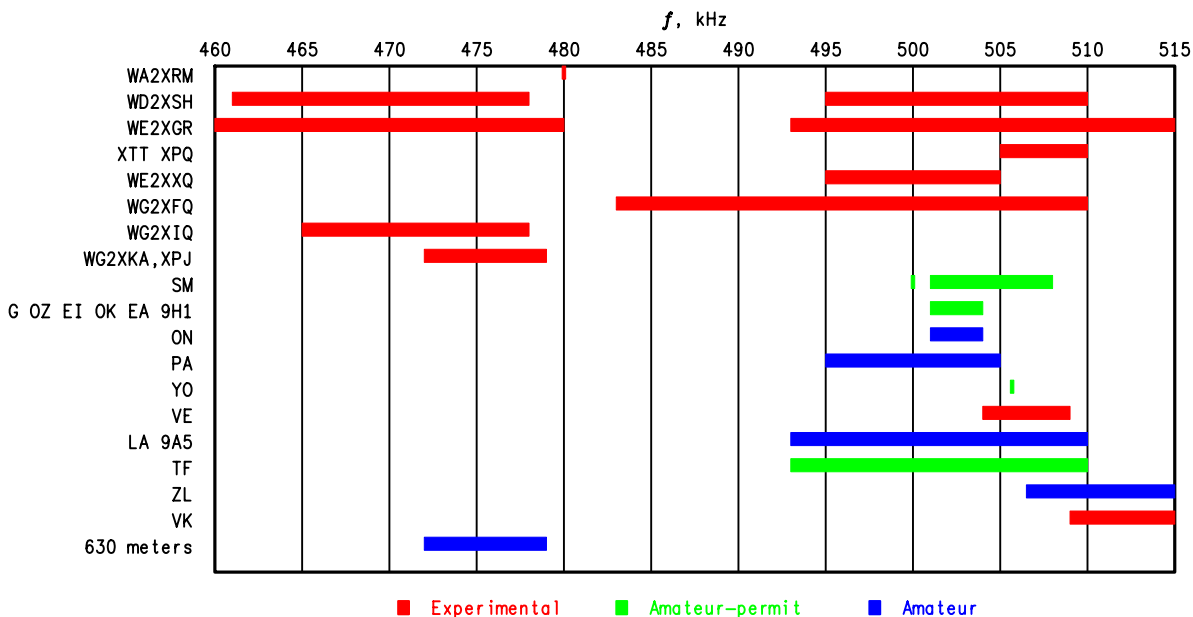


Figure 3. Worldwide amateur activity near 500 kHz.

The WE2XPQ license has been extended to June, 2018. WE2XTT has applied for a renewal.

The WG2XPJ license was issued on May 14 to Brian Pease in Milton, Vermont. He is authorized to run 1 W ERP from 472 to 479 kHz.

Lawrence Stoskopf, N0UU in Salina, Kansas, has applied for a license that will allow him to operate from 472 to 479 kHz. Ted Robinson from Stow, MA applied on June 3 for a license to operate from 460 to 487 kHz with a variety of modes and an ERP of 1 kW; the callsign WG2XSB has been assigned. Neil Klagge, W0YSE from Layton, Utah, applied on June 15 for a license to operate from 472 to 479 kHz with an ERP of 1 W using CW, PSK-31, FSK-31, and MSK-31. His callsign is WG2XSV.

7. INTERNATIONAL AMATEUR ACTIVITIES

Finland granted 630-meter operation on March 26. Finnish amateurs may operate from 472 to 479 kHz with an ERP of 1 W and a bandwidth of 1 kHz.

Amateurs in the following countries now have permission to use the 630-meter band:

Germany, Greece, Malta, Monaco, Norway, Phillipines, Czech Republic, Ireland, Switzerland, New Zealand, Finland.

8. HERITAGE (MUSEUM) OPERATIONS

Appendix D identifies the known heritage stations in the USA. WNE has been on the air on 472 kHz.

9. REGULATORY

Nothing new to report. The FCC has yet to act upon the NPR for 137 kHz.

10. MISCELLANEOUS

Nothing to report.

11. PLANS

Several WD2XSH stations will be continuing operations through the summer. The three Vermont stations plan to continue the daytime tests through July.

APPENDIX A. WD2XSH STATISTICS

STATION	CALL	STATUS	11/30/12		02/28/13		LAST LOG
			HOURS	QSOs	HOURS	QSOs	
WD2XSH/1	W1NZR	Inactive	4	3	4	3	02/13
WD2XSH/2	W5TVW	Inactive	13	22	13	22	08/07
WD2XSH/5	KW1I	ON	83	57	83	57	05/13
WD2XSH/6	W5THT	ON	10969	185	11328	187	05/13
WD2XSH/7	W5JGV	ON	22322	1	24557	1	05/13
WD2XSH/8	N4ICK	Inactive	0	0	0	0	-
WD2XSH/9	W2ILA	Inactive	10	27	10	24	05/10
WD2XSH/10	W4DEX	ON	2366	30	2390	30	05/13
WD2XSH/11	WS4S	Inactive	810	12	810	12	11/10
WD2XSH/12	AI8Z	ON	31892	26	32336	26	05/13
WD2XSH/13	K0J0	SK	997	7	997	7	08/08
WD2XSH/14	W1FR	ON	605	11	625	11	05/13
WD2XSH/15	W50R	OFF	14140	2	14142	2	05/13
WD2XSH/16	WE0H	Inactive	1356	16	1356	16	05/13
WD2XSH/17	AA1A	Inactive	11802	23	11802	31	03/12
WD2XSH/18	N1EA	Inactive	3959	0	3959	0	04/08

WD2XSH/19	K9EUI	ON	1367	3	1406	3	01/13
WD2XSH/20	N6LF	Moved	2402	7	2402	7	03/12
WD2XSH/21	WORW	Dropped	652	0	652	0	02/11
WD2XSH/22	WB2FCN	Inactive	-	-	-	-	-
WD2XSH/23	K2ORS	Inactive	112	1	112	1	08/09
WD2XSH/28	KL7Q	ON	63	6	67	6	05/13
WD2XSH/29	KN8AZN	SK	499	5	499	5	01/13
WD2XSH/31	WA1ZMS	ON	24822	8	27025	8	05/13
WD2XSH/34	WORPK	Moved	153	1	153	1	04/11
WD2XSH/35	K0HW	Inactive	11	0	11	1	11/12
WD2XSH/36	W5GHZ	Inactive	1180	0	1180	0	08/10
WD2XSH/37	W1XP	ON	6888	16	7161	16	05/13
WD2XSH/38	KN1H	ON	2322	2	2333	2	05/13
WD2XSH/41	W1HK	Inactive	18	13	19	13	04/13
WD2XSH/42	K2LRE	ON	105	0	116	0	02/13
WD2XSH/44	AC6QV	QRT (Moved)	72	0	72	0	08/12
WD2XSH/45	KL7UW	ON	175	6	180	6	05/13
WD2XSH/46	NO3M	Now WG2XJM	1612	5	1612	5	10/12
TOTAL	05/31/12	18 ON	129,081	492			
TOTAL	08/31/12	18 ON	134,811	492			
TOTAL	11/30/12	10 ON	138,954	503			
TOTAL	02/28/13	10 ON	143,787	504			
TOTAL	05/31/13	10 ON	149,332	504			

Notes:

Operating hours and QSOs are derived from logs through May 31, 2013. The statistics in this appendix were compiled by Rudy Severns using the Excel logs submitted by the stations. Decreases in the number of operating hours or QSOs from the previous total indicate correction of errors. Several stations are off the air because of health or equipment problems. "ON" means operation within the past year. Stations who do not submit logs each month are subject to an automatic QRT order and must remain off the air until their log has been brought up to date. The total hours for /42 have decreased because he submitted a log for 2013 only. He has been directed to merge logs from past years into a single log.

APPENDIX B. US EXPERIMENTAL LICENSES

CALL	NUMBER	QTH	f, kHz	ERP, W	DATES	NOTES
WA2XRM	1	CO	480	100	01/01/09 - 01/01/14	
WD2XSH	43	USA	495 - 510 461 - 478	20	09/13/06 - 08/01/15	
WE2XGR	8	New England	493 - 515 460 - 480	1000	09/05/07 - 04/15/15	
WE2AFX	1	OK	505 - 510	20	07/27/07 - 07/26/12	Exp.

WE2XTT	1	PA	505 - 510	1500*	09/08/08 - 09/01/13	
WE2XPQ	1	AK	505 - 510	50	06/05/08 - 06/01/18	
WE2XVY	1	AZ	500 - 510	200	12/09/08 - 12/01/10	SK
WF2XAU	1	FL	505 - 510	10	06/23/09 - 01/01/10	Exp.
WF2XXQ	1	FL	495 - 505	500	10/14/11 - 10/01/16	
WG2XCT	1	SC	465 - 510	500	03/14/12 - 03/01/14	
WG2XFQ	1	VA	483 - 510	20	06/08/12 - 06/01/14	
WG2XIQ	1	TX	465 - 478	1	09/12/12 - 09/01/14	
WG2XJM	1	PA	460 - 480	100	10/24/12 - 11/01/14	
			495 - 515	100		
WG2XKA	1	VT	460 - 490	1	10/24/12 - 11/01/14	
WG2XPJ	1	VT	472 - 479	1	05/14/13 - 05/01/15	

* RF output to antenna

APPENDIX C. FOREIGN AMATEUR/EXPERIMENTAL BANDS

The following table gives the amateur/experimental authorizations that were in force at some time prior to approval for amateur operation in the 630-meter band. Some of these allocations have been or will be phased-out concurrent with approval of amateur operation.

COUNTRY	TYPE	BAND, kHz	ERP, W
Sweden	NoV	500, 501 - 508	20 CW, SSB, data
Germany	Exp	505.0 - 505.2	9
Czech Republic	Exp	501-504, 505.60	10
UK	NoV	501 - 504	10
Belgium	Amateur	501 - 504	5
Canada	Exp	504 - 509	20
Norway	Am/Herit	493 - 510	100 (RF) CW only
Romania	NoV	505.68	100 (RF)
Denmark	NoV	501 - 504	20
Ireland	NoV	501 - 504	10 CW, PSK-31
Netherlands	Amateur	495 - 505	5
Iceland	NoV	493 - 510	100 CW
New Zealand	Amateur	505 - 515	20 200 Hz
Croatia	Exp	493 - 510	
Australia	Exp	505 - 515	
Spain	NoV	501 - 504	5 100 Hz
Malta 9H1	Amateur	501 - 504	10
Italy	NoV	501	One station
Finland	Amateur	472 - 479	1

The following countries have approved amateur operation in the international 630-meter band (472 - 479 kHz):

Germany, Greece, Malta, Monaco, Norway, the Phillipines, Czech Republic, New Zealand, Australia, Switzerland, Finland.

This list has been changing frequently and is no doubt incomplete.

APPENDIX D. HERITAGE STATIONS

CATEGORY	CALLSIGN	FREQUENCIES	OPERATOR / QTH
Coastal	KSM	500, 426	MRHS, Bolinas, CA
	KFS		
	KPH	500, 426	MRHS, Bolinas, CA
	KLB	500, 488	Seattle, WA
	WLO	500, 438	Mobile, AL
New	WNE	500, 472	NEHRS, Stoneham, MA
	KDR	500, 482	Bellevue, WA
	WFT	500, 486	KZ4RV, Palmeto, FL
USCG	NMC	500, 448, 472	Bolinas, CA
	NMN	500, 448, 468	Chesapeake, VA
	NOJ	500, 416, 470	Kodiak, AK
Ships	KKUI		SS American Victory
	KYVM		SS Red Oak Victory
	KECW		SS Lane Victory
	KXCH		SS Jeremiah O'Brien
	KHRC		SS Matsonia
	NWVC	500, 512	LST325, Evansville, IN
	NTTH	500, 512	USS Cassin Young, Charleston, MA
	NEPL		USS Massachusetts, Fall River, MA
	NWKJ		USS Yorktown, Charleston, SC
Foreign	LGQ	493 - 510	Rogaland, Norway
	LM500LGN	493 - 510	Bergen, Norway

APPENDIX E. US PART-15 OPERATORS

<i>f</i> , kHz	ID	QTH	OPERATOR
510.1	HI	Monroe, CT	
510.903	EH	East Haven, CT	K1RGO
515.15	U	Magdalena, NM	Mike Mideke - Inactive

APPENDIX F. CANADIAN 500-kHz STATIONS

CALL	OP	QTH	STATUS
VX9BDQ	VE7BDQ	Delta, BC (near Vancouver)	Active
VX9MRC	VO1NA	Torbay, NFLD	Active
VX9ZZZ	VE1ZZ	Nova Scotia	Active
VX90HH	VE30HH	Richmond Hill, Ontario	Inactive