

WD2XSH status report: June 1 - August 31, 2007**Prepared by Fritz Raab, W1FR, Experiment Coordinator****September 2, 2007****1. ADMINISTRATIVE ISSUES**

A total of 17 stations are (or have been) on the air. Two are awaiting modification of the license to include their current location. Three have dropped out. Only one of the original 23 stations has yet to get on the air.

Processing of the logs is now working smoothly, and all stations are now submitting logs. The web site is also working smoothly, and has been updated. We are expanding it to include information on foreign 500-kHz amateur-experimental stations.

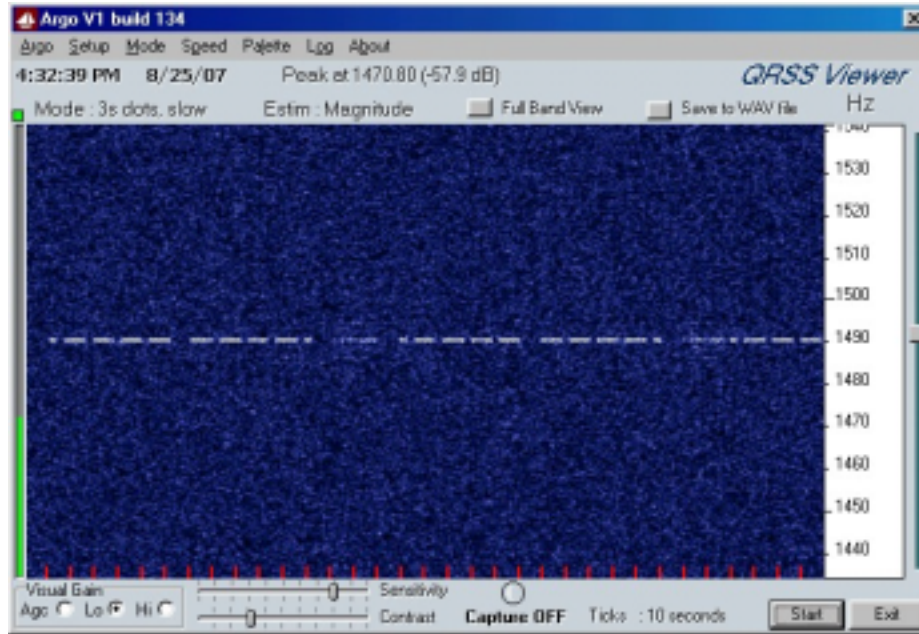
2. COMMUNICATIONS

Operations have continued in spite of summer-time QRN levels. Stations /6, /17, and /19 continue to be received regularly in the US, and /17 was just received in Germany. During the past three months, the WD2XSH stations have added 2000+ more hours of operation, bringing the total to 9239. A total of 91 QSOs have now been made. Over 3938 reception reports have been filed on our web site. Operating statistics are given in Appendix A on a station-by-station basis.

The QRN tends to be lightning-generated impulses. While this makes copying CW by ear difficult, there are significant portions of the time (1/2 to 2/3) when the signal can be received clearly. This suggests that a digital technique tailored to this noise environment will make possible reliable communications even during summer months.

A few stations have conducted ground-wave tests during the summer. These tests are conducted during the daytime so that the D layer absorbs the sky-wave signal. A further check is that there is no QSB. A summary of results follows. While these tests have not been repeated sufficiently to show reliability, they nonetheless demonstrate the potential of this band for reliable ground-wave communication over significant distances.

STATION	STATION	DISTANCE, mi	MODE	COMMENTS
20	KK7B	127.5	CW	
19	W9ORW	75	CW	
	W9JG0	50	CW	
	WORPK	278	QRSS3	Repeated, 15-dB SNR
9	5	127	CW QSO	50% success
6	2	87	CW QSO	Repeatable



Ground-wave signal from /19 received by W0PRK over 278-mi path on 08/25/07.

3. INTERFERENCE

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

NDB OF

Nothing new.

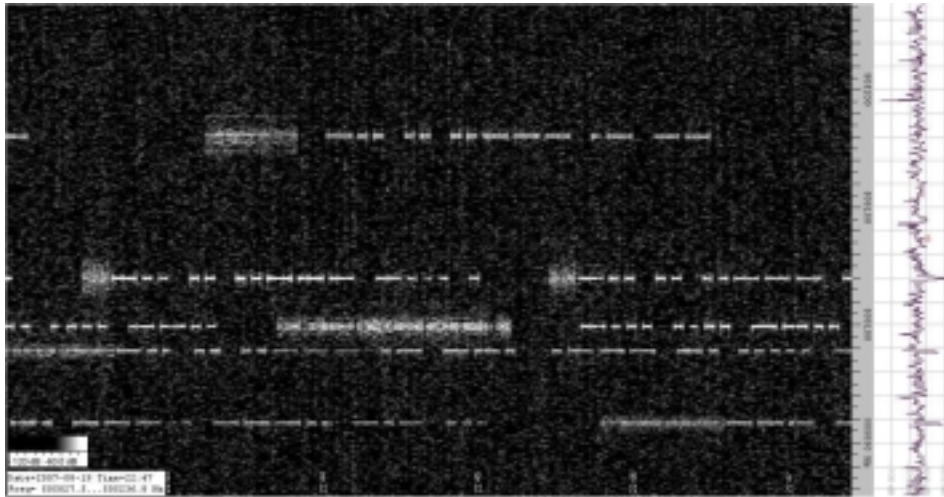
NEED

NEED has been heard several times this summer. Daytime ground-wave reception has been reported from Virginia Beach to Baltimore. However, we have not been able to localize it further and are not likely to be able to do so without DF capability closer to its location.

4. INTERNATIONAL AND OTHER

Five German stations are now operating at 505 kHz. About 20 UK stations are reported to be operating under NOV's, although obtaining a list has proved difficult. OK2BVG in the Czech Republic recently received a permit to operate as OK0EMW from 505.060 kHz.

WD2XFX (KD5UWL) has received permission to operate from 505 to 510 kHz, and has been integrated into our frequency plan. K1ENT in Utah has applied for an experimental license for 500 to 510 kHz.



European 500-kHz activity: DI2AM, DI2BE, SM6BHZ, DI2AG, OK0EMW.
Capture by DL6EBS on 08/19/07

5. PLANS

We plan to initiate the use of PSK/FSK/MSK-31, and hopefully soon. Several of the stations are ready to go. Since these signals fit within the spectrum of the currently authorized CW signal, we should be able to use these digital modes by simply filing notice under Section 5.77 of the FCC rules. A draft letter was sent to the ARRL attorney in early July, but to date there has been no action on this.

Seventeen candidates for addition to our license have been selected and prioritized into three groups. The first group provides geographic expansion in the western USA including Alaska and Hawaii. The second group adds opportunities for ground-wave tests in the midwest and south. The third group adds stations in the New England area. The recommendations [M06-7] have been forwarded to the ARRL for action.

Note: The FCC is currently taking nearly one year to process requests for experimental licenses. It is imperative for the ARRL to begin work on the application for renewal now. The additions can be included in this application.

I have arranged for comparative measurements to be made this fall of the signal levels of OF and our midwest stations. The monitoring station (K0HW) is at the edge of OF's operating radius. If our signals are 15 dB or more weaker than those from OF, I will be able to lift the restriction on the midwest stations operating in the top portion of the band.

I plan to investigate having QSL cards printed.

APPENDIX. STATISTICS

STATION	CALL	STATUS	HOURS	QSOs	COMMENT
WD2XSH/1	W1NZR	ON	3:07	3	
WD2XSH/2	W5TVW	ON	12:31	22	
WD2XSH/3	WD5CVG	DROPPED	-	-	
WD2XSH/4	WD4PLI	DROPPED	-	-	
WD2XSH/5	KW1I	ON	18:21	40	
WD2XSH/6	W5THT	ON	1500:27	33	
WD2XSH/7	W5JGV	MOVED	-	-	
WD2XSH/8	N4ICK	WORKING	-	-	Seeking location for ant
WD2XSH/9	W2ILA	ON	9:07	25	
WD2XSH/10	W4DEX	ON	519:49	17	
WD2XSH/11	WS4S	ON	761:28	11	
WD2XSH/12	AI8Z	ON	1394:56	0	
WD2XSH/13	K0J0	ON	460:22	0	
WD2XSH/14	W1FR	ON	17:09	3	Antenna problem
WD2XSH/15	W50R	ON	873:30	2	Antenna repair
WD2XSH/16	WE0H	ON	2:28	0	
WD2XSH/17	AA1A	ON	429:40	23	
WD2XSH/18	N1EA	ON	-	-	Testing
WD2XSH/19	K9EUI	ON	1158:01	3	
WD2XSH/20	N6LF	ON	1775:04	0	
WD2XSH/21	WORW	DROPPED	652:42	0	
WD2XSH/22	WB2FCN	MOVED	-	-	Ready to get on air
WD2XSH/23	K2ORS	ON	110:00	0?	QSOs not shown in log
TOTAL		17 ON	9239	91	

Note:

Operating hours and QSOs are derived from logs through July 31, 2007.