

WD2XSH status report: September 13 - December 1, 2006

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December 5, 2006

## 1. ADMINISTRATIVE ISSUES

The grant was issued on September 13. It permits CW transmission with up to 20 W ERP from 505 to 510 kHz. No explanation has been offered about why PSK-31 was not included; we assume that the FCC wants to be able to identify the stations easily.

The locations of the 21 stations are shown in Figure 1. Two of the original 23 dropped out for personal reasons, and one of the original participants has relocated because of Katrina. Fifteen have gotten on the air, although winds have taken down the antenna of one of these. The experiment coordinator has restricted the midwest stations to 505 - 508 kHz to ensure no interference to the NDB in Nebraska. He has also assigned frequencies for QRSS, CW beacons, rotating beacon, and calling.

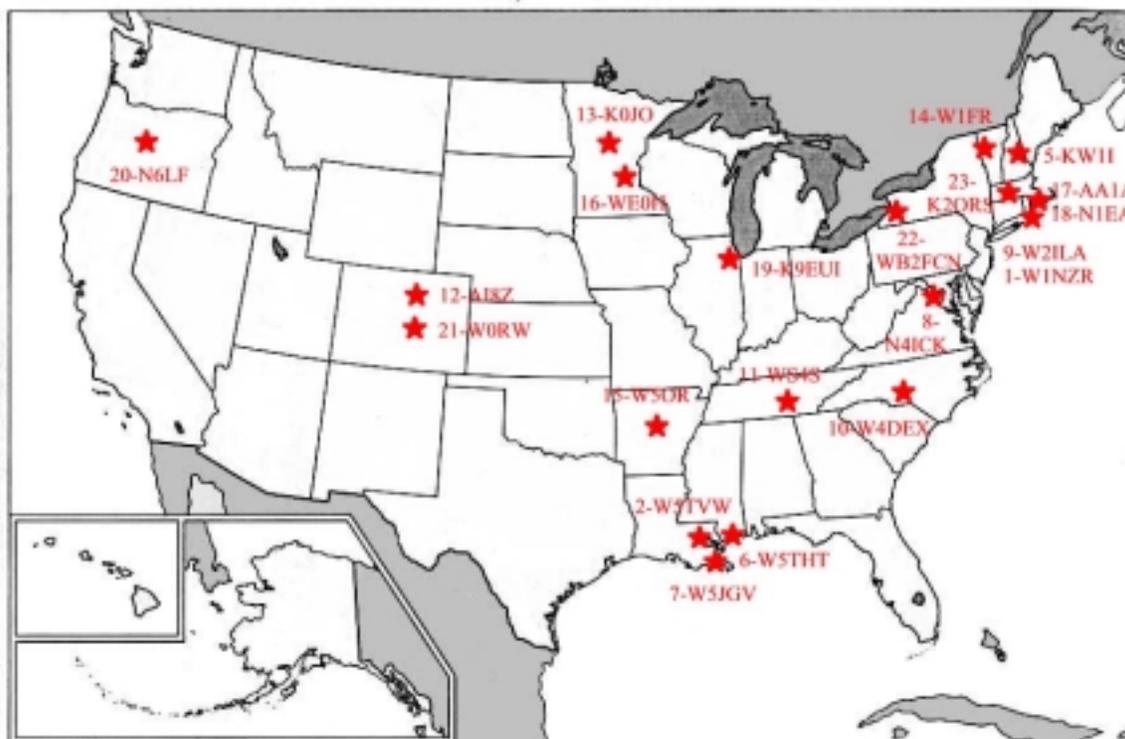


Figure 1. WD2XSH stations.

All participants must submit logs in Excel format. We have just begun processing the logs to extract statistics about our operations. There have been a number of glitches, but we are beginning to be able to extract useable information.

Our web site [www.500kc.com](http://www.500kc.com) is operational. It provides information on the project as well as a way for outsiders to file reception reports. The reports go into a data base which will later be sorted to produce statistics.

## **2. INTERFERENCE ISSUES**

None.

## **3. COMMUNICATIONS**

Most communications to date have been night-time sky-wave. Transmissions have included both CW and QRSS. Twenty-seven CW QSOs have been reported at distances ranging from 81 to 884 mi. Our web site has over 900 reception reports. Distances of 500 mi are readily achieved, and 1000-mi distances are not uncommon. Three stations have been received in Europe and one has been received in Hawaii.

Fast fading (possibly due to multipath) has been observed. It spreads the bandwidth of the signal beyond the 0.25-Hz spacing in the current QRSS assignments. A slower fading has been observed that makes it difficult to copy complete callsigns in the QRSS10 and QRSS30 modes.

## **4. PLANS**

In the short term, we hope to get most of the remaining 21 stations on the air. We also plan to expand processing the logs and begin processing the web-site reports. A little later we will begin day-time tests to determine ground-wave capabilities. A technical note has been drafted for use on our web site and as an article for *QEX*.

We will also continue coordination with the RSGB and IARU committees who are interested in 500-kHz operations. In the long term, we hope to add stations in the southwest, Hawaii, Alaska, and perhaps Puerto Rico.

**APPENDIX. STATISTICS**

STATION	CALL	STATUS	HOURS	QSOs	
				NUMBER	WITH
WD2XSH/1	W1NZR	ON		1	17
WD2XSH/2	W5TVW	ON		2	6, 11
WD2XSH/3	WD5CVG	DROPPED			
WD2XSH/4	WD4PLI	DROPPED			
WD2XSH/5	KW1I	ON	4	9	11, 14, 17
WD2XSH/6	W5THT	ON	178	8	2, 10, 11
WD2XSH/7	W5JGV	MOVED			
WD2XSH/8	N4ICK	-			
WD2XSH/9	W2ILA	ON		1	17
WD2XSH/10	W4DEX	ON	247	9	5, 6, 11, 14, 17
WD2XSH/11	WS4S	ON	433	2	2, 5, 6, 10
WD2XSH/12	AI8Z	ON	14		
WD2XSH/13	K0JO	ON			
WD2XSH/14	W1FR	ON	8	3	5, 10, 17
WD2XSH/15	W5OR	ON	2		
WD2XSH/16	WE0H	-			
WD2XSH/17	AA1A	ON	23	9	1, 5, 9, 10, 14
WD2XSH/18	N1EA	-			
WD2XSH/19	K9EUI	ON	446		
WD2XSH/20	N6LF	OFF	372		
WD2XSH/21	WORW	ON	652		
WD2XSH/22	WB2FCN	-			
WD2XSH/23	K2ORS	-			
TOTAL		14 ON	2379	27	

**Note:**

Operating hours are derived from logs.

QSOs are derived from W0RPK's weekly summary.