

REPORT ON THE BEVERAGE ANTENNA EXPERIMENT  
 Labor Day 1972  
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Site and Antenna The location DEE selected is in an unnamed valley about 1 1/2 air-line miles due east of downtown Los Angeles. The horizon is unobstructed to the NW and SE, and is obstructed by low, but rugged, mountains to the NE and SW. The latitude/longitude is roughly 34° 5' N/115° 40' W (more exactly, 34° 8' N/115° 41' W, by later check of Dept. of Interior map-DEE) a few miles north of the eastern panhandle of Joshua Tree Nat'l Monument. There aren't many radio stations in that area; the "local" is Palm Springs, 55 miles. Distances are approx. bearings to "nearby" settled areas are:

Los Angeles	- 145 miles - 270°	Yuma	- 120 miles - 155°
Las Vegas	- 150 - 5°	Healdton	- 105 - 115°
San Diego	- 130 - 210°	Palm Springs	- 55 - 240°

Two Beverage antennas are presently installed there: a 2800' antenna suspended two to four feet from the ground runs out at 135°. A second antenna consists of about 6000 feet of insulated #22 hookup wire on the ground aimed at about 55°. The actual direction of the antennas is uncertain until DEE gets a topographical map of the area and somebody goes out with a compass. (Bsp now on hand-DEE). The estimates are probably within 20° and could well be much closer than that. Both of these antennas were terminated in resistances. In the case of the 135° antenna, the ground rod is in sand which was wet to a depth of perhaps 3m by a thunderstorm. Attempts to adjust this resistance to eliminate KHRH-680 San Francisco exhibited little success. (It is now thought that KHRH might not be even close to the bearing of the antenna-DEE). The 6000 foot antenna is terminated to a handy U.S. Coast and Geodetic Survey marker. No attempt was made to tune this. (No, it is not that DEE has better sense than to set off for a mile walk across the desert on a pitch black night - it is because he got lost-DJK). DEE ran a third antenna along the side of the road which runs fairly close to due N-S. I'm not aware of his results. (The third antenna may no longer exist, having been constructed from 8000' of #16 Poly-Thermalex Magret wire, costing around \$5. The difference between it and the other two was that it had less gain either, because of horizon blocking and lack of pertinent signal areas, signals from other directions often dominated. It was not terminated. CQDA was strong on the 135° but so was KXKA 8/07-1220 and 1020 respectively- the most obvious conclusion was that signals even 90° from loop orientation would be received if there was absolutely nothing else on the frequency.-DJK).

EQUIPMENT In addition to the Beverage antennas, we had between the three of us, 3 Realistic TR6, a Falcon car radio, a Heath GR-78 equipped with a mechanical filter, and a shielded ferrite loop antenna (similar to Space Magnet but not constructed by Mr. Worcester).

CONDITIONS Reception conditions seemed about normal for Labor Day -- rather noisy but not impossible. There was considerable thunderstorm static -- extremely loud in the late afternoon. Almost all DXing was done on the Beverages, however; the "Space Magnet" was broken out around 0230 local time NW for a condition check. At that time, conditions seemed fairly dismal. Noise with only the WC and Midwest HSPers and a few powerful latins audible. Considerably better results were being had with the Beverages at that time. Immediately upon arriving home Monday, the GR-78/"Space Magnet" combination was checked out at home and found to be operating reasonably normally.

RESULTS In general, the Beverages lived up to expectations. The 135° antenna pulled in numerous Latin Americans along with incredible amounts of thunderstorm static. Although nothing exotic was logged, a number of stars were noted, some at excellent level. The 55° Beverage, on the other hand, pulled thru good signs from the east and, after 0230 local, from several ECNA stations. The thunderstorm noise on this antenna was much below that on the other antenna. Curiously, no Hawaiian or DU stations were noted on the 55° antenna (nor could any be found with the "Space Magnet"); however, the Tarraxa carrier was noted weakly on the 135° antenna. Comparison of the same frequency on the two antennas were impressive. Stations barely audible on one antenna were frequently dominant on the other. Although extremely strong signals from the "non-forward" direction were able to get through the difference in signal strength was extreme.

CONCLUSIONS The Beverage antenna seems to be everything it is reputed to be. It is that one accepts the hard fact that strong stations off to the side of the antenna are going to get through. I wish I had a bigger backyard.

TIME	FREQ	NOTES
0245	710	Strong JA (135). Not IDed but believed to be a hexagram.
0245	1000	134 Belize (135) poor with galy.
0245	1000	fair to good SS (135) assumed to be a hexagram.
0245	670	KERI Belize dominating on both antennas. EE under (55) assumed to be W/MQ. SS under and sometimes over (135) with no trace of W/MQ. SS seems to be 70MHz back here from 664.
0304-0310	910	Mixture of YKAG and a second hex. w/HIGH programming (assumed XEHO, Ciudad Obregon) w/KY10 very under (135). KPHO Phoenix dominant w/XEHO Mexicali under (55).
0313-0317	900	XEW Mexico City at local level (135). XEW weak but dominant w/vy w/EE under at one point (55).
0325	490	WIS Chicago clear and 100% readable (55) w/walk pgm. Lots of noise w/walk mx (135).
0327	880	W/WH at local level (55). Misc. distorted audio (135).
0335	830	WCOO Minneapolis clear w/rel pgm (55). Wk mx w/lots of noise (135).
0335	880	KWVI w/local-like sig (55). Mixture of KWVN & SS (700)? . Somewhat a few hundred cycles off freq. on the high side creating an annoying beat (135).
0728	800	CXOK Pontleton, B.C., fair w/some EE QRN (55).
0714 (sig?)	930	WCOO loud and clear -- no sign of KWVI (55).
0738	790	KABC Los Angeles good w/mx under (55). Music (not KABC) dominant w/rel (not KABC) under (135).
0745-0800	850	HUKC Bogota, Colombia, fair to good (135). HUKC poor w/EE QRN under (55). Estimated 4 or 5 3-units difference in HUKC signal.
0817	660	Het and several stations (?-DEE).
0818-0826	640	CHQ Habana w/FTI w/readable ID 0826 (135).
0830	890	SS fair to poor, not IDed (135).
0905	1000	SS o/u KONO OC w/lots of noise (135). ID may have been "Nueva Orleas" or something similar; nothing listed remotely like this.
0914	1010	XERC Guadaluajara atop jungle w/"R. Commercial" ID (135).
0930	1020	HDDP Havana, Colombia, w/Coloeseal, poor to good (135).
0948	1070	HCCG Bogota, Colombia, R. Santa Fe, fair to good atop 'jungle' (135).
0954	1180	EE mx (55) w/no sign of HUKC. EE mx (55) w/no sign of HUKC. EE mx (55) w/no sign of HUKC.
1000	1210	YMH Ciudad Ojuna, Ven., B/on w/good to fair signal thru noise (135). "Radio Petrola."
1000	730	HJFF Pereira, Colombia, w/clear strong ID (135). CIGG weak (55).
1020	1400	CJLG Vancouver w/Colombian even weaker (135). CIGG weak (55).
1024-1032	1400	KJUN Pecons, Texas, ET dominating on both but stronger on 135. Fair w/KJUN on 55. KJLD w/KSLI (55).
		Not written down but also noted: 55-VEBH 6d, WABC 6d, WCBS pr, WABC fair, WCAP 6d, WJL 6d, WOLJ or KOMA-1550 fair, WGY fair, 135-SS-880 (Peru?), carrier-853 (Peru), carrier-864 (Tarraxa), WVL 6d, WBAF 6d, 77-1550 1010 GMT, KXEL fair. Compulsorily mentioned: KPHL, KXKI, Cubans 670 & 720, ZMS-1540.