Jan - Feb 1998

SCCORE

Southern California Contest Club Operations, Results and Enlightenments

Vol. 12, No. 1

Message from the Prez

by Larry Serra, N6NC

The Visalia DX Convention (May 1-3, 1998) is coming and will be the site of our next SCCC meeting (noon Saturday, May 2 at the Holiday Inn) after our February 28 meeting at Don's, W6EEN. As a special treat for SCCCers, I have arranged a tour of the Voice of America transmitter/antenna facility at Delano, California, (about one hour south of Visalia on Rte. 99) on Friday, May 1. You may have seen its huge towers and curtain arrays to the west of Rte. 99 while driving up to Visalia.

The transmitting site is located almost two miles due west of the city of Delano and is reached by taking Highway 99 north (from Bakersfield) to the Pond Road exit, turning left onto Pond Road, then turning right onto Melcher Road to the VOA site. Alternatively, you can take Highway 99 north to the Garcias Road (Rte. 165) exit, turn left on Garcias Road to the VOA site at the intersection of Melcher Road and Garcias Road.

The Delano VOA station was constructed and opened in 1944 as part of the U.S. government's Office of War Information counter-propaganda efforts and was initially operated under contract with CBS radio. CBS continued to operate the Delano station until 1963, when the U.S. government assumed complete control. From 1965 to 1968, the shortwave station was updated under VOA's supervision by the addition of three Collins 250 kilowatt shortwave broadcast transmitters and two Continental 50 kilowatt independent sideband (ISB) transmitters. In 1977, a new horizontally-steerable curtain antenna was constructed for the 6 and 9 MHz bands. In 1985, four 250 kilowatt Brown Boveri transmitters replaced three original Federal transmitters that had been in place for 40 years. In 1988, VOA installed a high-gain, multi-band curtain array antenna. This computer-controlled antenna allows the transmitters signal to be rapidly switched, and the antenna horizontally and vertically slewed toward various reception areas with a keystroke. The shortwave mission of the Delano relay station is to transmit programs to audiences in Central America, South America and the central Pacific Ocean areas from the Marianas to Fiji. However, antennas are still in place that are capable of transmitting programming into mainland China and other Asian countries. In fact, in 1997, test Mandarin-language program transmissions were made to the mainland of China for Radio Free Asia.

The site includes 16 curtain and 6 rhombic transmitting antennas capable of handling 250 kilowatts from 6 to 21.6 MHz and 50 kilowatts from 6 to 22 MHz.

There will be two tours on Friday, May 1, one at 1:30 P.M. and one at 2:30 P.M., for each group of ten. Send me your name and choice of group by e-mail (hlserra@acusd.edu). Reservations will be on a first-come, first-served basis. A group of us in the K6NA mobile stopped by last year on the way home from Visalia, and the arrays were impressive even from our fence-line vantage point. I think the tour will be fun and informative, so I hope you take advantage of the opportunity.

SCCC NAQP and Sprint Teams Claimed Scores — Jan/Feb 1998

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AD6DO	833 x 236	196,588
K6LA	878 x 213	187,014
K6LL	819 x 223	182,637
W6KY	775 x 205	158,875
N5OT	710 x 201	142,710
		867,824

Note: Although this team total breaks the NAQP record of 784,229 held by the Florida Contest Group, the Southeastern Contest Club had the highest claimed team score of 907,579.

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		1,029,689

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SCCC SSB NAQP Team 2

N6KI	914 x 206	188,284
N6HC	968 x 193	186,824
N6ED	736 x 188	138,368
W7WW	687 x 145	99,615
K6LA	398 x 134	53,332
		666,423

SCCC SSB Sprint Team 1

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K6LA	284 x 46	13,064
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The Editor's Ramblings — Why Are Some Guys So Loud!

by Bruce Horn, WA7BNM

As contesters, we're generally obsessed with being loud. We want to break pileups on multipliers on the first call. We want to hold a run frequency without being pushed around. We want all of the casual contesters to hear us and say to themselves, "Wow! That guy's really loud. I should be able to work him easily."

So, the question becomes how to be loud. Obviously, we can turn up the power. When we start off with barefoot transceivers, we keep telling ourselves that if we just had a linear amplifier we'd be sure to break all of those pileups, and our signal would be revered far and wide. Some us even decide that the 1.5 kW limit is a little low, so we invest in coax-melting, 3 kW, 5 kW or even higher power amplifiers. Turn up the power! That's the ticket! This obsession with output power even extends to low power categories, where debates have raged over the use of amplifiers to bring output power to the 150W limit of a contest because those with 100W transceivers thought the extra 1.8 dB was important.

What else will make us loud? Of course, we need big antennas. Admittedly, there is a big difference in performance between a vertical or wire dipole, and a yagi of almost any type. However, if we have a tribander, we just know that having a monobander would be the real answer. When we get the monobanders, we decide that stacked monobanders would be even better. (Some of us go through the stacked tribander phase between these two.)

Yes, each of these antenna improvements produce incremental improvements in performance. But why does my buddy, who has similar antennas, keep beating me to the multipliers? Keep beating my scores? Of course, he must be turning up the power. He's probably really running an amplifier in those low power contests. He's probably using his linear to drive a Voice of America surplus amplifier. How else could he be beating me?

Although power and antennas certainly affect how loud we are, the terrain around us has a much greater effect on our signals. If we're blessed by great terrain, we can be loud without having big antennas. Unfortunately, unlike power and antennas, the only way to change our terrain is to move. We usually think of good terrain as being ideal moutain top locations, probably reached by some road that is barely passable during winter. However, signal-enhancing terrain can be found right here in suburbia. In fact, your buddy, that guy who is always louder than you, may be living in such a place. All it takes is a gentle downhill slope in the desired direction to do wonders

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Editor (from page 2)

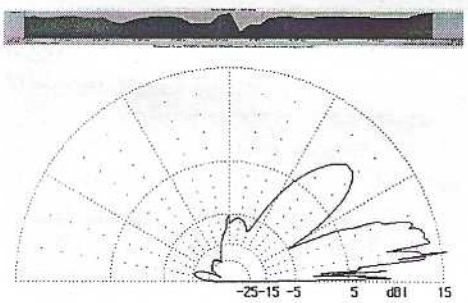
for your low-radiation-angle signal.

To illustrate the effect of terrain, let's look at two non-exotic QTHs. I live in the San Fernando Valley, and my foreground terrain when pointed at 60 degrees is essentially flat (less than 10 foot variation for the first 0.5 mile). Dan, AD6DO, lives in Fullerton, and his foreground in the same direction slopes downhill (70 feet lower) before rising again. The accompanying figures show the elevation variation for the first mile. (By the way, to rigorously analyze terrains, you need to look at the terrain out to at least the radio horizon.)

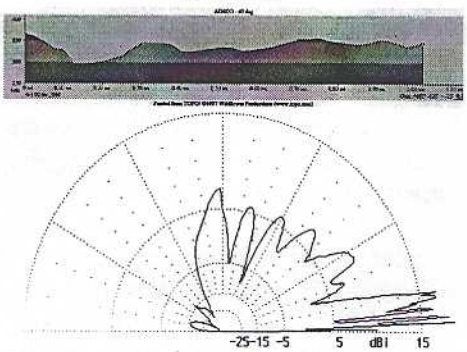
Using Brian Beezeley's, K6STI, terrain analysis program (TA), we can see how the terrain affects the vertical pattern of the antenna. Since the purpose of this example is not to compare our actual stations, but to illustrate the effect of terrain, I modeled a HyGain 205CA at 75 feet at 14 MHz for both QTHs. As you can see by examining the resultant antenna patterns, Dan's local terrain greatly enhances his low angle signal. In the range from 0 to 10 degrees, Dan's QTH is approximately 10 dB better than mine. That's a big difference. That's equivalent to 150W vs. 1,500W.

Do some contesters run excessive power? Yes. Will better antennas help you? Yes. But the next time you're wondering why some guy is always so loud, ask him about his QTH.

WA7BNM



AD6DO



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Membership in the SCCC is open to anyone. Dues are:
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Mexico/Canada: $8 per year
Other countries: $10 per year
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