The Heterodyne

Bulletin of the West Valley Amateur Radio Association
An Affiliated Club of the American Radio Relay League

West Valley Amateur Radio Association, W6PIY— http://www.wvara.org
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December 2008

Potluck Dinner Holiday Party: Wednesday, 7 to 9 p.m., December 17, 2008 at the American Red Cross, 2731 North First Street at Plumeria (between Trimble and Montague Expressway) in San José. Those who are bringing items to setup/decorate, or dishes to share, please arrive by around 6:30 p.m. to help set-up the room.

Election of Officers for 2009 — At the November 19, 2008 meeting, the following officers were unanimously elected for the next calendar year 2009:

Office	Officer	Call Sign
President	Scott Emery	AD6RY
Vice President	Grant Willner	AD6RE
Treasurer	Jon Kelley	K6WV
Secretary	Jeanett Willner	KG6SVJ
Director, 2-Year Term	Dave Schultheis	WB6KHP
	Brian Goldberg	KG6BKI
	Phil Verinsky	W6TQG
Director, 1-Year Term	Loren Singh	AD6YU

Am-Tech Day — Last event of the year is December 13th! The even is at the Stanford Linear Accelerator Center (SLAC) has graciously given amateur radio operators use of a large indoor and outdoor activity area, including a large auditorium and a picnic area to practice and demonstrate our amateur radio skills. See http://www.fars.k6ya.org/amtechday/ .
The event runs from 0800 to 2100 PST.

RadioFest 2009, March 7–8 — See http://www.radiofest.org/ .
This two-day event will be the ARRL Santa Clara Valley Section Convention! If you have something to show and tell, contact Bill Dale, N2RHV, n2rhv@arrl.org , 408-263-5325.

Summary of WVARA 2008 Field Day Results: Fantastic Job! — by Jim Peterson, K6EI
We were we #23 overall for all 2410 Field Day entries (all categories) in 2008.

1. We placed #2 out of 38 entries in the SCV Section after W6YX.
2. We place #2 out of 138 entries in the Pacific Division.
3. We scored highest of the 12 entries in the 8A and 8ABattery categories for the whole country.

4. We were #4 out of 252 entries at the QRP level nationally.
5. And we set a new national all-time record for 8ABattery.

WVARA Tuesday Night Net Check-ins:

Call Sign	Name	Nov. 11, 2008	Nov. 18, 2008	Nov. 25, 2008 - %	Dec. 2, 2008
AB6XS	Kevin	X	X		X
AD6CL	Chuck		X		
AD6YU	Loren	X	X #		X
K6WAR	William		X	%	
KD6VOR	Marv		X		
KF6EMB	Svend	X	X	%	
KG6SEA	Tom				X
KK6VF	Kevin	X #	X		X #
NU6P	John				X
W6HOC	Howard	X	X	%	X
W6RPH	Doug	X			
W6TQG	Phil		X		
WB6KHP	Dave	X			X

Notes:
X — Checked into net
— Net control operator
% — There was no net control station, and the net did not officially convene.

Club Net: Tuesday, 8:30 p.m. on our club repeaters:

WVARA Repeaters (W6PIY)			
Band	**MHz**	**PL**	**Status**
6 Meters	52.580-	151.4 Hz	Operating
2 Meters	147.39+	151.4 Hz	Operating
1.25 Meters	223.96-	156.7 Hz	Operating
0.70 Meter	441.35+	88.5 Hz	Operating
0.23 Meter	1286.2-	100 Hz	Operating

WorldRadio to Cease Print Publication— In a joint statement, WorldRadio publisher Armond Noble, N6WR, and CQ publisher Dick Ross, K2MGA, announced that WorldRadio magazine will no longer be published as a print magazine. According to the announcement, CQ Communications Inc. has acquired WorldRadio and plans to continue it as an online publication on CQ's web site. WorldRadio subscribers will have their subscriptions transferred to CQ magazine. Readers will be notified of details as plans are finalized.

One Ham's Introduction to "Top Band" — by Jim Peterson, K6EI (formerly AA6OZ)

(Originally published in QST, November 1991. Reprinted below with the author's permission.)

I've been in the habit of jogging on my lunch hour with coworker and fellow ham, Paul Jensen, AA6PB. With the usual tales of recent "ones that got away" and discussions of future Field Day

plans, our conversations frequently drift to the topic of ham radio in the "good old days" and Paul's early exploits on 160 meters.

"Back in '41 when I was W5JWX," he puffed one day as we plodded along the jogging trail, " all radios glowed in the dark. Almost everybody was operating on 160 meters with Zepps or random-length wire antennas. Most of us went home-brew using 6L6s, 807s or maybe a push-

pull pair of 813s." Paul winced as I commented that I always assumed he'd used cat-whisker detectors and spark-gap equipment in his youth. "Actually," he explained, "I did get a heck of a shock once when I tried out a spark-gap transmitter I'd built using the spark coil from an old Model T. Normally, though, I ran 10 watts from a Stan Cor kit into a wire-wrapped bamboo pole. You could always count on the ol' Top Band for a good, late-night ragchew. The static could be ear numbing and DX was any contact spanning more than 100 miles, but 160 meters was fun and a real challenge for us old-timers."

Hearing Paul's stories sparked my interest. What might this mysterious band be like today? I had recently upgraded my station from a pair of 1957-vintage "boat anchors" to a modern rig (i.e., a used transceiver only 10 years old). After discovering the new settings on the band switch, I was having a great time testing the new WARC bands. HF operating was great, but which might MF (medium-frequency) work have in store -- especially for a straight-key pounder like me?

One way to find out was the upcoming ARRL 160-Meter Contest. Quick scans of the band had previously shown CW activity on Top Band to be limited or nonexistent. A review of the previous year's 160-Meter Contest results in QST, however, made it clear that plenty of domestic activity and a smattering of CW were possible. I marked the impending contest weekend on the December page of my calendar with anticipation and began planning how to use my limited real estate to maximum advantage.

A full-size dipole on 160 meters was out of the question -- my suburban lot on Ferndale Avenue measures only 60 x 100 feet. My next thought was to somehow modify my 40-meter dipole to resonate as a shortened 160-meter dipole. My residence had already taken on the nickname among the neighbors of "Radio Ferndale" because of the imposing appearance of my wire antenna zigzagging between our palm tree and strategically placed TV push-up masts. Certainly, I thought, this magnificent piece of structural engineering could be converted into a Lean Mean DX Machine for the contest. Sadly, a glance at my ARRL Antenna Book and a few pokes at my calculator showed that my "imposing" 50-foot-high dipole loaded up on 160 meters would be the equivalent of a 4-foot dipole suspended 3 feet off the ground on 10 meters -- not a design likely to gain entry in the annals of 160-meter lore.

The alternative was to turn my existing skyhook into some type of vertical radiator. A second glance at the Antenna Book explained that by shortening the two conductors of my ladder-line feed together near the base of the center-support mast and feeding this from my shack, the dipole and vertical feed-line segment could be considered a vertical antenna with a two-legged top hat. With an antenna tuner and a counterpoise ground-plane system suspended over my house and yard, it might get me on the air with a decent signal.

"Wait a minute," my beloved wife questioned me upon hearing of my planned entry into the world of MF operating, "you mean that instead of getting on the higher bands that use smaller antennas and give you easy long-range coverage, you're doing all this to maybe talk to somebody in the Midwest? That sounds pretty cockeyed to me." My wife had questioned my wisdom on previous radio-related activities, such as shimmying up lofty pine trees during our mountain vacations to

install yet another "ultimate DX" wire beam. "Au, but, Dear," I explained, "you don't yet understand the mystique , yes, even the romance of spanning the late-night ether on 160 meters!" (I made a mental note that future lobbying might be in order when the time came to acclimate my wife to the idea of my spending two full nights on the air during the upcoming contest.)

I tracked down the odds-and-ends I'd need to get my signal on 160, including a simple tuning unit and wire for a counterpoise. When the Friday of the contest arrived, I was ready. I took the afternoon off from work to get my radiating system ready for use. Step One was to deploy as efficient a counterpoise as possible, given my limited real estate. My design consisted of running a dozen radials, elevated about 6 feet off the ground, to the fence line surrounding my property, from the point on the roof where I was feeding my vertical. Each radial was connected to a second plastic-coated copper wire that ran along the top of the fence around our lot. I connected additional concentric loops of wire tot eh radials at various distances from the monopole. The resulting network of wires took on the appearance of a huge spider's web draped ove r my house and yard.

As I was installing this network of wires, I noticed curious glances from nearby windows. "No big deal," I told myself, "This will just give the neighbors something new to talk about at their next bridge night."

Having installed the elevated ground system, the next step was to get the "top hat vertical" resonant somewhere near 1.8 MHz. This proved easier said than done. As I passed through the kitchen on repeated trips from the shack to the ladder leading to the roof and the tuning unit *[Note: This article was written in 1991 before the arrival of antenna analyzers]* , my wife showed interest in my progress. My responses changed from enthusiasm to frustration. By now the contest had begun and a scan of the band revealed heavy contest act ivity, even though sunset was still hours away.

After two hours of trotting back and forth through the house and up and down the ladder, I deduced that a more user-friendly solution was called for. The natural solution was to carry the rig, SWR meter and a long extension cord up to the roof where the feed point and tuning coil were located. My temporary operating position on the peak of the roof drew even more curious glances from the neighbors as I experimented with various feed methods. After shortening the legs of my top hat and trying numerous tuning-coil adjustments, I finally achieved an SWR close to 2:1.

"At last," I thought, as I pulled out my contest log and dupe sheets *[note: logging software wasn't common in 1991, either]*, "Time to knock off a few multipliers!" I knew from QST write-ups of past 160-Meter Contests that activity could be brisk -- and was it ever. Although sunset was an hour away and daytime absorption was evident, the band was hopping and I began making contacts up and down California and into Oregon.

Unexpectedly, there was a knock at the shack door. "Guess what," my wife said, as she popped in with a Mona Lisa smile, "Your father just dropped inn from out-of-town and wants to treat us to dinner." I looked up with dismay and hesitated. Blood may be thicker than water, but this was no run-of-the-mill contest. My first thought was to feign a highly contagious illness and lock the radio-room door. After a moment of two, however, I regained my composure and dutifully left the shack (and the evening's grayline period" for a few hours of good food and family conversation -- not that my attention didn't wander from time to time to thoughts about band conditions.

Later that evening, I returned to the clamor of the contest. The band was wide open to the rest of the continental US. To all appearances, it more closely resembled 80 meters on a Sweepstakes weekend than the sedate gentleman's band I'd listened to on preceding evenings. Although no exotic signals were apparent in the "DX window", I did my best to resist the temptation to contact the few Ws calling CQ TEST in the 1.830-1.835 MHz segment. My wife was understanding enough to let me operate uninterrupted for the rest of the evening, and my log and dupe sheets began filling up. Although the majority of my contacts were on the West Coast, I was surprised and pleased to see sections from the Midwest and a few from the East Coast make it into the log. So this is what a simple antenna on top band could do!

The hectic activities of the day caught up with me about 1am and I signed off for some shuteye. Following 40 winks in the early morning hours, I was on the air for the sunrise grayline. Although the West Coast was hopping and I could hear W6s and W7s making transpacific contacts, my lowly "vertical T" seemed better designed for picking up noise from the local power lines than the faint signals of JAs operating at 1.907-1.912 MHz. Thoughts of those lucky hams in Wyoming and Idaho with acres of real estate for V-beams and rhombics passed through my head. "If only I had a 500-foot Beverage antenna running to the northwest," I moaned. But common sense convinced me that suspending a long wire from street light to street light up our block would just further convince my neighbors that I'd finally gone over the edge.

The contest was great fun, with band conditions the second night even better than the first. By the end of the weekend, I had run up a respectable score -- 116 QSOs in 28 sections. Although I hadn't made the top slot for my section by a long shot, I'd had a great introduction to Top Band, not to mention a good start on 160-meter WAS.

That was last year. Now it's time to get ready for this year's contest. I wonder if Paul would be interested in entering the multioperator category to man the controls during the graveyard shift? Then the only question is how to deploy a 2000-foot buried-snake receiving antenna through the local sewer system and a 5/8 wavelength balloon-supported vertical . . . . .

West Valley Amateur Radio Association

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Heterodyne Editor	**Loren Singh**	**AD6YU**
Repeater Technician	**Chuck Kamas**	**AD6CL**
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