

Palos Verdes Amateur Radio Club



K6PV



Surprise Program!

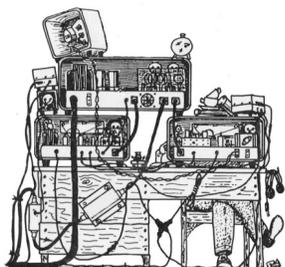
Surprise Even to Our Vice President!

Whatever the program ends up being--
...if the potential speaker returns his calls,
...if the ARRL tape on T-hunts arrives,
...if none of this happens

The meeting will still offer the usual good time, good snacks, and good comaraderie along with a great raffle (four new items).

See you there!!!!





The President Pontificates

Well, here we are -
BACK in the USA!!

Europe was great and we're certainly glad we went; but it's great to be back home in the USA again. Kudos, for sure, to the Willert's (Ann N6GVP/DJØIX & Ernst N6IDN/DK3FF) who had their (large) California flag out and the VHF/UHF Antennas/Tower at full height to greet us on our arrival to their very nice QTH in Bonn, Germany. We had a delightful overnight stay with them, enjoying their warm hospitality before heading off to the Rhine River drive south, for the weekend Hamfest. We were a bit disappointed that we were not able to enjoy the elaborate, precision train network that Ernst built and wanted to set up and show/demonstrate in their backyard for us – darn rain (even though I usually LOVE the rain!). They have a very impressive home and yard with excellent use of space and functions. Their shack is decked out with very nice equipment focused mainly on VHF/UHF and higher bands into the 10GHz range. Remember that the Willert's are members of our Palos Verdes Club (since the 80's); Ann is a Past President, as well. The Hamfest, held in Friedrichshafen just a few Km from the beautiful (Lake) Bodensee was attended by ~18,000 with representatives from about 100 vendors (even some we recognized) plus booths from many special interests clubs along with European and other countries. We had a delightful buffet dinner Saturday evening with the Bavarian Contest Club and interested attendees. We did manage to sit with English

speaking Swiss and a Brit (duh!). The 'Flea Market' covered most of THREE HUGE aircraft Hangers with a wide variety of (electronics) goods. I even saw one of my buddies from here... Alex who provides Astron Power Supplies and a wide range of Batteries and Flashlights was THERE too! He said he was there just for the fun of it all! There were a lot of equipment/choices



and a good bit of competition; but, the prices in Euros were high (some, even if they were in dollars). The rate of exchange (US Dollar vs. the Euro) was about 1.36 and not good! I didn't manage to find a working HF station (though I think there was one) to be able to look for K6PV and provide a Field Day QSO; would have been nice, but tantamount to a miracle, considering propagation as it was. Anyway, we also enjoyed a very nice Bed & Breakfast recommended by our friend Wolf, DF2PY; it was very convenient to the Hamfest

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and very nice as well – certainly worth a future stay while in the area, Hamfest or not! The Hamfest is the biggest in Europe and rivals the Dayton Hamvention (somewhat) – go to Dayton, then Friedrichshafen. Bottom line is that this Hamfest (in Europe) is quite an event; one worth the effort to attend, given a reasonable opportunity to do so.

Overall, we managed to stay in a lot of people's homes (B&B, friends, & Relatives); quite nice that it was.... But, beware that European Bedrooms and Plumbing; they are not quite consistent with what we are used to here in the good ole US of A – by the way, the Willert's guest bedroom and plumbing were fabulous. Anyway, it's very nice to be back to the USA and our style of bedrooms and plumbing. If/when you travel to Europe, you will indeed find out what I'm referring to. We also enjoyed driving nearly 2300 miles of limited sightseeing while meeting and visiting many of Marian's relatives in France and The Netherlands – Aunt's, Uncle's, and Cousins!! They were warm and friendly – quite hospitable at that!

Shifting gears a bit, we in the Palos Verdes Amateur Radio Club have a lot to be proud of... A select few of our hardworking members have engineered a MOST impressive City Emergency Communications Facility supporting the Command and Control Communications needs of Rancho Palos Verdes. The Facility is anchored in a dedicated pre-fab/mobile unit with SIX independent HF/VHF/UHF positions that connect to antennas on a US Tower HDX-589 Self-Supporting, Motorized triangular tower that can place antennas anywhere from around 25 feet (fully nested) to over 89 feet when fully raised (I KNOW, I have a similar tower). Attending the dedication on Saturday, July 1st was most impressive and attended by our own US Representative, Dana Rohrabacher, RPV Mayor Tom Long, Council members, and other dignitaries. Most



responsible for the very impressive facility are Mel Hughes, K6SY, Dale Hanks, N6NNV, Ken Getzin, NE6K, Alan Soderberg, W8CU, Herb Stark KO6RC, as well as many other volunteers that helped put it all together and get it operational. Congratulations on a job WELL DONE!

By the way, this is the time to get ready for improved (HF) propagation starting with this fall. Summer time is a very good time to get those HF antennas up and operational. If you need any assistance with what you have up and/or what you are considering, by all means contact those us that you know have HF background and interests. We certainly want to share the fun times of HF. Be sure to plan for the Club Picnic coming up next month. See you all at the meeting on the 18th.

Make room on the HF Bands for newly upgraded General Class Licensee's Ginger Clark, KG6TAU, Rick Murray, K6WXA and Jon Appleby, KI6GVA. Congratulations to you all!

Vy 73 Joe Locascio K5KT

PS: Driving and navigating with my Garmin NUVI 370 was INVALUABLE!

de the VP

Denzel Dyer,
KG6QWJ



I'm planning ahead for this QRO, because I'm leaving on July 27 so I will miss the next deadline. We'll be off to Scandinavia on vacation.

The Lighthouse Picnic is coming up August 19th. A picnic implies food. The Club will provide hamburgers, hot dogs, buns, cheese, ketchup, mustard, relish, salt, pepper, and regular and diet soft drinks, water, plates, napkins, tablecloths, plastic 'silver'ware, and paper towels.

As usual, we'll need side dishes. For particulars, there will be a sign-up list for them at the July 18 meeting. Here are some suggested food items: (Husbands, check with your wives!)

For the hamburgers, we need 15 sliced tomatoes. You don't need to bring all 15. Sign up to bring a plate of 5 tomatoes, sliced. Likewise for the hamburgers, we need 2 heads of lettuce (separated) and 4 onions (sliced).

A plate of raw veggies ("finger foods") with dip or some other healthy snacks like peanuts, and small fruits like grapes and cherries, etc. Then to represent the other side, we would like one more large bag of potato chips (we already have one bag signed up for), a large bag of corn chips, and a couple of large bags of puffed cheese snacks.

For salads, we'll probably need 2 vegetable, 2 green, a pasta salad and a potato salad, three plates of cut up fruits for 8 or fruit salads for 8. And one more 8-serving-sized coleslaw and a quart of bread and butter pickles.

For extra carbohydrates a large pot of chili, a bean casserole, and three, 8-servings dishes of baked beans

(As you can see, "8 servings" is the key to quantity).

For the bakers among you, we'd love 2 signups to bring a pie or a cake, 2 signups for a couple dozen cookies, and 3 brownie makers.

We will also need some volunteer help:

- half-hour duty as gate control, starting 11 AM to 3:30 PM. (Need hand-held radio, probably

145.750). As of now, 12-noon to 12:30 is signed up for, but all the other time is free.

- 3 members to set up tables and chairs, starting 12:00

- 4 members for clean-up (starting about 3 PM)

There may be more openings!

If you can't make the July 18 meeting but do plan to be at the picnic, please check with me at denzel.dyer@verizon.net, but **by 27 July!** I will be out of touch after that.

Treasurer's Report

Bill Harper



As of July 5, 2007

PVARC Balance	\$2,100.12
John Alexander Fund:	\$ 795.50
Repeater Fund:	\$ 850.16
Total Bank Balance	\$3,745.78

Sign Up Now!!! To transmit from wonderful Point Vicente Lighthouse - August 17-19, 2007 International Lighthouse & Lightship Weekend And talk with some Great Old Lighthouses!!

Thanks to our Hosts: The United States Coast Guard!



Granite Island Light Station, Michigan
K8G USA-333



Yaquina Bay Lighthouse, Oregon
N7L USA-906



Point Fermin Lighthouse, California
K6AA USA-621

Board of Directors

President	Joe Locascio, K5KT
Vice President	Denzel Dwyer, KG6QWJ
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Secretary	Ginger Clark, KG6TAU
Past President	Dave Scholler, KG6BPH

Appointed Offices

QRO Editor	Ginger Clark, KG6TAU
Editor Emeritus/ Proofreader	Bryant Winchell, W2RGG
Graphics Guy	Rick Murray, K6WXA
Web Page Editor	Rick Murray, K6WXA

Contacts

QRO Editor	310-378-7894
WebMeister	310-544-0982

ARRL Summary Report
July 2007
Compiled by Bryant Winchell, W2RGG



US Senate to investigate BPL's interference potential to Amateur Radio

Sen Mark Pryor of Arkansas filed a bill yesterday in the US Senate calling on the Federal Communications Commission to study the interference caused by broadband Internet transmission over power lines, otherwise known as BPL. Sen Pryor is a member of the Senate's Committee on Commerce, Science, and Transportation.

If passed, Senate Bill 1629 would require the FCC to "conduct and submit to that committee and the Committee on Energy and Commerce of the House of Representatives, a report on a study of interference potential of systems for the transmission of broadband Internet services over power lines." *Ref.: The ARRL Letter, Vol. 26, No. 24*

FCC Responds to ARRL's BPL Brief

On Monday, July 2, the FCC filed its reply brief with the US Court of Appeals for the District of Columbia Circuit. The FCC attempted to rebut the ARRL's challenge to the FCC's Broadband over Power Line (BPL) rules enacted in late 2004 and affirmed by the agency in 2006. According to ARRL General Counsel Chris Imlay, W3KD, "The FCC's brief does not accurately describe ARRL's arguments concerning harmful interference. The FCC claims that it has the authority to permit unlicensed BPL under Section 302 of the Act; this section allows the FCC to regulate the interference potential of RF devices. What Section 302 does not do, Imlay said, is to create a loophole in, or modify, or invalidate Section 301. *Ref.: The ARRL Letter, Vol. 26, No. 27*

Army MARS HF e-mail system passes "hurricane test"

Dubbed "Operation Sidewinder," a drill aimed to test a new HF digital backup communication link for airports in case weather or a terrorist event ever compromised conventional telecommunications, as Katrina did in 2005. For this trial run, Army MARS mobilized a new Winlink digital communication system, with Air Force and Navy-Marine Corps MARS members providing support. *Ref.: The ARRL Letter, Vol. 26, No. 24*

Field Day Was Here!

It wasn't just Field Day here on the continental United States – it was also Field Day on the **South Pole!** Robert Reynolds, NØQFQ, a ham down at Amundsen-Scott South Pole Station, said all three US bases on the Pole were on the air for Field Day. Also, it was the intention of the International Space Station to

have at least one station on the air for Field Day. Whether they could fit it in with their work schedule hasn't yet been reported.

The Hiram Percy Maxim Memorial Station, **W1AW**, located at ARRL Headquarters in Newington, Connecticut, hosted its own Field Day event. ARRL HQ staff and visitors operated W1AW the entire 24 hour Field Day period. *Ref.: The ARRL Letter, Vol. 26, No. 25*

Kenwood Purported to Merge with JVC in 2008

A consumer electronic magazine, *This Week in Consumer Electronics*, reports that Kenwood has agreed to merge in 2008 with Victor Company of Japan (JVC) under a holding company. JVC is owned by Matsushita Electric Industrial Company. Under the plan, Kenwood will buy about \$161,500,000 in JVC shares as early as this summer, raising its stake to 13 percent. Combined, Kenwood's and JVC's annual sales are \$7.3 billion dollars for fiscal year ending March 31. *Ref.: The ARRL Letter, Vol. 26, No. 26*

Astronaut Suni Williams, KD5PLB, Back on Terra Firma

Suni Williams, KD5PLB, International Space Station Expedition 15 Flight Engineer, came back to Earth Saturday, June 23 on the space shuttle Atlantis (STS-117), wrapping up a six-month stay during which she became the new record holder for the longest single spaceflight by a woman and while on the Space Station, she participated in 33 Amateur Radio contacts. *Ref.: The ARRL Letter, Vol. 26, No. 26*

Solar Update

Tad "Don't Let the Sun(spots) Go Down on Me" Cook, K7RA, this week reports: We are seeing new sunspots over the past few days after 11 days with none at all. Lack of solar activity made Field Day this year (June 23-24) a real cycle-minimum experience. Most areas saw very little 10 and 15 meter activity, so 80, 40 and 20 meters were the places to be. Sunspot numbers for June 25-28 were 11, 11, 15 and 27 *Ref.: The ARRL Letter, Vol. 26, No. 26*

Solar Update

Solar Flux to Bottom Out in July as Cycle 24 Gets Closer: The National Oceanic and Atmospheric Administration's (NOAA) Space Environment Center (SEC) released their monthly forecasts of sunspot number and 10.7 cm radio flux, including high and low bounds to their forecasts. The SEC forecasts that the smoothed sunspot number reached its low value of 11.7 in March 2007, and predicts that the solar flux will reach its low of 75.4 this month. This is the fourth month in a row that the SEC predicts the solar flux will bottom out in July. *Ref.: The ARRL Letter, Vol. 26, No. 27*

Mel Hughes sent along a web address for NOAA's Space and Environment Center's prediction for the end of Cycle 23 and the beginning of Cycle 24. The address is

<http://www.sec.noaa.gov/ftplib/weekly/Predict.txt>

and their sunspot and solar flux predictions:

<http://www.sec.noaa.gov/SolarCycle.-----Sunspot>





Revisiting the 12-Element 70-Centimeter Yagi - and - Murray's Junk Box

Rick Murray, K6WXA



Quite frankly, I collect stuff which I know I have no immediate use for... left over bits and pieces from previous projects; stuff that people have given me that I can't use; you know, stuff that you just can't throw away. It all goes in the junk box. Pretty soon I have enough "junk" that I can actually do something constructive with it.

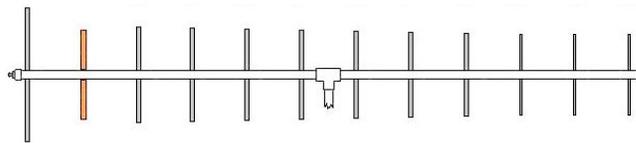
Back in the February edition of the QRO, Bill Harper presented his 12-element yagi for the 70 Centimeter band, designed from uniform pieces of half-inch copper pipe on a three-quarter inch PVC boom. My version isn't so uniform; remember this is a "Junk Box" project. The reflector and the first seven directors are all of three-sixteenth inch aluminum tubing; the remaining three directors are of one-eighth inch stainless steel rod, while the driven elements are of one-quarter inch copper tubing. One big difference with these materials as elements verses copper pipe is a lot less weight. Unlike Bill's design, this version doesn't require an additional support "cradle" when affixing it to a mast.

Experimenting with antennas can be a series of disappointments, surprises and just plain shock. Rarely however, do I encounter an antenna design that presents all three in some variance. Disappointments: a 12 element yagi, in a perfect world, should produce 14 Db of gain, or at least a respectable closeness and that's what I was looking for. This antenna only produced 11 Db of gain. The disappointment arises only that my last "Junk Box" project was an eight element yagi also for 70 Centimeters (*QRO October 2005*) which also produced 11 Db of gain. Surprises and shock: one thing that this antenna was not designed to be was

broad-banded. It is. With a VSWR of 1.7:1 or less from 432 mHz to 448 mHz. Sixteen mHz of usable frequency width in one antenna; my eight element really only had about 12.5 mHz of usable bandwidth.

As to the antennas construction, like my eight element version, the elements pass through a 3/4" PVC boom. The driven elements are separated by a 1/4" wooden dowel and are balun fed through a hair-pin tuning loop. The feedline coming off the balun passes through a small hole between the driven elements and the reflector and then enters the boom where it terminates at a BNC connector at the back of the antenna.

Since there is already a design plan for a 12-element 70-Centimeter yagi on the Club's Projects page, I'll be incorporating this design along with it into the same file as a "Version 1 & 2" especially since there are differences in the radial lengths due to the different types of materials used. See you at the July 18th club meeting!
- Rick, K6WXA



Point Robinson Lighthouse, Washington
W7VMI USA-637



This year's annual RHE 10K/5K event has been moved to Saturday, 11 August. The event starts and finishes at Ernie Howlett Park, just off of Hawthorne Blvd. This 10K/5K event is a bit different from other 10K/5K events. This one is run mostly on the horse trails in the City of Rolling Hills Estates, and also goes through the Botanical Gardens

The race, starting at approximately 8:30 a.m. will be completely finished by around 10:00 a.m! Walt is short by about five volunteers, so if you'd like to spend a couple of morning hours helping with the radio communications, please contact Walt, K1DFO, at waltordway@juno.com.

Opportunities

August

- August 11-** The Hills Are alive, 5K/10K, RHE. Walt Ordway, K1DFO, 310-541-4007
- August 17-19** - International Lighthouse and Lightship Weekend, Dan Colburn, W6DC 310-373-5206; Rick Murray, K6WXA 310-544-0982
- August 19** - Annual PVARC Lighthouse Picnic.- Denzel Dyer, KG6QWJ, Club meeting.

September

- September 7-9** Hamcon, Torrance See flyer next page! Sign up early & Don't miss it!
- September 16** - Concours d'Elegance- Trump National Golf Course-Walt Ordway-

Need a Club Badge?

Contact Karen Freeman, KG6BNN

310-541-6971

\$13



Need a Club Patch?

Joe Locascio, K5KT

310-541-5495

\$5



FCC's Catherine Deaton To Retire (thanks to W6HB of URAC for sending this)

Catherine Deaton, the person in charge of the FCC Enforcement Bureau's Los Angeles field office, will be retiring from the Commission on August 3, 2007. She is leaving after 40 years of Federal service including 27 years with the FCC and 10 years before that as a narcotics undercover agent.

Catherine has been a breath of fresh air for the L.A. field office: the door has been open to all inquiries and concerns, the attitude of the office has

been positive and the results impressive. Who could forget, for example, the home run hit by her team in putting jammer Jack Gerritsen safely behind bars.

After August 3, Catherine plans to do a bit of traveling, help her daughter in her medical services business and fully exercise her gym membership. If you'd like to send her your best wishes, send mailto: Catherine.Deaton@fcc.gov



HAMCON

Presents

The 2007 ARRL Southwestern Division Convention

“Emergency Communications from the Desert to the Sea”

September 7-9

featuring our **Guest Speakers**



Saturday Lunch
Mark Spencer WA8SME
 “The Challenge of
 Science Education Today”



Saturday Banquet
Mark L. Benthien
 Director for Communication,
 Education and Outreach
 Southern California Earthquake Center
 “Shift Happens—Secure Your Space”



Sunday Breakfast
**Dr. Scott Stolnitz N6ABC and
 Tom Tcimpidis K6TGT**
 “Winlink: Emergency and Routine
 Communication on Land and Sea”

... and a Maximum of Usable **Prizes**



Pre-Registration Prize
Yaesu FT-450 160-6 Meter Transceiver



Grand Prize
**Flex 5000A SDR
 Transceiver**

Prizes also awarded for the Transmitter Hunts and in hourly drawings include **VIBROPLEX 25% off Gift Certificate and accessories** • **UX5UO QSL 1000 “Luxury” Full Color Custom QSL’s** • **IDIOM PRESS Book—Contesting in Africa by G3SXX** • **SIGNMAN OF BATON ROUGE \$10 Gift Certificates** • **AOR ARD9000MK2 Digital Voice Modems** • **GORDON WEST General and Extra Home Study Courses and Extra Full 3-Day Course** • **TASHJIAN TOWERS TB-2 Thrust Bearing & \$500 Certificate toward tower**

Location

Torrance Marriott Hotel
3635 Fashion Way
Torrance, California

info: www.hamcon.org or contact either
Jim Pitman at wa6mzv@worldnet.att.net or
Bev Pitman at wa6tiu@juno.com
 Talk in on 146.52 simplex



Plus enjoy a wide array of speakers at our many

Forums

Included are *From Classroom to Space: Bringing Students the Excitement of Science and Amateur Radio through Live Radio Contact with Astronauts aboard the International Space Station* by Matt Bennett, KF6RTB • *Direction Finding for Search and Rescue, ELT and More* by Joe Moell, K0OV • *It’s the Network—What It Takes to Maintain Support for Local Hospitals* by April Moell, WA6OPS • *DC Power Distributions* by Jim Olliff, KE6URZ • *The Terminator: PowerPoles and Crimping* by Larry McDavid, W6FUB • *How to Get Young People Involved in Ham Radio* by Tom Fagan, WB7NXH • *The Queen Mary Story* by Nate Brightman, K6OSC • *Baker to Vegas Team Communications* by Joy Matlack, KD6FJV • *Overhead and Underground Electrical Safety and Ways to Track Down and Eliminate RTVI* by Charlie Basham, N6DZW and Brian Thorson of SCE • *Sound Card Modes—Emergency Power for Hams and Battery Testing* by John Kalotia, N1OLO • *What Is Flex Radio?* by John Basilotto, W5GI • *Novice History and Your Novice Experience* by Cliff Cheng, WW6CC • *Elecraft Innovations* by Eric Swartz, WA6HHQ • *Gordo on Tropo* by Gordon West, WB6NOA • *Yaesu Innovations* by Dennis Motschenbacher, K7BV • *Emergency Preparedness* by Eugene Humphreys, KG6SLC • *Ten-Ten International Group* by Bob Farrow, N6OPR • *Heil Sound Innovations* by Bob Heil, K9EID • *Event Coordination and Planning* by Joy Matlack, KD6FJV and Larry Simon, KC7QJO • *Paper Chasing 101* by Tom Van Buskirk, K6TV • *Project Broadband for Commercial Airlines* by Joe Lai, KB6UCO • *Introduction to the PIC Micro and Basic Stamps* by Bob Diaz, KQ6WQ • *Islands on the Air (IOTA)* by Harry Hodges, W6YOO • *A History of Precision Time and Frequency* by Dennis Kidder, W6DQ • *DXing from Afghanistan* by John Kountz, KE6GFF/T6EE • *Contest Forum* by Dick Norton, N6AA

MORE INFO & ORDER FORM ON BACK



Excerpts from the Dayton FCC Forum Speech
by Riley Hollingsworth, K4ZDH,
Special Counsel, Spectrum Enforcement Division Enforcement Bureau, FCC

(A PDF scan of the speech can be found at <http://mobileers.org/riley.pdf>)

“I want to talk to you about what bothers me most about Amateur Radio—and I want to give you a homework assignment.

“What concerns me most is this: You need to ‘lighten up.’ I said that last year but you need to take it to heart more. All of you can learn from each other. And you need to work together more and show a little more respect for your diverse interests and for the service as a whole. It isn’t about you. It isn’t about enforcement. It’s about Amateur radio.

“Every time you get on the air, you need to decide what’s most important to you—the best interests of Amateur radio as a whole, or your own pride or ego or “rights.” On the air you need to be more cooperative and less argumentative. Please read Dave Sumner’s article in May 2007 QST, page 9.

“The good news: nothing is wrong with Amateur radio. It is a good service that is showing its value to the public on a daily basis. Bad news is that there is an element of Amateur radio that too often reflects present society generally. Whatever the phenomenon behind Road Rage—whatever that is—that’s what I am talking about. All of you need to work together and depend upon the FCC less to solve your operating problems. We live in a rude, discourteous, profane, hotheaded society that loves its rights, prefers not to hear about its responsibilities. That spills over into the Ham bands. As Dave Sumner said in his QST article, “Most of the unpleasantness that erupts from time to time on the most popular HF bands can be avoided if we’re willing to be flexible in our frequency selection.”

“Kindness would go a long way in your service.

“I was looking at a 1968 QST the other day and noticed inside the back cover an ad for Swan transceivers. Some of you might remember the 350 and the 250—these were really state of the art at the time. The 350 has 17 little controls and one big one—the VFO, presumably to make it easy to change frequencies. Now let’s go to a 2007 QST

and look on the back cover at the Kenwood TS570. It has 46 little controls and knobs, and one big one—the VFO. Look near the back at the ICOM 7800—it has about 75 little controls and buttons, but the real big knob is still the VFO—presumably to make changes in frequency the easiest function of all!

“That’s why you are the only service that has thousands of frequencies—it was designed that way to give you alternatives, to have fail safe back up plans and to experiment and lead technology. “Now I have specific messages for more of you:

“To the contesters: be more courteous. You are responsible for the frequency you are operating on and realize that’s true even when you operate split. All frequencies are shared.

“To those who don’t like contesters: LIGHTEN UP!! Contests are short lived. Use the WARC bands. Wash the car. Cut the grass. Learn from the contesters—and this applies to you Traffic net folks too—learn from the contesters—they pass information a lot faster and more efficiently than you do. Contesters are some of the best radio operators on planet Earth. If the contesters operated at the same pace as some of the emergency traffic nets, the contest would be over after the first few dozen signal strengths were exchanged!

“To those of you who don’t like DXpeditions: LIGHTEN UP! If a group of people want to spend a lot of money to go to a rock or sandbar in the ocean, live in a tent and swat flies and scorpions for a week and talk over Ham radio 24 hours a day, SO WHAT? LET THEM DO IT!! DXpeditions, too, are short lived, and such operation must be important to SOMEONE—Scarborough Reef drew over 50,000 contacts didn’t it—and weren’t half of them CW, by the way? Nobody would have even know about it had it not been published in popular radio magazines.”

