

The Heterodyne

Newsletter of the West Valley Amateur Radio Association

November Meeting

**Highlights of WVARA's
CQP Expedition
by Bill Frantz, AE6JV
& Jim Peterson, K6EI**

**Wednesday November 12
Meeting Starts at 7pm**

Meeting Location:
American Red Cross,
Silicon Valley Chapter
2731 N. First Street at Plumeria Dr
(southwest corner) in San Jose
Map at www.wvara.org/meetings.html

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

Club Net

WVARA's club net is on the W6PIY repeaters each Tuesday at 8:30 pm. All repeaters are linked together during the net. The net script can be found at www.wvara.org/net.html.

Visitors Are Welcome!

President's Letter

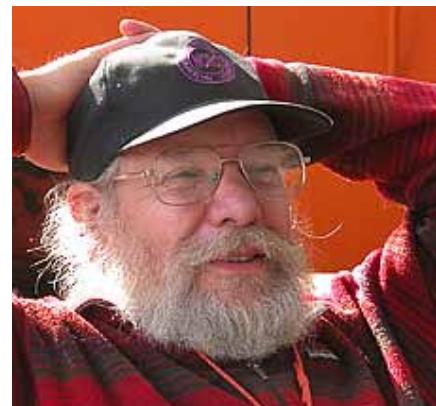
Contest Operation and Emergency Services

On the surface you wouldn't think that contest operation and emergency services have much in common. After all, contests are about making as many contacts as you can in a frantic rush for a high score and emergency services are about public service, ICS and served agencies.

But they do have some important things in common. Besides the need for efficient operation of radios, they both involve transferring a message under pressure and possibly trying band conditions.

In contests there is something called "the exchange". The exchange is the information you have to send and receive correctly. In many contests, unless the exchange recorded by both ends of the contact is correct, the contact is disallowed.

In emergency services, there are messages that need to be exchanged correctly. There is no really good way to check if the messages have been correctly transmitted, but mis-transmis-



sion will show up later in much more serious ways.

Some contest exchanges are specifically designed to model the data needed for emergency message exchange. The ARRL Sweepstakes is one of these contests. Its exchange is: The call sign of the station worked, consecutive serial number (NR) starting with 001, precedence, your call sign, check, and the two or three-letter abbreviation of your ARRL section. In the contest, the precedence is a letter that indicating your operating category. In an emergency message it indicates the urgency of the message. Likewise, in the contest, the check is the last two numerals of the year you were first licensed. In an emergency message it is a count of the words in the message to help ensure the entire message was correctly transmitted.

Contester hams and emergency services hams can expand their use of ham radio by learning from each other. Contesters can volunteer for their local ARES/RACES group and learn about the protocols for working with a served agency. Hams who are primarily emergency services oriented, can take advantage of the training available in contests.

There are a number of ways a technician licensee can try contesting. The ARRL 10 meter contest, coming up on December 13-14, 2014, has a lot of activity on the 10 meter SSB subband which is available to all license classes. There are also a large number of VHF contests, some designed for the first time competitor. The ARRL sponsors three VHF contests throughout the year. The next is on January 24-26, 2015. These contests have a category for FM only operation. Both contests have simple exchanges. See the ARRL web site: <http://www.arrl.org/contest-calendar> for details.

Another way to learn about contesting is to help a club station during a contest. A technician licensee can practice contacts on the high frequency bands with some other ham as control operator. ARRL Field Day is an ideal time to learn, as many field day sites have "GOTA" stations set up for just this purpose.

73, Bill - AE6JV

About the Meeting **Highlights of WVARA's CQP Expedition**

This month's WVARA meeting will be on Wednesday, November 12. The presenters, Bill Frantz (AE6JV) and Jim Peterson (K6EI), will cover "Highlights of WVARA's CQP Expedition". As most of you already know, seven members of our club did an expedition to a rare county during last month's California QSO Party. The WVARA team had a real blast and brought back plenty of stories and photos to share.

Meeting Location: Silicon Valley Chapter of the American Red Cross, 2731 N. First Street at Plumeria Drive (southwest corner) in San Jose. Visitors are welcome, and of course there will be chocolate chip cookies.

If you haven't been to the Red Cross, "talk-in" is usually available on the Association's repeaters. Best choice would be 2m/220.

And for those who are hungry, several of us will be eating dinner prior to the meeting at the Burger King at 2532 Channing Avenue, just off Seaboard Avenue and near the corner of Trimble Road and De La Cruz Boulevard. Map of restaurant: <http://mapq.st/3-l0rpFmro>

Hope to see you there!

Jim, K6EI

WVARA CQP Expedition a Huge Success!



The Kings County CQP Mini-DXpedition Team:

L to R: Bill Frantz (AE6JV), Peri Frantz (K16SLX), Bobby Barnett (KA4VBF), George Williams (N6NKT), Svend Jensen (KF6EMB), Mark Ward N6IB), Janelle Ward (KJ6TTL), Jim Peterson (K6EI), and Tom Dunbar (W6ESL).
(Mark and Janelle were our gracious hosts.)



Seven adventurous WVARA members participated in this year's California QSO Party from one of our state's rarest counties. The California QSO Party, commonly known as CQP, occurs each fall during the first weekend in October, which this year was 4-5 October. Hams across the country (and from around the world) attempt to make a clean sweep by contacting all 58 counties. While many California counties are heavily populated with lots of hams, there are a dozen or more counties with very few active amateur radio operators. Rare and sparsely-populated counties are typically activated by mobile and/or expedition teams – and can attract a lot of on-the-air excitement from county hunters near and far.

This is the second year that WVARA has operated portable from Kings County, which is about a three-hour drive from San Jose. Kings County is located in the Central Valley southwest of Fresno and has a very limited ham population – making it a perfect match for our club. Since no other club had volunteered to operate from that location, we did!

A CQP expedition is defined as an operation from a temporary location using temporary antennas installed only for use during the contest period. Last year, there were five low-power county expeditions: Alpine, Del Norte, Glenn, Sutter, and us (Kings County). In 2013, three of our club members, Tom Dunbar (W6ESL), Bill Frantz (AE6JV), and Peri Franz (KI6SLX) went to Kings County and operated using 100 watts from a motel parking lot in Kettleman City. While they had lots of fun, the location was crowded and options for installing antennas were limited. Even so, they managed to set a new all-time multi-operator, multi-transmitter record for Kings County with a score of 15,480.

This year, the WVARA CQP Team began hunting for a better operating location in Kings County. For a while, the options didn't look good. Kings County has no campgrounds or parks available. And there isn't a Red Cross facility in the county, either. Our luck took a sudden turn for the better when Mark Ward, N6IB, dropped by our local Ham Radio Outlet store to buy some ham-related supplies. He mentioned to Jon Kelley that he was from Kings County, and Jon quickly got him connected with our Kings County exploration team. Mark and his wife Janelle were more than happy to have WVARA set up on their 5-acre property near Hanford, and so we were all set.

Our station at Mark's farm consisted of four transmitters: two 100 watt HF/SSB transmitters, one 100 watt HF/CW transmitter, and one VHF transmitter on 6-and 2-meters. Svend Jensen, KF6EMB, brought his tower trailer and was our site manager. He did an excellent job of guiding our efforts to get the WVARA antenna farm installed – in spite of the unseasonably hot weather. Bobby Barnett, KA4VBF, was in charge of our VHF antenna tower. By dinner-time on Friday we had installed

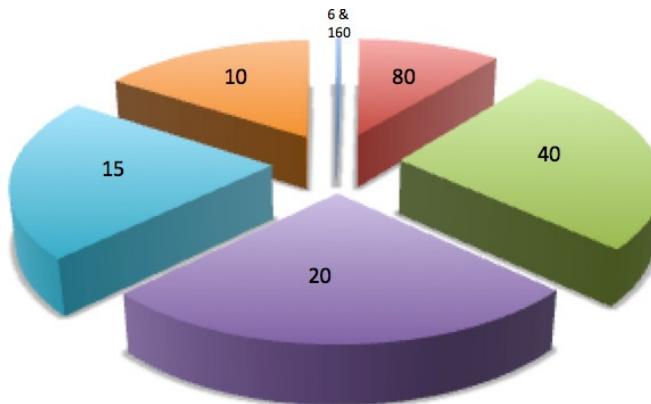
- 160 meter dipole (fed with ladder-line)
- 80 meter inverted-Vee up 50 feet
- 40 meter self-supported dipole up 55 feet (oriented for the Midwest and East Coast)
- 40 meter NVIS dipole up 30 feet (oriented for working the West Coast)
- 10/15/20 meter triband Yagi with triplexer
- 6 meter 8-element Yagi on Bobby's 40 foot tower
- 2 meter 8-element yagi on Bobby's tower

	SSB #1	SSB #2	CW
9am - 11pm	10 / 40	15	20
11am - 1pm	10 / 40	20	15
1pm - 3pm	10 / 40	15	20
3pm - 5pm	10 / 40	20	15
5pm - 7pm	40	15	20
7pm - 9pm	40	20 / 160	80
9pm - 11pm	80	20 / 160	40
11pm - 1am	40	20 / 160	80
1am - 4am			
4am - 5am	80		40
5am - 7am	40	20	80
7am - 9am	40/10	15	20
9am - 11am	10 / 40	20	15
11am - 1pm	10 / 40	15	20
1pm - 3pm	10 / 40	20	15

Our site's band-sharing schedule

The contest ran for 30 hours – from 9am Saturday until 3pm on Sunday. Since we were running 100 watts on HF, we didn't attempt to put more than one transmitter on a given band.

It was no surprise that there were lots and lots of hams excited to make contact with Kings County! Many of the phone contacts were concluded with a “thanks again for the new county!” And on CW, Jim found himself managing a major pile-up of Europeans and East Coast stations Sunday morning on 15 meters.

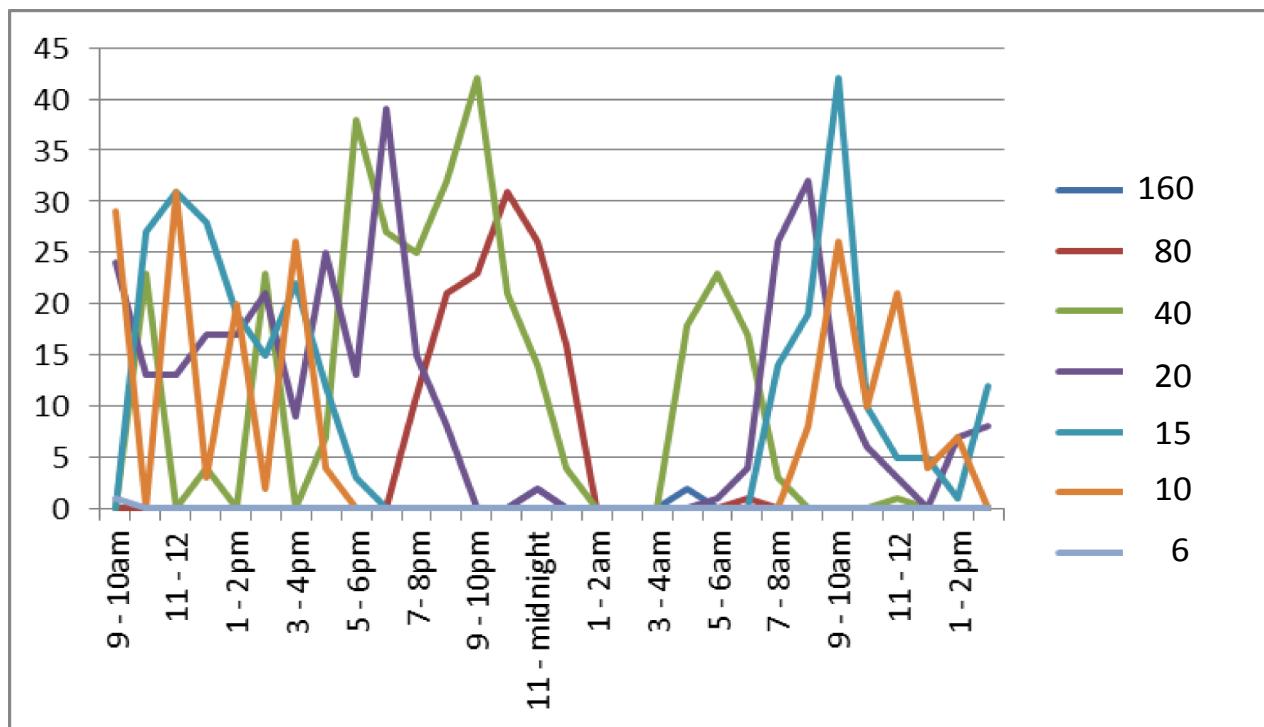


Band-by-band WVARA QSO Totals

Total "QSOs" per "hour"



Hourly QSO Rate per Band



We had a major opening on 10 meters Sunday morning as well as lots of late night / early morning action on 40 and 80 meters. We even made four contacts on Top Band (160 meters). (We did manage to get a few hours of sleep between midnight and 4am.) Our peak QSO rate was on Sunday morning when 10 and 15 meters were both on fire.

Unfortunately, band conditions suddenly took a dive mid morning on Sunday and never fully recovered. Likewise, the sporadic E conditions never took hold, and as a result the VHF bands were not fruitful during the contest. Our site's QSO totals are summarized in the table below.

	CW	SSB	Total
160	4	0	4
80	74	61	135
40	128	206	334
20	166	164	330
15	162	115	277
10	0	201	201
6	0	1	1
Total	534	748	1282

QSO Totals Per Band and Mode

In summary, we had a great time and are looking forward to participating in CQP again next year.



Setting up the 6 meter yagi



Cozy operating conditions for our four stations



Bobby and Tom running late night contacts on 20 meters



Bill making late night contacts on 40 and 80 meters



It got chilly in the early morning!

K6EI

California QSO Party County
Expedition to Kings County

West Valley Amateur Radio Association
P.O. Box 6544
San Jose, CA 95150-6544

Confirming 2 way contact with HA3NU
2014-10-04 1838 15M CW
2014-10-05 1903 15M SSB

73 - AE6JV, KI6SLX, KA4VBF, N6NKT,
K6EMB, N6IB, KJ6TTL, K6EI, W6ESL
(KJ6AZR not shown)

CQP Expedition QSL Card

Holiday Party - Pot Luck

On **Wednesday, December 10** we will have our annual Pot Luck Holiday Party at our regular meeting location. More information will be announced.

WVARA Net Check-Ins (W6PIY)					
Each Tuesday at 8:30 PM					
All Repeaters Linked Together During Net					
Call Sign	Name	10/07/14	10/14/14	10/21/14	10/28/14
AA6RB	Roy		X	X	
AB6XS	Kevin	X	X	X	
AE6JV	Bill	X			
AF6AE	Bill	X	X	X	
AG6HE	Dennis		X		
K6BRF	Bert		X	X	
K6QFO	Mike				X
K6WAR	Bill				X
KA6AMB	Mark	X	X	X	
KD6VOR	Marv				X
KF6EMB	Svend	X	X	X	X
KF6OTD	Gwen			X	
KJ6CQJ	Dean			X	X
KJ6GMO	Sue			X	X
KJ6ZZI	Michael	X	X		
KK6OVW	Cliff	X			
KK6VF	Kevin	NET	NET	NET	NET
NU6P	John		X		X
W6ESL	Tom			X	X
W6HOC	Howard	X	X	X	X
WA6QYS	Lou			X	
WB6KHP	Dave	X	X	X	X
Total		10	12	14	11

Items For Sale By George, N6NKT:

Hy-Gain TH-7DX, 7 Element, Tri-Band, 10/15/20M \$300

Manual available at <http://www.hy-gain.com/support.php?productid=TH-7DX>
Down from Palo Alto ARC office, disassembled and located in Cupertino

KLM KT-34, 4 Element, Tri-Band, 10/15/20M \$200

Booton 92EA RF Voltmeter \$200

Contact George Williams, N6NKT, n6nkt at yahoo dot com

Send Buy and Sell information to: het_editor at wvara dot org

Software Defined Radio Lecture

An Introduction to Software Defined Radio

by Jeffrey Pawlan, WA6KBL

A Distinguished Lecturer in the IEEE MTT Society

Thursday, November 13

6:00PM to 8:00PM

6:00 - 6:30PM, Networking and Snacks, 6:30 - 8:00PM, Presentation

Free Admission for All

Location:

Keysight (Agilent) Technologies, Building: Aristotle Room

5301 Stevens Creek Boulevard

Santa Clara, California

This lecture will begin with the definition, history and evolution of Software Defined Radio (SDR). RF/micro-wave engineers will find it clear and understandable because analogies will be made to conventional classic radio systems and components. The lecture will introduce the concepts of oversampling and undersampling as it applies to SDR. There will also be an introduction and explanation of the firmware and software portions of SDR. A comparison with state-of-the art conventional analog circuitry will be shown. Several live demonstrations of SDR will be presented.

Software Defined Radio (SDR) is the culmination of advances on several fronts and probably the most significant area of development in radio systems today. The entire worldwide cellular system uses SDR. NASA and the US military communications are now almost exclusively using SDR.

In addition to his more than 40 years of work experience in analog, RF, and microwave engineering, Jeffrey Pawlan has been licensed as WA6KBL for 54 years. He has loved VHF, UHF, and microwave design, construction, and operation since 1961 when he first upgraded.

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The Heterodyne is published monthly by the West Valley Amateur Radio Association and sent to all club members via the web.

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