

# *The Heterodyne*

*Newsletter of the West Valley Amateur Radio Association*

**WVARA Summer BBQ**  
**Saturday August 15**  
**11am - 2pm**

At Sunnyvale's Baylands Park  
Pickleweed Place #2  
Reservation is under "WVARA"

When you get to Baylands  
Park, turn **right** after going  
through the main gate

Please see pages 3 and 4  
for more BBQ information

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](http://www.wvara.org/net.html) .

**Visitors Are Welcome!**

## **President's Letter**

### **Viewing Field Day from the Digital Tent**

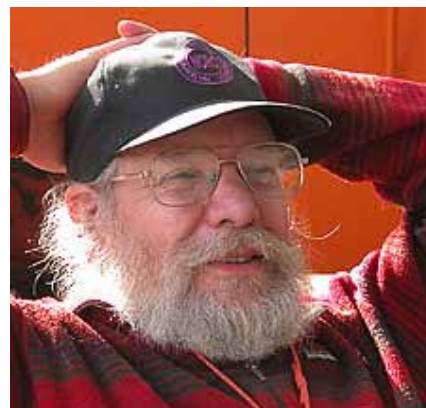
The field day digital landscape was quite interesting this year. I started out on 15 meter PSK31 and found a lot of stations to contact. I spent about an hour and a half contacting stations and logged 21 QSOs for a rate of 14/hour.

I then switched to 20 meters and found a large number of stations who seemed to be mostly QRMing each other. One and three quarter hours resulted in 14 QSOs for a rate of 8/hour.

Moving up to the 20 meter RTTY subband for 20 minutes resulted in 5 QSOs for a rate of 15/hour.

Why the differences? In a word, the experience and self discipline of the operators. On field day you expect to find all levels of experience, from the seasoned contest operator to someone using a radio for the first time in a GOTA station. But the difference in experience seemed not to be evenly distributed. For some reason, PSK31 seemed to attract the less experienced operators.

All the RTTY stations I saw were acting like experienced contest operators. Stations were



spread out making it easy to tune an individual station and avoiding QRM from nearby QSOs. To avoid QRMing each other, many callers would listen before responding to a CQ, allowing QSOs to complete quickly. QSOs were short and to the point. A typical QSO would go[1][2]:

CQ FD AH4JJ AH4JJ K  
AH4JJ DE K6EI K6EI KN  
K6EI 3A SFL 3A SFL K6EI  
AH4JJ 11A SCV 11A SCV DE K6EI  
K6EI TU QRZ AH4JJ

The PSK31 world was quite different. There were few enough stations on 15 meters that they were fairly well spread out and working stations was easy. The data exchanged was much more voluminous than the RTTY exchanges. A typical QSO might go:

CQ CQ CQ field day de AH4JJ AH4JJ AH4JJ  
CQ CQ CQ field day de AH4JJ AH4JJ AH4JJ pls KN  
AH4JJ DE K6EI K6EI KN  
K6EI de AH4JJ pls copy 3A SFL 3A SFL de KH4JJ  
AH4JJ 11A SCV 11A SCV DE K6EI  
K6EI TU de AH4JJ  
AH4JJ QSL TU K6EI  
CQ CQ CQ field day de AH4JJ AH4JJ AH4JJ  
CQ CQ CQ field day de AH4JJ AH4JJ AH4JJ pls KN

My favorite example of excess verbiage was the station which sent it's exchange:

K6EI de AH4JJ Please copy One Alpha South Florida One Alpha South Florida K6EI de AH4JJ

In addition, some stations who were calling CQ were very reluctant to send their exchange. There were a number of QSOs which went:

CQ CQ CQ field day de AH4JJ AH4JJ AH4JJ pls KN  
AH4JJ DE K6EI K6EI KN  
K6EI de AH4JJ pls K  
AH4JJ 11A SCV 11A SCV DE K6EI  
K6EI de AH4JJ pls copy 3A SFL 3A SFL de KH4JJ  
AH4JJ QSL TU K6EI

On 20 meters, the band conditions were a lot more crowded. Many PSK31 signals overlapped with each other which makes decoding much more difficult. Lots of people jumped in to call CQ on top of ongoing QSOs. As a result, it was hard to complete a QSO and there were pileups everywhere.

What can we learn from this? First of all, remember that field day is much more than a contest. It is quite reasonable for old friends to rag chew for a short time during a field day QSO. However, excess verbiage is not a good use of the airwaves. While the more verbose PSK31 QSOs didn't seem to materially reduce the QSO rate on 15 meters, on 20 meters they contributed to more QRM. In heavy QRM conditions quick QSOs are the best way to make contacts.

What really reduced the QSO rate was signals that overlapped. Checking that a frequency is open before using it is always good practice. I realize that finding open frequencies on field day is difficult, and it isn't any easier when the propagation is rapidly changing, but I'm not sure everyone was even trying. Moving away from the magic 14,070 to 14,072 MHz PSK31 subband up to 14,075 or so might be a better choice. For the search and pounce operator, looking where the operators are well disciplined will probably always result in higher QSO rates.

*Field day is an event where many new hams first learn how to operate in trying conditions. More experienced operators should help guide them in the direction of good practices.*

[1] WVARA was using the K6EI call. I made up the AH4JJ call and it is currently unassigned. The K6EI transmissions are the macros I was using. I had a bunch of unnecessary DEs and KNs, but the macros were set up for ease of understanding by inexperienced field day operators.

[2] When I asked another ham to review this letter, she asked what all the abbreviations meant. They all come from standard CW (morse code) practice. Here is a glossary:

CQ - Calling any station. An invitation to a contact.

DE - "I am" so DE K6EI means "I am K6EI."

FD - Short for Field Day. CQ FD - I want to make a field day contact.

GOTA - Get On The Air. A field day station where new and unlicensed operators are coached in using a radio.

K - Any station please now respond.

KN - Only the station called please now respond.

PSK31 - Phase Shift Keying - A digital communications protocol.

QRM - Interference from another station.

QRZ - Next caller please go ahead.

QSO - A contact between two stations.

RTTY - Radio Teletype - A digital communications protocol.

TU - Thank You.

3A SFL - A standard field day exchange. Class 3A in South Florida.

11A SCV - WVARA was in class 11A in Santa Clara Valley.

73, Bill Frantz, AE6JV

## WVARA Summer BBQ

Our annual BBQ will be this Saturday, August 15:

When: 11am - 2pm, Saturday, Aug 15

Where: Sunnyvale's Baylands Park, Pickleweed Place #2

Note: When you get to Baylands Park, turn right after going through the main gate.

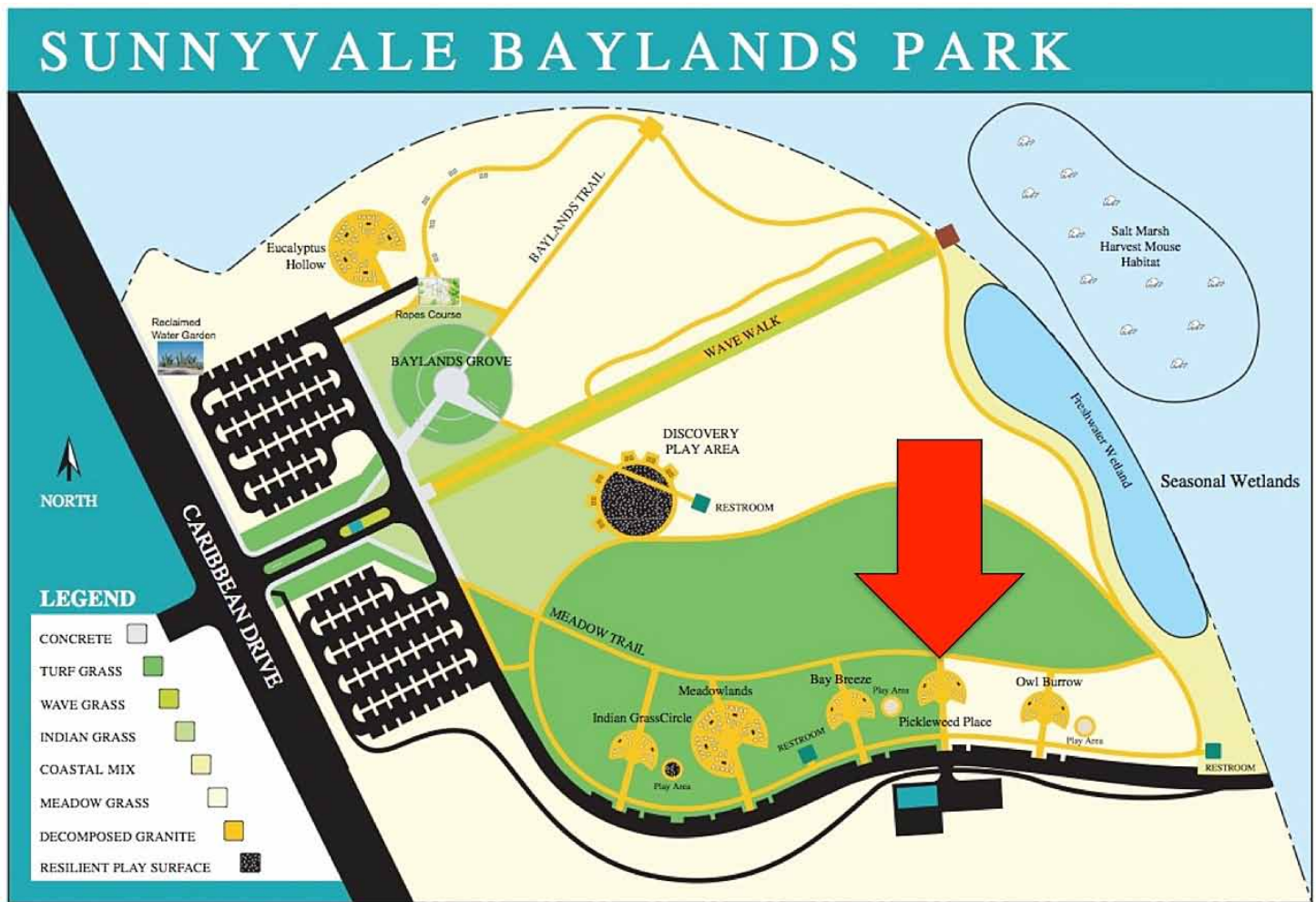
Our location (see map below, the reservation is under "WVARA") includes multiple tables, grill, an AC outlet, and a covered awning for shade. There is an entry fee per car at Baylands Park, so you may prefer to carpool. We'll have hot charcoal and condiments -- ***please bring your own meat to grill.*** Let me know if you are planning to come and what you're planning to bring.

This is a great opportunity to have radio-related fun with other WVARA folks. Our BBQ coincides with the SSB portion of the North American QSO Party (NAQP) which means this is an ideal opportunity for a really fun portable radio operation. (NAQP Contest rules are at: <http://www.ncjweb.com/NAQP-Rules.pdf>). We will string up an NVIS dipole and/or put an HF whip on top of the metal awning and have some fun in the contest.

- Jim, K6EI

[k6ei at earthlink.net](mailto:k6ei@earthlink.net)

***Map is on the following page***



## Photos for Last Year's BBQ



**Note: There is no regular Wednesday meeting in August**



## WVARA Field Day a Big Success

Field Day is a great opportunity to get outdoors, gain experience assembling equipment in the rough, and operate a station under challenging band conditions. This year we operated QRP in the 11A Battery category from Mora Hill in Los Altos, California, overlooking the Silicon Valley from an elevation of 500 feet.

We had 3 HF CW stations, 3 HF SSB stations, an HF digital station, a Get On The Air (GOTA) station, and five VHF/UHF stations including at least one with satellite link capabilities. In spite of being limited to 5 watts, we succeeded in contacting all 50 states as well as Puerto Rico and Aruba.

Our GOTA station (W6ZZZ) was particularly popular with plenty of drop-in visitors including a fair number of kids. In addition to having a great time, each year we work at improving our equipment, antennas and operating skills. This year we expanded our GOTA options by including a GOTA CW coach who introduced visitors (and a few rusty hams) to the fun of Morse code.

In order to minimize interference within our site, we took care to have HF transceivers with well-designed front-ends in order to minimize spur transmissions and receiver pumping/de-sensing. All of our site's HF stations used Elecraft K3 or KX3 transceivers. We likewise set up our antennas in a line, all pointed at the East Coast, so the side lobe rejection helped reduce interference.

Being outdoors also meant that we got to put up wild-n-crazy antennas that our spouses and neighbors might never allow back home. We used two HF triplexers to simultaneously share a pair of HF tribanders between multiple stations on 10- 15- and 20 meters. If you'd like to build one for your club, you can learn how to build one in K6KV's article in the June 2010 issue of QST. Other antennas at our site included three self-supporting 40m dipoles.

Band conditions were okay, although not as great as the previous few years. Solar flux over Field Day weekend was around 100. Geomagnetic conditions were likewise okay with a mid-latitude A index between 8 and 12. D-layer absorption wasn't bad, and late night conditions on 40- and 80m were reasonably good. 20 meters was clearly the sweet spot with 15 meters a close second, but 10 meters was relatively quiet. There was plenty of VHF activity to keep us busy on the 6-, 2- and 70 cm bands. And we made five satellite QSOs – not bad for QRP!

In summary, FD2015 was a real hoot! Be sure to let us know if you'd be interested in getting involved with our team in 2016. We tend to be especially short-handed between midnight and 7am. If you have any questions, you can reach us via CQFieldDay at gmail.com or view our Field Day plans at [www.wvara.org](http://www.wvara.org).

- Jim, K6EI

WVARA Field Day Coordinator

**Band/Mode QSO Breakdown:**

	CW		Digital		Phone	
	QSOs	Pwr(W)	QSOs	Pwr(W)	QSOs	Pwr(W)
160m						
80m	114	5			92	5
40m	266	5	90	5	131	5
20m	524	5	73	5	184	5
15m	355	5	15	5	161	5
10m	2	5			22	5
6m	2	5			27	5
2m	1	5			36	5
1.25					8	5
Other	1	5			18	5
Satellite					5	5
GOTA	84	5			76	5
<b>Total</b>	<b>1349</b>		<b>178</b>		<b>760</b>	

**Field Day 2015 Photos**

Mora Hill (Photo by N6GD)



Svend's Tower Arrival  
(Photo by AE6JV)



Set-up Action  
(Photo by KJ6KCG)



Pot of Gold in the CW Tent  
(Photo by KF6EMB)



FD Sunset  
(Photo by K6EI)

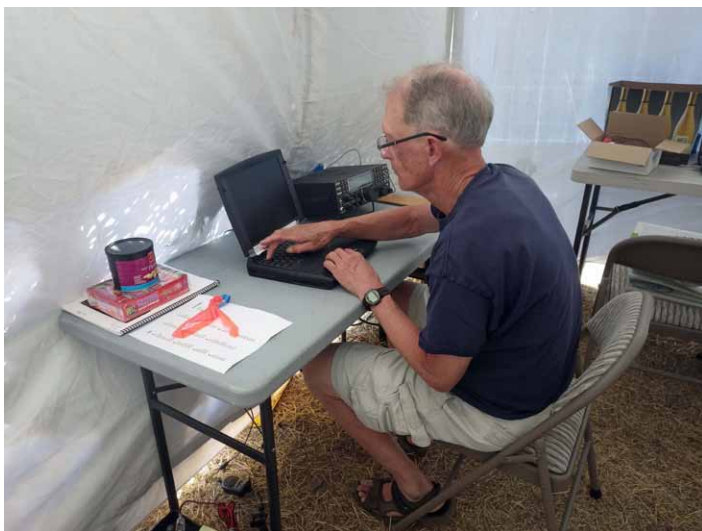


CW Operations  
(Photo by AE6JV)



CW Operations  
(Photo by AE6JV)





CW Operations  
(Photo by AE6JV)



Digital Operations  
(Photo by AE6JV)



SSB Operations  
(Photo by AE6JV)



GOTA Operations  
(Photo by KJ6KCG)



GOTA Operations  
(Photo by AE6JV)



GOTA Operations  
(Photo by AE6JV)





GOTA Operations  
(Photo by KC7XE and KA6FBE)



VHF-UHF-Satellite  
(Photo by KC7XE and KA6FBE)



VHF Operations  
(Photo by AE6JV)



Satellite Communications  
(Photo by AE6JV)



Inside VHF Tent (Photo by N6GD)



VHF Action (Photo by AE6JV)





Busy in the CW Tent (Photo by N6GD)



WVARA FD Group Photo (by AE6JV)

## 2015 West Valley Amateur Radio Association Board

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<b>WVARA Net Check-Ins (W6PIY)</b>										
<b>Each Tuesday at 8:30 PM, All Repeaters Linked Together During Net</b>										
<b>Call Sign</b>	<b>Name</b>	<b>06/16/15</b>	<b>06/23</b>	<b>06/30</b>	<b>07/07</b>	<b>07/14</b>	<b>07/21</b>	<b>07/28</b>	<b>08/04</b>	<b>08/11/15</b>
AA6RB	Roy	X	X		X	X	X	X	X	
AB6XS	Kevin							X	X	
AF6AE	Bill	X	X	X		X	X	X		
K6BRF	Bert	X					X		X	X
K6SCC	Brian		X							
K6WAR	Bill					X				
KA6AMB	Mark	X	X	X	X	X	X	X	X	X
KD6DIF	Terry					X				
KD6VOR	Marv		X							X
KF6EMB	Svend	X	X	X	X	X	X	X	X	X
KG6SBN	Marcia					X				
KG7UWG	Nate					X				
KJ6CQJ	Dean								X	
KJ6GMO	Sue								X	
KJ6ZZI	Michael	X		X		X	X	X	X	X
KK6UYI	Todd					X				
KK6VF	Kevin	NET	NET	NET	NET	NET	NET	NET	NET	NET
KK6VSI	Rex									X
KS6PD	Steve		X	X				X		
KX6B	Dick			X	X			X		
N6AIR	Robert									X
NU6P	John					X				
W6ESL	Tom	X	X	X	X	X	X	X	X	X
W6HOC	Howard	X	X	X	X	X		X	X	X
W6PK	Phil			X				X		
WA6QYS	Lou					X				
WB6KHP	Dave	X	X	X	X	X	X	X	X	X
TOTAL		10	11	11	8	16	9	13	12	11

The Heterodyne is published monthly by the West Valley Amateur Radio Association and sent to all club members via the web. Please obtain permission from the author to re-publish any article in this publication.

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**See You At The BBQ!**