

Conejo Valley Amateur Radio Club 2019 Field Day Survey Report

Summary

The members of the club were surveyed on a number of topics regarding the field day held June 22 and 23, 2019. 26 club members or attendees responded to a survey regarding their Field Day Experience.

The Good News

Overall, the club membership was satisfied with their field day experience. Individual satisfaction was 9.52 Out of 10 with a 0.93 point standard deviation. Perceived overall satisfaction was 9.2 with a 0.99 point standard deviation.

The layout of the tents and trailers was well received with a score of 9.26 and a standard deviation of 1.01 points.

Setup and tear-down was considered well done with a score of 9.63 and a standard deviation of 0.68.

The BBQ was popular with a score of 9.43 and a standard deviation of 0.93.

The OK News

The score for the satisfaction with the revised antenna layout was 8.45 out of 10 with a standard deviation of 1.89 points. With so many HF stations the distance from the transmitters to antennas was necessarily long. The experiment with using mag-loop antennas for FT8 was inconclusive.

Where we can improve

As with any large number of transmitter operation, inter-station interference is still a problem. 18 responders reported interference. This chart summarizes the data, such as it is:

Band	Mode	Saturday	Sunday	Time	Band Captain	Heard
10M	Phone	X	X	Any	Yes	15M Phone
15M	CW	X			No	
15M	Phone	X	X		Yes	10M Phone
15M	CW	X	X		Yes	15M Digital
20M	Phone	X		Early PM	Yes	GOTA
20M	Phone		X	AM	Yes	GOTA
20M	Phone	X	X		No	20M GOTA
20M	CW	X	X		Yes	20M Digital
20M	CW	X	X		No	20M Digital
20M	Digital				Yes	20M CW
20M GOTA	Phone		X		No	20M Data
20M GOTA	Phone		X	1000	No	20M Phone
20M GOTA	Phone				Yes	20M Digital

40M	CW	X			No	FT8
40M	Digital		X	0400-1100	No	40M CW
40M	CW	x	X		Yes	40M Digital
40M	CW	x	X		No	40M Digital
40M	CW	x	X		Yes	40M Digital
40M	CW	x	X		No	40M Digital
40M	Phone	X	X		Yes	40M CW
80M	CW	x	X		Yes	80M Digital
80M	CW	x	X		No	80M Digital
80M	CW	x	X		Yes	80M Digital
80M	Digital				Yes	80M CW

Field Day operations do not lend themselves to a scientific evaluation of the causes of interference. However, some qualitative trends included:

1. Significant interference between digital HF stations and CW stations in most bands. It is not known if this was because the CW and FT8 frequencies overlap or not. Since FT8 frequencies cannot move and CW can avoid them it seems some inter-mode frequency coordination/education might yield a major improvement. One powerful suggestion was to experiment with a CW and FT8 station at a mini-field day to gather more specific data.
2. There was interference between the 20M phone and GOTA station, again due to overlapping operating frequencies. Again inter-frequency coordination was suggested as a potential solution.
3. There was interference between 10M and 15M phone that seems to be related to the combiner used to feed the multiband antenna servicing these stations. Investigation of both the combiner and the antenna status is underway.
4. The RF ground straps were not interconnected between tents and they were not connected to a low impedance earth ground. This should be remedied for the next field day. The suggested earth ground is the chain-link fence posts also used for the power safety ground. Not ideal but should improve the situation.

Please see the attached raw data and detailed comments for additional information and suggestions.

Respectfully submitted:

Bill Willcox, CVARC operations

8 August, 2019

2019 CVARC Field Day Debriefing Results

Number of Responses 26

1. On a scale of 1-10 Please Rate the Layout of the Tents/Trailer .

Number of Responses	25	10	10	10	7	8
Mean Rating	9.26					
Standard Deviation	1.011599					

COMMENTS/SUGGESTIONS

CW did not fill up their tent
 Keep walking space between tent corners
 End on tents facing East and West need more shade
 Much Improved (over previous years)
 Trailer too close to end of middle tent
 Need signs for public
 Need 4 tents, one for each mode plus one for social

2. On a scale of 1-10 Please Rate the Layout of the Antennas

Number of Responses	22	10	10	10	8	8
Mean Rating	8.454545					
Standard Deviation	1.89554					

COMMENTS/SUGGESTIONS

Combiners should have 50 ohm terminations on un-used ports
 Greater Separation between Digital and CW
 Try digital on the Tarmac
 Probably best given the space available
 Need better spread and height for 40/80 M CW
 Digital ?
 Run FT8 on 80M and 40 M dipoles
 I believe the mag loops were underperforming, espeically at night
 Wires very neat. Some interference not sure if it is antenna related
 Understand the difficulty so close together
 Fix FT8/CW conflict

3. On a scale of 1-10 Please Rate the Setup/Teardown efficiency

Number of Responses	19	10	10	9	10	10
Mean Rating	9.631579					
Standard Deviation	0.683986					

COMMENTS/SUGGESTIONS

Smooth
 Seemed to work, plenty of help
 Considering the size of the operation it was fast
 Hell of a crew

. On a scale of 1-10 Please Rate the BBQ (including the cost)

Number of Responses	21	10	10	8	8	9
Mean Rating	9.428571					
Standard Deviation	0.92582					

COMMENTS/SUGGESTIONS

Insufficient notice that only dinner was served
 Should have had Saturday Lunch and Nighttime Snacks too

Awnings for Eating
 Cost and Selection ++
 Food was luke warm
 More tables for serving
 Excellent and good value
 Awesome!
 Add a Vegetable
 Food selection at end sparse.
 Maybe solicit a potluck

5.. On a scale of 1-10 Please Rate your overall personal satisfaction with your field day experience

Number of Responses	25	10	10	10	10	10
Mean Rating	9.52					
Standard Deviation	0.918332					

COMMENTS/SUGGESTIONS

Improve food communication
 Fix FT8 Interference
 Investigate CW/FT8 interference
 Set up a CW/FT8 intererence test at a many field day
 Network operator should not also be a band captain
 Had a great time
 Less interference
 One location for visitor sign-in at publicity table
 Arrange for better propigation
 Operations chair needs to improve cat-herding skills
 Good explanation of setup and contest for newbies.
 Thank you for friendly and helpful guidance to newer operators
 Wish I had more time to operate

6. . On a scale of 1-10 Please Rate how you think the club as a whole was satisfied with the field day experience

Number of Responses	23	10	10	10	8	7
Mean Rating	9.195652					
Standard Deviation	0.985568					

COMMENTS/SUGGESTIONS

Need to work on QRX
 I think everyone had a good time
 Any desenters are party poopers
 Heard no complaints form anyone during the event
 Less interference
 Great to have Scouts and other visitors at operating stations
 CW/FT8 interference again
 I think CW people were frustrated with digital interference

7. If you operated, did you experience interference?

Number of Yes Responses	18
Number of No Responses	2

COMMENTS/SUGGESTIONS

20M GOTA received interference from 20M Phone
 15 and 40 M CW

8. If you experienced interference please tell us (for the station you operated): Band ____, Mode ____, Saturday____ Sunday____

Band	Mode	Saturday	Sunday	Time	Band Captain	Heard	
10M	Phone	X	X	Any	Yes	15M Phone	
15M	CW	X			No		
15M	Phone	X	X		Yes	10M Phone	
15M	CW	X	X		Yes	15M Digiital	
20M	Phone	X		Early PM	Yes	GOTA	
20M	Phone		X	AM	Yes	GOTA	
20M	Phone	X	X		No	20M GOTA	Adjust Triplexer
20M	CW	X	X		Yes	20M Digital	Adjust Triplexer
20M	CW	X	X		No	20M Digital	
20M	Digital				Yes	20M CW	
20M GOTA	Phone		X		No	20M Data	
20M GOTA	Phone		X	1000	No	20M Phone	
20M GOTA	Phone				Yes	20M Digital	
40M	CW	X			No	FT8	
40M	Digital		X	0400-1100	No	40M CW	
40M	CW	x	X		Yes	40M Digital	
40M	CW	x	X		No	40M Digital	
40M	CW	x	X		Yes	40M Digital	
40M	CW	x	X		No	40M Digital	
40M	Phone	X	X		Yes	40M CW	
80M	CW	x	X		Yes	80M Digital	
80M	CW	x	X		No	80M Digital	
80M	CW	x	X		Yes	80M Digital	
80M	Digital				Yes	80M CW	

9. Do you know if the station you operated had all its equipment chassis connected to the RF ground strap?

No. Yes 17
 No. No 0
 No. Don't Know 9

COMMENTS/SUGGESTIONS

- RF Ground straps between tents were not interconnected
- RF Ground straps were not connected to effective ground
- RF ground straps were effectively floating
- Tie all ground straps to single point ground at fence
- Recommend chokes at every station connection for computer power

10. If you experienced interference please tell us (for the station you heard See Question 8.

11. If you experienced interference, what do you think was the cause?

COMMENTS/SUGGESTIONS

- Improve ground strap system per question 9 suggestoins
- Improve frequency coordination between CW and FT8
- FT8 can tolerate more interference than CW
- Improve frequency coordination between GOTA and 20M Phone Stations
- Service the phone multiplexor
- Add 50 Ohm terminator resistors to un-used multiplexor ports
- Experiment with controlled two station FT8/CW station during mini-field day
- Reduce FT8 ALC and power

12. BONUS QUESTION: Any overall/general constructive comments or suggestions for improvement

Go to QRP

Improve training prior to FD for

 Frequency discipline

 RF Grounding and Choke useage

Tie all network equipment to UPS

Fewer stations more operators

More involvement in Pre-Event Planning

Larger Pre-Event Planning venue

Food was great let's do it again

Look into tighter band pass filters and/or notch filters

Guidance/Suggestions form club members was very helpful for newbies

Assign Terry Newman to bring ice cream