

## Cathay October 2018

[www.cathayradio.org](http://www.cathayradio.org)

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**Mission:** The Cathay Amateur Radio Club is basically an active social club of Ham Radio Operators and their spouses. We support local community requests for HAM emergency communications. Several of us are trained in CPR/ First Aid and are involved with community disaster preparedness.

**Monday Night Net Time:** 9 PM Local Time/PST,  
Repeater: WB6TCS - RX 147.210, TX 147.810, Offset +0.6 MHz, CTCSS/Tone PL100 Hz

Please note: Repeater: N6MNV UHF 442.700 Mhz, Offset +5MHz, CTCSS/Tone PL 173.8 Hz in South San Francisco is cross linked every Monday Night Net at 9 p.m. to WB6TCS 2 meter repeater.

The CARC Monday night net is the best way to find out the latest club news. All check-ins are welcome.

**Message from the President:** George Chong, W6BUR

Hello CARC Members and Friends;

The flu season is off to an early start, your CARC Editor been laid up with the flu! So please consider getting a flu shot and don't let yourself get run down with all the ongoing events.

Many thanks to Mr. Denis L. Moore – WB6TCS for the use of his repeater for our CARC Monday Night Net.

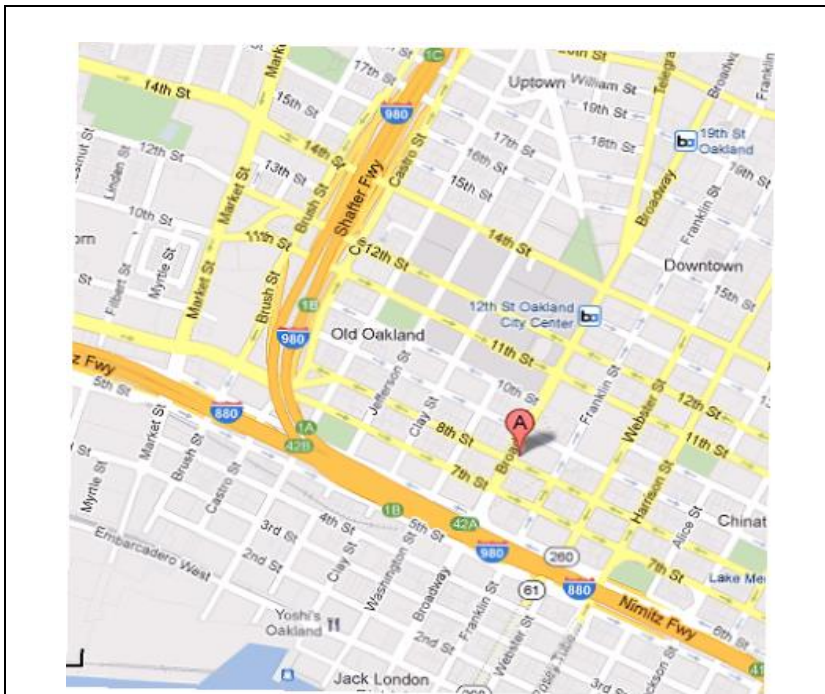
## **Veteran's Day Luncheon**

Please mark your event calendars and join us for the CARC annual luncheon celebration of Veteran's Day, 11am – 1pm on Sunday November 11, 2018 at the restaurant below:

Buffet Fortuna  
800 Broadway Street  
Oakland, CA 94607  
(510) 839-1688 web address - <http://www.buffetfortuna.com/>

The restaurant is an all you can eat American, Japanese and Chinese seafood buffet style food. The cost is \$11.99 per person and for seniors (62+) it is \$10.99. All soft drinks, coffee and tea are included with the price plus tipping is optional. The dining time is limited to 2 hours, however have never seen it enforced for the luncheon period. Of course it does help a lot that CARC member Gilbert Gin, (KJ6HKD) is planning on attending and he has considerable influence with the restaurant owners. I am usually stuffed to the gills within the first hour of eating the delicious food. It is truly a bargain value luncheon.

Map of the restaurant location is shown below:



## **The PACIFICON Announcement**

Details about the upcoming PACIFICON 2018 – October 19-21, 2018 details are in this newsletter.

Our distinguished CARC member Ed Fong will be the featured guest speaker on the evening of Friday October 19, 2018 during the MDARC (Mt. Diablo Club Amateur Radio Club) meeting being held at Pacificon.

The topic will be "The - TBJ-1 - a 2 meter, 1.25 meter and 70 cm antenna without radials". So don't miss Ed's talk on what we all wish we knew more about.

## **Ham Tech Session Wrap Up Introduction**

Edison Fong – *WB6IQN* did another terrific job hosting this year's annual Ham Tech Session at his home in Sunnyvale this past September 8, 2018.

For a more complete write up please read the **Ham Tech Session Wrap Up** in this newsletter.

## **Additional Thoughts**

I wish to thank our CARC members that set aside their valuable time to participate in our Monday night's nets.

Chat sub s'em to all you CARC members! - George W6BUR.

## **Public Service Announcements**

### **HAM CRAM / HAM Licensing**

For upcoming HAM Licensing locations please refer to:  
<http://www.arrl.org/find-an-amateur-radio-license-exam-session>

### **Auxiliary Communications Service (ACS)**

The Auxiliary Communications Service (ACS) was organized by the San Francisco Office of Emergency Services (OES) following the 1989 Loma Prieta Earthquake to

support the communications needs of the City and County of San Francisco when responding to emergencies and special events.

The Auxiliary Communications Service holds General Meetings on the third Tuesday of each month at the San Francisco Emergency Operations Center, 1011 Turk Street (between Gough Street and Laguna Street), from 1900 hours to 2100 hours local time. All interested persons are welcome to attend.

The ACS Net begins at 1930 hours (7:30 p.m.) local time each Thursday evening, on the WA6GG repeater at 442.050 MHz, positive offset, tone 127.3 Hz. The purpose of this net is to practice Net Control skills, practice checking in with deployment status in a formal net, and to share information regarding upcoming ACS events. Guests are welcome to check in. ACS Members should perform Net Control duty on a regular basis. On the second Thursday of each month, the net will be conducted on the output frequency of the WA6GG repeater, 442.050 MHz no offset, tone 127.3 Hz, simplex.

For more information, please attend an ACS meeting or check in on a net, or call 415-558-2717.

Upcoming meetings: Tuesday 7pm, October 16, 2018  
Tuesday 7pm, November 20, 2018

### **Gilbert Gin (KJ6HKD)**

Free Disaster Preparedness Classes In Oakland:  
<http://www.oaklandnet.com/fire/core/index2.html>

CORE is a free training program for individuals, neighborhood groups and community-based organizations in Oakland. The underlying premise is that a major disaster will overwhelm first responders, leaving many citizens on their own for the first 72 hours or longer after the emergency.

If you have questions about the recertification process, you may contact the CORE Coordinator at 510-238-6351 or [core@oaklandnet.com](mailto:core@oaklandnet.com).

### **Free Disaster Preparedness Classes In San Francisco – NERT Taught by San Francisco Fire Department (SFFD).**

<http://sf-fire.org/calendar-special-events>

Upcoming events

## October

6, 7, 8 Fleet Week Humanitarian Assistance Village NERT  
Info Booth Marina Green near Scott St  
Sign up to participate for any part of each day

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13 2MCM Ham Radio practice

20 NERT Citywide Drill, NERT graduates and victims needed

## November

7 NERT Quarterly Meeting – All NERTs Welcome

10 2MCM Ham Radio Practice  
Spreckels Lake in Golden Gate Park – no RSVP Needed

17 NERT Training Day – Third Saturday

## December

8 2MCM Ham Radio practice Spreckels Lake in Golden Gate Park  
no RSVP needed

15 NERT Training Day - Third Saturday

RSVP to [sffdnert@sfgov.org](mailto:sffdnert@sfgov.org) or call 415-970-2024 to register.

**\*SFFD DOT** is the Fire Department Division of Training. All participants walking, biking or driving **enter through the driveway gate on 19th St.** between Folsom and Shotwell. Parking is allowed along the back cinderblock wall.

Visit [www.sfgov.org/sffdnert](http://www.sfgov.org/sffdnert) to learn more about the training, other locations, and register on line. Upcoming Special NERT Events.

## San Francisco Police Department: Auxiliary Law Enforcement Response Team (ALERT)

The Auxiliary Law Enforcement Response Team (ALERT) is a citizen disaster preparedness program designed. The ALERT program is for volunteers 16 years of age or older, who live, work, or attend high school in San Francisco.

Graduates of the San Francisco Police Activities League (P.A.L) Law Enforcement Cadet Academy are also eligible to join.

ALERT volunteers will first complete the Fire Department's Neighborhood Emergency Response Team (NERT) ([www.sfgov.org/sfnert](http://www.sfgov.org/sfnert)) training and then graduate into an 8 hour Police Department course specifically designed for ALERT team members.

ALERT members will work closely with full-time and/or Reserve Police Officers in the event they are deployed after a disaster. The Basic ALERT volunteer will have no law enforcement powers other than those available to all citizens.

### **SFPD ALERT Training**

The next SFPD ALERT training class has been scheduled for TBD The class will be held at the San Francisco Police Academy, in the parking lot bungalow, from 8am-5pm (one hour lunch break) on Saturday.

**\*\*** Class dates indicated in red are only for new members who have not completed either SFFD NERT training or the SFPD Community Police Academy.

IMPORTANT- All participants must complete the background interview process in order to be eligible to attend the ALERT training class.

Eligible ALERT participants may register for a training class by contacting the ALERT Program Coordinator, Mark Hernandez, at [sfpdalert@sfgov.org](mailto:sfpdalert@sfgov.org), or by telephone at 415-401-4615.

### **SFPD ALERT Practice/Training Drill**

All active/trained ALERT members are asked to join us for our next training drill, scheduled for an evening on Saturday November 3, 2018. Details will be emailed to active ALERT members, prior to the date of the exercise. Participation is not required, but strongly encouraged.

For more information on the San Francisco Police Department ALERT Program, email us at [sfpdalert@sfgov.org](mailto:sfpdalert@sfgov.org), or call Sergeant Mark Hernandez (SFPD, Ret.), SFPD ALERT Program Coordinator, at (415) 401-4615.

For additional information on the web please refer to:

<http://sf-police.org/index.aspx?page=4019>



**PACIFICON 2018**  
**San Ramon Marriott**  
**2600 Bishop Drive**  
**San Ramon CA 94583**

**Friday through Sunday**  
**Oct. 19-21, 2018**

**Pacificon** gives you three great days of activities for one low cost:

- \* A full slate of outstanding Forum presentations about a wide range of amateur radio topics
- \* A large Vendor Expo filled with exciting products and exhibits
- \* An outdoor Swap Meet
- \* QRP activities
- \* Youth Activities
- \* Electronics kit building and soldering instruction
- \* A One Day License Prep Class to prepare you to pass the amateur radio Technician license examination and get your first amateur radio license
- \* Two days of License Testing
- \* A Special Events Station where you can operate and contact other hams worldwide, even if you don't have a General or Extra Class license
- \* A wonderful Banquet with Keynote Speaker Jeri Ellsworth, AI6TK
- \* Our annual Wouff Hong Initiation ceremony
- \* A chance to hear about and discuss important national amateur radio issues with top ARRL leaders
- \* A chance to win radios and other great prizes throughout the convention

And perhaps the best part - *a chance to interact and share information with lots of other amateur radio enthusiasts to further (or begin) your own knowledge and to advance the hobby*

**Pricing:**

- General Admission - On-Line (until Oct. 7) \$25.00
- General Admission - At the Door \$30.00
- College Student (w/ Valid Student ID, Max age 25) \$5.00
- Youth (Age 17 & under) Free
- Antenna Seminar (including USB Thumb Drive) (Oct. 20) \$20.00 (See our [Antenna Seminar](#) page.)



- USB Thumb Drive for The Friday Antenna Seminar \$10.00 (See our [Antenna Seminar](#) page.)  
(Additional to one included with the Antenna Seminar registration.)
- Breakfast with Gordon West (Oct. 20) \$23.00 (See our [Breakfast with Gordo](#) page.)
- Banquet - (Oct. 20) (See our [Banquet](#) page.)
  - Rib-Eye Steak \$56.00 (See our [Banquet](#) page.)
  - Chicken \$56.00 (See our [Banquet](#) page.)
  - Salmon \$56.00 (See our [Banquet](#) page.)
  - Vegetarian \$56.00 (See our [Banquet](#) page.)
- Wouff Hong (Oct 20, 11:45 pm) Free (See our [Wouff Hong](#) page.)
- License Testing Fee (FCC mandated) and \$15.00 (See our [License Testing](#) and

8:00 am	<u>So you have antenna challenges? Let's try this...</u> Tom Schiller, N6BT
9:05 am	<u>Understanding Propagation with Respect to Unusual QSOs</u> Carl Luetzelschwab, K9LA
10:15 am	<u>Antennas: The Story from Physics to Computational Electromagnetics</u> Steve Stearns, K6OIK
11:25 am	<u>SimSmith Tools</u> Ward Harriman, AE6TY
12:15 am	<u>Lunch Break</u>
1:20 pm	<u>A Wire in The Air - What Matters Most</u> Kristen McIntyre, K6WX
2:15 pm	<u>How to Blow Up Your Balun and Other stuff</u> Dean Straw, N6BV
3:25 pm	<u>Designing H.F. Loops for Best DX</u> Ted Algren, KA6W
4:30 pm	<u>Q &amp; A</u>

For more information and registration at Pacificon 2018:

<https://sites.google.com/a/mdarc.org/pacificon2018/education-and-forums/antenna-seminar>



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## **Ham Tech Session Wrap Up – Sept 8, 2018 By Edision Fong**

Thanks for all the folks that came to the September 8, 2018 Ham Tech Event. For sure we had a record turnout. I counted on the group picture 48 folks but that was taken later in the day before the raffle.

A lot of folks dropped by and left before the group picture was taken. There was probably about 70 folks total. I have a better count on the food.

- 5 - Family size pizzas. 18 inch diameter
- 2 - Eight pound orders of lasagna
- 6 - Loaves of Boudin sour dough bread
- 4 - Quarts of various dips
- ½ - Sheet of chocolate mousse cake
- 80 - Cans of soda

Lots of deserts and vegetable dishes folks brought.

### **Technical Results Of The Beofeng Radio Testing:**

The topic of the meeting was “Cheap Chinese Radios” or CCR’s as they often referred to. Of particular interest was the ubiquitous Baofeng UV5 which is sold for about \$25 complete with smart drop in charger, li-ion battery, belt clip and rubber duck antenna.

Rumor has it that these radios produce a lot of spurious radiation (SPURS). FCC specs for 4 watt hand held transceiver is 50dB down. We wanted to fine out the truth with our lab standard Agilent 8591A.

The answer was surprising. We tested a bunch of radios to reassure our equipment was working properly. Nick Carrsino (N6VOA) brought his Motorola APX8000 and it tested fine. So did the Yaesu FT60, Wouxun KG-UVD1, Motorola HT220, Beofeng UV3.

The Beofeng UV5R was a little different. It had spurs, but not all the time. What we noticed is that with some antennas it worked fine but with others, it had spurs that would not meet FCC specs. In all case, spurs were down 40dB. Remember that FCC spec is 50dB down. With a well matched antenna such as a TBJ-1, spurs were a good 60dB down. With a poorly matched antenna such as the stock older thicker rubber duck, spurs were only 40dB down. The explanation is quite simple. The RF amplifier Beofeng is using is “unstable” under various loads that are not 50 ohms.

On the next page is the frequency spectrum analyzer side by side comparison of the same Beofeng UV5R transceiver transmitting but configured with three different antennas to gauge the performance configuration.



Baofeng with the thick rubber duck antenna - this was the worse antenna with poor efficiency and high spurs. Only about 40dB down. Note – some of the signals are just being picked up by air.



UV-5 with the later “thin” antenna - gives about 10dB better output performance and with the spur way down next the main carrier.



UV-5 with the TBJ-1 triband base antenna. Notice that it gives almost another 10dB better performance with no spur.

### Ok, enough of the serious stuff on to the other fun stuff:

The winner of the Grand Prize: HP Laptop was Mark Goldman (WB6DCE) who drove all the way from the city of Seaside in Monterey County.



Left to Right: Ed Fong presenting grand prize laptop to Mark Goldman (WB6DCE)

Ben Devotlet (WB6FDU) won the Quad Band QB25 mobile and the ProLux LED flashlight – how does that guy do it?



Left to right: Ben Devot – WB6FDU winner of the 2d Prize – Radio Oddity QB25 Quad Band Mobile and Ed Fong - WB6IQN



Left to right: Ben Devot – WB6FDU winner of the ProLux LED flashlight and Ed Fong - WB6IQN

Leonard Tom (NX6E) won the Baofeng UV5 dual band hand held, Sam Drake (KM6CZX) won the digital multimeter.



Left to Right: Leonard Tom – NX6E winner of Baofeng and Ed Fong- WB6IQN



Left to right: Sam Drake - KM6CZX holding his multi-meter raffle prize and Ed Fong – WB6IQN



Joe Castellano (W6SNV) won the County Comm tool set.



Left to right Joe Castellano – W6SNV with his County Comm Tool Set and Ed Fong - WB6IQN



Left to right: Ed Fong – WB6IQN and his daughter - Violet Fong. Ed is holding one of his many gift mini-led flashlights.

Congratulations to all the raffle prize winners. All attendees received a cool gift: a mini-LED flashlight (see above right photo). This was not just an ordinary flashlight. Unlike the cheap ones that require three AAA batteries (which can become costly to replace), the flashlights that were given away have a built in switching power supply so they can run on one inexpensive and easy to find long lasting AA battery. Something that should be in everybody's Every Day Carry (EDC) Kit.



## Ham Tech 2018 - Group Photo



Ed Fong in center of picture wear green t-shirt, demonstrating his spectrum frequency analyzer and confirming that folks portable HAM radios were transmitting properly.





Walt Lee – K6WAL



Ron Quan - KI6AZB







Left to right: Todd Wen – KT6JK, Gordon Yee – HI6UH, Tad Kuwano - KD6EFH, and Ben Devot – WB6FDU



Left to right;; Nick Cassarino–N6NSA, and attendee



Left to right: Attendee, Bill Chin - KC6POF, Howard Louie - N6MNV and seated is Ed Fong - WB6IQN



Cliff Shak – KH6IKL



Left to right: David Kimita and Norman Nobel - WB6YSL

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Left to right: Howard Louie - N6MNV  
and Ron Quan - KI6AZB



Attendees in conversation



Leonard Tom – NX6E



Equipment use to evaluate the Ham Radio transmissions.





Provided by Ed Fong – Made to order sheet of chocolate mousse cake to commemorate the HAM Tech Session 2018. It was a very tasty dessert that was enjoyed by all the attendees.