

## Cathay November 2015

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

revised 11/05/2015

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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, Frequencies: 146.67MHz -600KHz PL85.4 and 442.70 +5MHz PL 173.8. The repeaters are linked only during the CARC Monday night net.

Update: Link to repeater 442.70 is currently not active until further notice.

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;

I wish all our CARC members a very happy upcoming Thanksgiving during this 2015 holiday season.

**Special Message From CARC Editor:**

On behalf of the CARC, we wish a very **HAPPY BIRTHDAY** to our esteemed CARC President: **George Cheong, W6BUR who will be turning 90 years old** on Saturday November 21, 2015.

As some of you may know several of our CARC Club members have been quietly behind the scenes volunteering their services to the Chinese Community. Most notability CARC members: Gilbert Gin- KJ6HKD, Bill Chin – KC6POF, Minge – W6EE, George Chong – W6BUR, Hetty Chong – WB6SHU, Ed Fong – WB6IQN, and Rodney Yee – KJ6DZI; are among those many CARC volunteers.

CARC members providing community service is in keeping with the spirit of CARC having been founded and operating out of SF Chinatown in 1946. The CARC has since evolved and has spread out its volunteering efforts thought out the SF Bay Area (ie: Skip Weiss- KG6SCE: Daily City Relay for Life).

Below is a group picture of your CARC Editor, Rodney – KJ6DZI (in royal blue shirt on the far lower left) volunteering during the YMCA Chinatown Community Health Fair held on October 17, 2015.



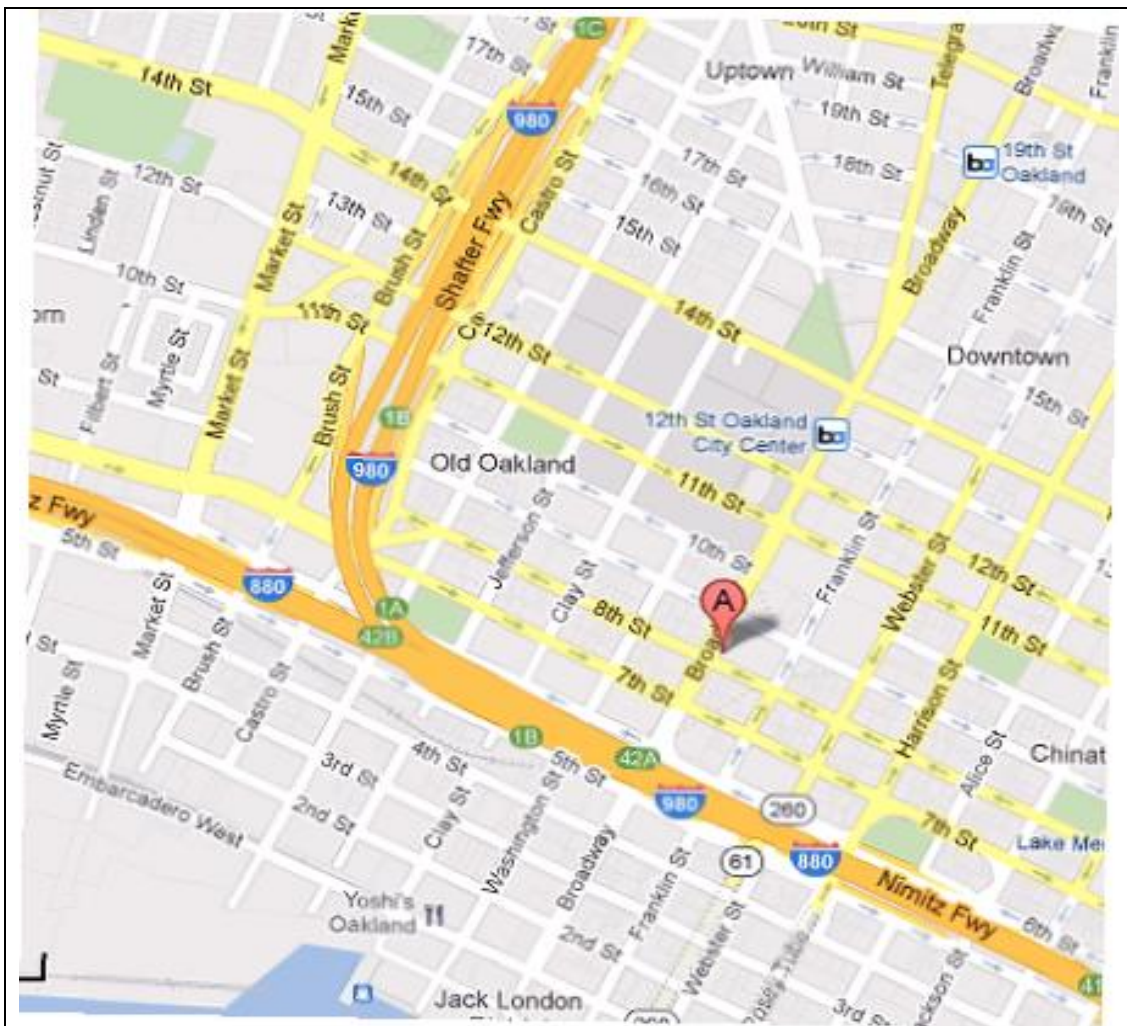
## Veteran's Day Luncheon

Please join us for the CARC annual luncheon celebration of Veteran's Day, 11am on Wednesday November 11, 2015 at the restaurant below:

Buffet Fortuna  
800 Broadway Street  
Oakland, CA 94607  
(510) 839-1688

The restaurant is an all you can eat American, Japanese and Chinese seafood buffet style food. The cost is \$9.99 per person and for seniors it is \$8.99. 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 with going to be with us as he has considerable influence with the restaurant. I am usually stuffed to the gills within the first hour of eating the delicious food.

Map of the restaurant location is shown below:



## **Upcoming Xmas Party hosted by Ed Fong - WB6IQN**

Save the date: 5:30pm – 10:00 pm Saturday December 19, 2015 for Ed Fong's annual blow out Christmas Party at his home in Sunnyvale.

Each attendee will receive one free raffle ticket that for a chance to win a gift that Ed very has generously donated.

Folks usually bring their families to this fun event for great food and good conversation.

Details will be contained in next month's CARC December 2015 newsletter that will be released in early December.

### **Tech Article Introduction:**

With our collective breaths held, many folks have been following the news on the loss of a Boeing 777-200 ER jet aircraft; Malaysia Airlines Flight 370.

The flight of 227 passengers and 12 crew members went missing on the evening of Sunday March 8, 2014, while flying from Kuala Lumpur International Airport in Malaysia, to Beijing Capital International Airport, China.

After many months of an international search effort, the location of the wreckage and black box of MH370 was not successful.

On July 29, 2015 a flaperon; a wing control surface part was identified as coming from MH370 was found on Reunion Island, some 4,000 miles from flight MH370 last known position. The flaperon provides the aircraft stabilization during low speed flying conditions that occurs on both take-off and landing.



After a 16 months disappearance, finding parts of flight MH370 has renewed interest in locating the black box from MH370 and the main aircraft body. Finding the remaining debris of MH370 would greatly help in piecing together the mystery of what happened to the jet liner.

At the request of CARC member **Allen Chung (KI6YRL)**, this month's Tech Article has been devoted to answering what is a "Black Box / Flight Recorder".

### **CARC Final Wrap-up News**

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, Nov 17, 2015  
Tuesday 7pm, Dec 15, 2015

### **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**

Upcoming events

**November** (None this month)

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

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 ALERT training classes have been scheduled for Saturday, February 27, 2106. The classes will be held at the San Francisco Police Academy, in the parking lot bungalow, from 8am-5pm (one hour lunch break).

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 Saturday November 7, 2015 9AM – 1PM. 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>

## Featured Tech Article:

“flight recorder” article: “By courtesy of Encyclopaedia Britannica, Inc., copyright 2015; used with permission.”

# flight recorder



Flight recorders.  
Meggar

**flight recorder**, byname black box, instrument that records the performance and condition of an [aircraft](#) in flight. Governmental regulatory agencies require these devices on [commercial aircraft](#) to make possible the analysis of crashes or other unusual occurrences.

Flight recorders actually consist of two functional devices, the flight data recorder (FDR) and the [cockpit voice recorder](#) (CVR), though sometimes these two devices are packaged together in one combined unit.

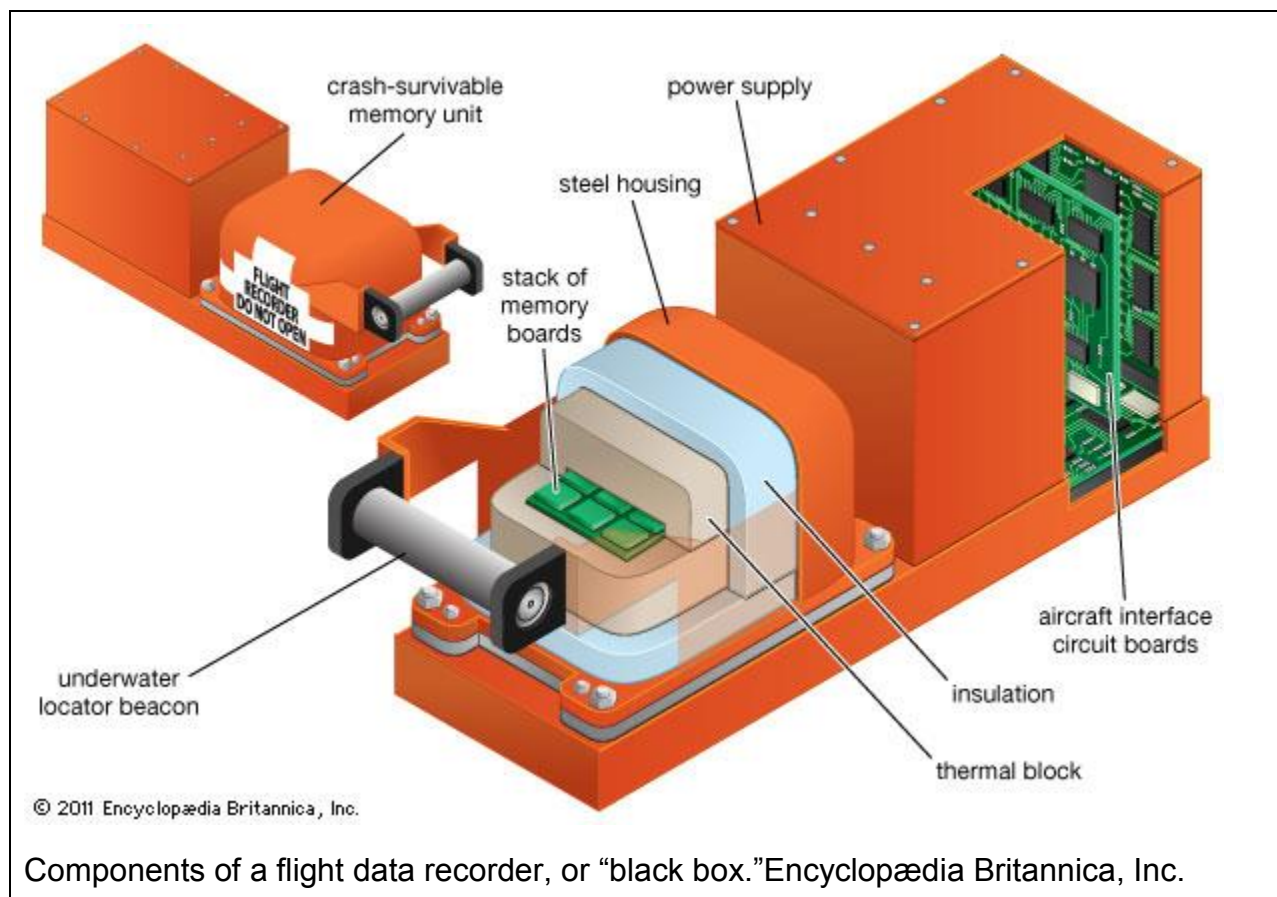
The FDR records many variables, not only basic [aircraft](#) conditions such as airspeed, altitude, heading, vertical acceleration, and pitch but hundreds of individual instrument readings and internal environmental conditions.

The CVR records verbal communication between crew members within the aircraft's [cockpit](#) as well as voice transmissions by radio. Aircraft sounds audible in the cockpit are also caught on the recorder.



Flight recorders are commonly carried in the tail of the aircraft, which is usually the structure that is subject to the least impact in the event of a crash.

In spite of the popular name *black box*, flight recorders are painted a highly visible vermilion colour known as “international orange.”



The voice and instrument data processed by the flight recorder are stored in digital format on [solid-state](#) memory boards. Up to 2 hours of cockpit sound and 25 hours of flight data are stored, new data continuously replacing the old.

The memory boards are housed within a box or cylinder called the crash-survivable memory unit. This is the only truly survivable component of the flight recorder (the other components, such as the data processor, are not necessary for retrieval of data).

Consisting of a heavy stainless steel shell wrapped within layers of insulating material and covered by an aluminum housing, a memory unit is expected to survive impacts of 3,400 g (units of gravitational acceleration), flame temperatures as high as 1,100 °C (2,000 °F), and pressures encountered at 6,000 metres (20,000 feet) underwater.

In the event of a crash at sea, flight recorders are equipped with a sonar device that is designed to emit an ultrasonic locator signal for at least 30 days.

Flight recorders of varying levels of sophistication have been in existence almost since the beginning of manned flight.

The [Wright brothers](#) are said to have installed a device on their first [flyer of 1903](#) that logged such parameters as propeller rotation and airspeed, and [Charles Lindbergh](#), in his epoch-making flight across the Atlantic in 1927, employed a barometric device that sensed changes in air pressure (and therefore altitude) and recorded these changes by tracing lines on a rotating spool.

As civil aviation developed in the years before World War II, “crash-survivable” flight recorders came to be seen as a valuable tool in analyzing aviation disasters and contributing to the design of safer aircraft.

However, truly serviceable recorders that had any chance of surviving plane crashes were not produced until several years after the war.

In the United States, credit for the first survivable FDR is given to James J. Ryan, an engineer employed by General Mills in the early 1950s. Ryan’s VGA Flight Recorder sensed changes in velocity (V), gravitational forces (G), and altitude (A) and inscribed the measurements on a slowly moving strip of aluminum foil.

As released in 1953 and sold by General Mills to the [Lockheed Aircraft Company](#), the entire apparatus was enclosed in a yellow-painted spherical shell.

Beginning in 1958, larger civilian passenger aircraft in the United States were required to carry survivable FDRs, and numerous other devices were produced employing various recording media, from metal strips to, eventually, magnetic tape.

Parallel developments occurred elsewhere in the world. A series of disastrous crashes of De Havilland Comet jetliners in 1953–54 spurred David Warren, a scientist at Australia’s Aeronautical Research Laboratory (ARL), to design the first combined FDR and CVR.

The recording medium for Warren’s ARL Flight Memory Unit was steel wire of the type then being used in magnetic audio recorders. After a demonstration of the device in Britain in 1958, a journalist is said to have given it the sobriquet *black box* (the common name for all flight recorders to this day), though Warren’s recorder, as produced commercially by S. Davall & Son beginning in 1960, was housed in an egg-shaped casing that was painted red.

Other theories of the origin of the term *black box* have been offered, including the charred appearance of early flight recorders retrieved from a fiery crash.

During the 1960s, crash-protected FDRs and CVRs became mandatory on airliners around the world.

Most flight recorders employed magnetic tape, but during the 1990s a great advancement came with the advent of solid-state memory devices.

Memory boards are more survivable than recording tape, and the data stored on them can be retrieved quickly by a computer carrying the proper software.

A complete picture can be created of conditions on the aircraft during the recorded period, including a computer-animated diagram of the aircraft's positions and movements.

Verbal exchanges and cockpit sounds retrieved from CVR data are transcribed into documents that are made available to investigators along with the actual recordings.

The release of these materials to the public is strictly regulated.

*"flight recorder". Encyclopædia Britannica. Encyclopædia Britannica Online. Encyclopædia Britannica Inc., 2015. Web. 14 Sep. 2015*  
<<http://www.britannica.com/technology/flight-recorder>>.