

The Oscillator



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December 2003

ARALB 76 Years of Community Service

Fire Communications Duty

By Tom Gibbons, W9EYB

During late October and early November wildfires were burning out of control across Southern California. Hundreds of thousands acres of vegetation and structures were destroyed over a period of weeks. At Long Beach we could detect the scent of burning homes and vegetation. The smoke was visible in the air many miles from the actual fires.

Joe Provenza, W6UPN, the Emergency Coordinator for Long Beach ARES/RACES, used the weekly ARES/RACES radio nets to announce the great and immediate need for Amateur Radio communicators in support of Red Cross shelters at Ontario and nearby communities. Thousands of residents were forced away from their homes in the fire areas, some for a long period of time.

I volunteered as an ARES communicator. Joe gave me the Ontario Red Cross Chapter telephone number to call, and I was assigned to duty in support of fighting the large Old Fire.

My call to the Red Cross was welcomed. They had a great, immediate need for Amateur Radio communicators. The shifts, originally scheduled for eight hours, became 12 hours due to the insufficient number of volunteer communicators. I was directed to report in person to the Ontario Chapter by 1900 hours on Monday, October 27. I was given the active 2m repeater frequency pair so I could program my HT before leaving home. I checked my emergency readiness Go Bag, and added two HTs, a magmount 2m antenna, and other accessories.

Finding Ontario was easy but the Red Cross Chapter address was more difficult to locate. It

(Please see Fire Communications Duty on page 4)

December 5 Meeting

7:00 PM

*At the Signal Hill Community Center
1780 E. Hill Street*

Members Open Forum

Come and enjoy an evening of camaraderie. Share some of your exciting moments in Amateur Radio. This is your chance to mix and mingle with members and guests of the ARALB. ♦



Give generously!

Please donate to the ARALB Spectrum Defense Fund. Our club will match your donation and present a large donation to the ARRL at the January Banquet.

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**ARALB
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WA6NIA@arrl.net
562-858-2883

Donna Jean Barker, W6DJB
Vice President
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562-981-9111

Tom Gibbons, W9EYB
Secretary and Testing VEC
W9EYB@arrl.net
562-529-8644

Lisa Gibbons, KF6QNG
Treasurer
ltgnov6@yahoo.com
562-529-8644

Ray Rittenhouse, KF6WZN
Past President
KF6WZN@aralb.org
562-860-5472

John Rogers, KF6TTR
Director and W6RO Asst. Mgr.
John.Rogers28@verizon.net
562-626-1755

Kostas "Dino" Kitsios, KF6ECO
KF6ECO@aralb.org
Director and Special Projects
Chairman
562-421-7582

Carina Lister, KF6ZYY
Director and Oscillator Editor
KF6ZYY@arrl.net
562-570-6062

Chuck Williams, KN6DB
Director
KN6DB@charter.net
562-431-3488

Ed Koran, WA6JOK
Director
edk246@aol.com
562-427-2560

George Apt, KF6THT
Director
cgapt@aol.com
562-997-8985



Tom Gibbons, W9EYB, and John Rogers, KF6TTR, show off the radio equipment at the ECOC grand opening.

ECOC Grand Opening

By John Rogers, KF6TTR

The Long Beach Emergency Communications and Operations Center (ECOC) held its grand opening on Thursday, November 20. The Center houses both the police and fire communications centers, and it has an amateur radio room equipped for working the 440, 2m, 6m, and 10m bands.

Presiding over all the excitement was Casey Chel, KD6DOV, Disaster Management Coordinator for the City of Long Beach. During the five years of the ECOC planning and construction, Casey continually insisted that an amateur radio room should be included in the Center. It is to his credit that his vision became a reality, and this room is available for use today.

Local hams in attendance included Joe Provenza, W6UPN; John Rogers, KF6TTR; Ray Rittenhouse, KF6WZN; George Apt, KF6THT; Carol Apt, KF6THS; Hugh Haven, KF6AOK; Dick Albin, N6CMR; Bob Curl, WB6TKR; Ed Koran, WA6JOK; Frank Spencer, KA6BUY; Michael Fox, W6MJF; and Tom Gibbons, W9EYB. In addition, Don Smith and Robert Berg, two former members of ARALB attended as did six other visiting local hams.

Members of the Long Beach ARES/RACES demonstrated ATV and SSTV, and also explained to the audience that the four antennas on the tower at the ECOC point at the repeaters on Signal Hill. The ECOC radio room also is equipped for APRS and packet radio. ♦

ARALB Regains Special Service Club Title

The ARALB recently regained its status as an ARRL Special Service Club. This special designation is awarded to clubs that meet stiff requirements with respect to new ham development and training, public relations, emergency communications, school club support, technical advancement, operating activities, annual reports, and more.

In the Los Angeles and Orange ARRL sections there are 65 clubs. Just three clubs besides the ARALB have earned the status of Special Service Club: the South Bay Amateur Radio Club; the San Fernando Valley Radio Club; and the Inland Empire Amateur Radio Club.

We are the ONLY Special Service Club that offers all the services specified by the ARRL: entry-level license classes; general or higher license classes; license test sessions; TVI/RFI committee; repeater; packet radio BBS; club newsletter; on-the-air bulletins; and Hamfest participation.

We are entitled once again to display the ARRL Special Service Club logo on our club newsletter, stationery, banners and signs, and web site. Notice the logo on the cover of this issue. This logo is earned by the efforts of many members. We should be proud to have earned this status, and we should continue supporting the activities that brought this honor to the ARALB.

◆

Remember! Donate to the ARALB fund for the ARRL Spectrum Defense effort.

Special Event

Vacaville. Aeronautical and Maritime Radio Club of California, W1C. December 17, 0000Z through December 18, 0200Z. 100th anniversary of Wright Brothers First Flight (from aircraft in flight if weather permits). 28.475, 14.272, 7.250, 3.972. Send an SASE for certificate. Bill Alber, WA6CAX, PO Box 799, Suisun City, CA 94585. ◆

January Banquet Coming Up!

Be sure to purchase your tickets for the January Banquet at the next meeting. We have a fine meeting place, a great chef with a terrific menu, and an outstanding speaker. The Banquet will be held at the Long Beach Chapter of The American Red Cross on Saturday, January 24, at 7:00 PM. Pre-registration is required. Tickets cost \$20.00 apiece, or you can buy two for \$35.00. See the Treasurer at the December meeting, or call Lisa Gibbons at 562-529-8644 to make a reservation.

Jim Young, W7FTT, will be our speaker. He has been the Resident Astronomer at the Jet Propulsion Laboratory Table Mountain Observatory for the past 40 years. He'll present, "Asteroids: Is the Earth in Danger?" This will be a brief historical record of how asteroids were discovered and the history of the JPL program of Near-Earth Asteroid discovery and orbit determination. It will be a non-technical discussion with many illustrations and discovery/recovery accounts.

Attendees also will be present for the installation of the ARALB officers and directors for the year 2004. Don't miss this chance to see everyone all dressed up! ◆

Ho Ho Ho HRO Discount!

Tell Santa to shop at HRO! If you or Santa mention that you saw this ad in *The Oscillator*, HRO will give you a discount on your purchase if possible! Just tell them the ARALB sent you...



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Ham Radio and the Firestorm of 2003

By Carina Lister, KF6ZYY

In the past month we experienced one of the worst natural disasters that has ever befallen southern California. Three wildfires swept across San Diego and Los Angeles Counties, together burning 750,000 acres of land and thousands of homes. As of mid-November the Old Fire (the fire that began on October 25 in Waterman Canyon, on the north edge of the City of San Bernardino) was 100% contained. During its course the fire burned 91,281 acres. The response costs to date are estimated to be \$42,045,093. Fire suppression and rehabilitation efforts continue because there still are smoldering stumps and snags.

During the Old Fire, about 75,000 people were evacuated from the mountains. The emergency evacuation shelters in San Bernardino could not possibly have accommodated all the evacuees. Fortunately many of the residents were able to find shelter for a week or more with friends outside the fire area. The fire spread up Waterman Canyon toward the crest of the mountain, and there was a valiant attempt to stop it at the crest. Instead it jumped across Highway 330 and headed toward Cedar Glen near Lake Arrowhead, a community where several hundred homes burned to the ground. Concurrently the fire began moving east toward Running Springs, where Highway 330 comes up from San Bernardino and meets Highway 18 that runs between Lake Arrowhead and Big Bear. On the North side of the ridge, another fire began at Green Valley and began closing in on Running Springs from that direction.

The upper hand came only when the Santa Ana winds died down and a Pacific front moved in with a storm that brought snow. The cold temperatures combined with a snowfall combined to stop the progress of the fire.

A mandatory evacuation was in effect for a week. When it was reduced to voluntary evacuation, only residents of the mountain communities were allowed back up the mountain. They had to obtain a residence pass provided by an evacuation center. Residents were escorted up the mountain by the Highway Patrol. For several days, the only traffic allowed was between 5:30-7:00 AM

(Please see Ham Radio and the Firestorm on page 6)

(Fire Communications Duty, continued from page 1)

was in a residential area. I had programmed the active repeater data into the VFO of my 2m mobile and portable radios so I called, asking to confirm the address. I drove a few more blocks to the correct location and reported.

When I arrived at the Red Cross Chapter, I was assigned to the Red Cross active shelter at the City of Upland Community Center, some five miles away. I quickly noted the directions and left, arriving at the shelter at about 1920 hours. Shelters are located well away from fire lines.

My briefing by the communicator (who was ending his shift) was friendly and effective. I then was alone for hours to use the Vertex commercial mobile UHF radio for contact with the Ontario Red Cross Chapter and the other active shelters. Radio traffic was light, mostly logistic needs and the numbers of new guests to expect at the shelter. No guest names were transmitted over radio. The Amateur Radio Operators at other locations on this net seemed experienced with emergency communications, and they used pro words, pro signs and the phonetic alphabet effectively.

Food, healthy drinks (no sodas), and warm fast foods were readily available. Eventually my replacement arrived at 0620 hours, and then it was my turn to do the briefing. I made notes of all radio traffic to and from my location. The shelter manager was new to this task and asked for information and advice from me. She sent and received some messages to Control during the night. Curiously, a PCS telephone was delivered to her at the shelter. I became her instructor on how to unlock and use it.

I found it rewarding to speak with area residents who were forced from comfortable homes by the fire. Some were worried about the fate of homes; others were weary from long hours and little sleep for days after an emergency evacuation order was given.

After a nice Original Grand Slam breakfast was delivered from Denny's Restaurant I left for home at 0815 hours.

If you work an emergency operation like this, remember to record the mileage you drive. You can use this record later to document an income tax

(Please see Fire Communications duty on page 6)

The Active Sun

With material from Paul Harden, NA5N

With all the news lately about solar flares and magnetic solar hurricanes, perhaps we need to take a look at how solar activity affects amateur radio. If peak solar activity is good for propagation, thus the "peak of the solar cycle, then why is this activity is detrimental to HF communications?

The active sun is both good and bad for HF propagation. The good part is that the sun spits out more ionizing radiation during the active sun, making our ionosphere, specifically the E and F layers, more reflective to radio signals below the maximum usable frequency (MUF). That means good skip propagation on the higher bands. During the quiet sun, 10m and 15m are above the MUF, and signals pass through the ionosphere out into space somewhere. During a solar maximum, good skip propagation occurs on 30m and above, including 15m and 10m daytime.

An active sun also presents problems for propagation. During an active sun, there are many large solar flares. These flares spit out two main types of energy: the speed of light energy; and a super-sonic shockwave.

The speed of light stuff ionizes our ionosphere at higher than normal levels. At first you would think this is good because it makes the E and F layers more reflective. But it also ionizes the D-layer, causing high absorption to HF signals. Signals must pass through the D-layer twice, going TO the E/F layers, and again coming back to earth. During and shortly after a major flare, this ionizing of the D-layer causes a couple of hours of radio blackout conditions. This is called the **solar storm phase**.

A large flare also produces a large shockwave that pushes mass and particles from the sun out into space. This is called a **coronal mass ejection**, or CME. The shockwave travels around 500-1000 km/sec and thus takes two to three days to travel from the sun out to the orbit of the earth. If the earth happens to be in the trajectory path of the shockwave, the shockwave compresses our geomagnetic field when it hits, producing a **geomagnetic storm**. The storm is produced by the dynamo effect. (The dynamo effect generates large voltages and currents by moving a metal core

through a magnetic field.) In this case, our magnetic field is moving with respect to the earth, generating huge currents in our magnetic field (causing lots of QRM!) and inducing large voltages on electric lines that can cause power failures. This moving magnetic field from the geomagnetic storm also fuels spectacular aurora borealis displays. Geomagnetic storms usually last from a few hours to a day.

A large flare is a two-punch storm. Punch one comes during the flare or solar storm, and punch two comes two or three days later when the shockwave hits the earth and triggers a geomagnetic storm.

After a band black out, would we expect excellent propagation when the "lights came back on"?

Exactly so. Once the extra ionizing radiation from the flare goes away, the D-layer absorption returns to normal, but the E and F layers remain extra reflective for many hours. The D-layer recovers in 30-60 minutes after the flare, while the E and F layers remain dense with free electrons until the normal solar energy goes away at sundown. Conditions will remain fairly good for about two days until the shockwave from the flare hits. In some cases, if the geometry and trajectory are not quite right, the shockwave will miss the earth. In this case we might get a little fringe shock causing active conditions (a little extra noise), but not a geomagnetic storm.

One final thing to remember is that the daily solar flux effects the higher bands (20-10m) and has little effect on 30m and below.

The daily A-index, showing the activity of our magnetic field or a geomagnetic storm, affects the lower bands, primarily 40-160m. It takes a major geomagnetic storm to affect 30 and 20m with high noise.

That's why 30m is such a nice band. It usually does not feel the effects of a solar storm or a geomagnetic storm, and thus has fairly good signals all the time. Of course, if the D-layer is wiped out, the 30m band will be affected as well.

Armed with this primer, find out for yourself. With all the recent solar activity, this is a fine time to scan the different ham bands to observe the solar effects and hear what happens. ♦



From This...

The W6RO antenna engineers examine the parts, demonstrating their excellent organizational skills. They formulate their plan and get to work.

Special Event

Vandenberg AFB. Satellite Amateur Radio Club, W6AB. December 13, 1700Z through December 14, 0500Z. 42nd Anniversary of OSCAR 1 Launch from Vandenberg AFB. 21.300, 14.225, 7.225. Send your QSL and a SASE to Satellite ARC, PO Box 5117, Vandenberg AFB, CA 93437. ♦

(Ham Radio and the Firestorm, continued from page 4)

and 5:30-7:00 PM. Even as traffic opened up for more hours, escorts were required at the time of this publication.

Now that life in the mountain communities is assuming some normalcy, there is much to be discussed. How well did our various public safety agencies prepare for responding to this crisis? How can we do better next time? And for radio amateurs, there should be a great deal of discussion over similar issues. How well did we prepare? How well did we respond? What services should we be able to provide in a major disaster? ♦

NWS/ARRL SKYWARN Recognition Day

From the ARRL Letter, Vol. 22, No. 44

The fifth annual SKYWARN Recognition Day will take place Saturday, December 6, 2003, 0000 UTC to 2400 UTC. During the special event, Amateur Radio operators visit National Weather Service (NWS) offices and contact other operators around the world. The purpose of the event is twofold: to recognize Amateur Radio operators for the vital public service they perform during times of severe weather; and to strengthen the bond between radio amateurs and their local NWS office. The event is cosponsored by the ARRL and the National Weather Service.

In the SKYWARN event of 2002, participants logged nearly 23,000 QSOs during the 24 hour event, and nearly 70 countries were contacted. ♦



(Fire Communications Duty, continued from page 4)

charitable donation deduction.

One problem we had during these wildfires is that not enough hams participated. Were hams unprepared? When classes in emergency/disaster communication are offered locally by ARES/RACES, attend and learn so that you will be prepared for the next emergency or disaster. The FCC gives us liberal frequency assignments so that Amateur Radio operators can rise to the call and challenge by providing emergency/disaster communication. Every one of us should join the effort.

I found my service as an emergency communicator to be a rewarding and satisfying experience. If you were reluctant to volunteer for duty during these wildfires, I hope you will volunteer as a communicator during the next area emergency. ♦

Antenna Party – Big Success

The W6RO antenna party on November 2 was a big success. Our trusty gaggle of Wireless Room Engineers put up three antennas and two rotors. “Easy,” you say? Try unbundling the antenna parts and discovering the assembly instructions are nearly non-existent! Try discovering that the rotor is missing some key parts. Would you be able to fabricate quality parts on the spot using tools and spare pieces from the W6RO parts bin? With seven good hams, with beautiful weather, with a gorgeous view of the City and mountains and clouds, with all the camaraderie that can be had, there was nothing to do other than meet every challenge and make it work.

Pictured to the right is Thomas Woolley, K6BYK, adjusting the 6m antenna on its new mast with rotor. Can you identify the engineers in the photo at the left?

Many thanks and kudos to: Nate Brightman, K6OSC; John Rogers, KF6TTR; Thomas Woolley, K6BYK; Tim Carberry, KG6MZF; Michael Fox, W6MJF; John Klanchink, KG6POB; and Carina Lister, KF6ZYY. ♦



To This!

In just seven fun-filled hours a band of expert antenna engineers, led by John Rogers, KF6TTR, assembled and installed two rotors and three antennas at W6RO.

The BEST Wildfire Information

www.rimoftheworld.net

www.incidentcontrol.com

www.fireupdate.com

EMSA Exercise on Hold

By Joe Provenza, W6UPN

The California Emergency Medical Services Authority and Department of Health Services (EMSA/DHS) cancelled a large part of the statewide exercise scheduled for November 13 because EMSA was still heavily involved in real emergency operations during the wildfires in southern California. Some local hospitals held a drill, but the Los Angeles County emergency drill was put off until January 29. The January drill will be announced on the Thursday night ARES/RACES net and in the January issue of The Oscillator. See the back cover of this issue for details on the nets. ♦

Testing Committee Report

By Tom Gibbons, W9EYB

The ARALB conducted GLAARG Session #2146 on November 15 at CSULB. Tom Gibbons, W9EYB, chairman of the ARALB testing committee, was the VE-in-charge, and Ray Rittenhouse, KF6WZN, was the session VE-in-charge.

There was an unusually small turnout of just two applicants, and they had a 50% pass rate. The ARRL-VEC web site may have listed an incorrect date for the test session, and this might account for the low turnout. We'll carry on and look for more applicants in December. ♦



W6RO, the ARALB Station

The ARALB club station is W6RO, located in the Wireless Room of the Queen Mary. W6RO has lots of fine equipment, and it's a great place to try different rigs. If you haven't operated here, come for a visit. You can become a permanent W6RO Operator if you are a licensed Amateur, and if you are willing to work one four-hour shift per month for one year. To learn more about this opportunity, call Henry Lulli, W6OLZ, at 714-963-2986, or email him at W6OLZ@socal.rr.com. If you already are a W6RO operator and have scheduling questions, call Nate Brightman, K6OSC, at 562-427-5123. If you have questions about equipment in the Wireless Room, please contact John Rogers, KF6TTR, 562-626-1755 (pager w/vm). ♦

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Upcoming Events

December

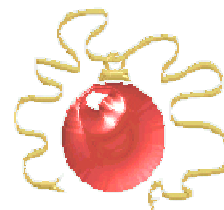
- 5 ARALB General Meeting. 7:00 PM.
- 8 ARALB BOD. ECOC, 7:00 PM.
- 13 Signal Hill Breakfast with Santa.
- 16 LB ARES-RACES-Repeater Associates. Spire's, 6:30 PM.
- 20 ARALB Testing. CSULB, 9:00 AM.
- 27 ARALB Breakfast. Best Place Café, 8:00 AM.

January

- 2 ARALB General Meeting. 7:00 PM.
- 5 ARALB BOD Meeting. ECOC, 7:00 PM.
- 17 ARALB Testing. CSULB, 9:00 AM.
- 20 LB ARES-RACES-Repeater Associates. Spire's, 6:30 PM.
- 24 ARALB Banquet. Am. Red Cross.

February

- 6 ARALB General Meeting. 7:00 PM.
- 9 ARALB BOD. ECOC, 7:00 PM.
- 17 LB ARES/RACES-Repeater Associates. Spire's, 6:30 PM.
- 21 ARALB Testing. CSULB, 9:00 AM.



WWW.ARALB.ORG

Young People's Net

The Young Peoples' Net, led by Robert Dalley, KF6YGY, is for hams 20 years old and under. It meets every Wednesday night from 7:00-8:00 PM on the Catalina 2m repeater (147.900 +, no PL). Third party traffic is always welcome. Hope to hear you on the air!

Join the ARALB for Breakfast!

Best Place Cafe

**2099 Bellflower Blvd.,
 Long Beach**
 8:00 AM, 4th Saturday of each month!

Associated Radio Amateurs of Long Beach

P.O. Box 7493
Long Beach, CA 90807
www.aralb.org

Membership Application

Date _____

Dues are \$20.00 annually (Jan. 1 through Dec. 31), or \$15.00 per year for seniors (62+). Family memberships are an additional \$5.00 per household. You will receive a copy of our monthly newsletter, *The Oscillator*, with your paid membership. Family memberships receive one *Oscillator* per household. Membership badges are available for \$10.00 each. Your first and last name and call sign will be printed on the badge. Badges will be distributed at the meetings.

PLEASE PRINT CLEARLY

Call Sign: _____ License Class: _____ ARES Member: Yes _____ No _____
ARRL Member: Yes _____ No _____

Primary Member: _____

Call Sign: _____ License Class: _____ ARRL Member: Yes _____ No _____

Family Member: _____

Call Sign: _____ License Class: _____ ARRL Member: Yes _____ No _____

Family Member: _____

Call Sign: _____ License Class: _____ ARRL Member: Yes _____ No _____

Family Member: _____

Address: _____

City: _____ State: _____ Zip: _____

Home Phone: (_____) _____ Email Address: _____

The information listed above will be printed on the Club Roster.

Do you want a club email account with yourcall@aralb.org? Yes _____ No _____

Do you want your email address to appear on the club web page? Yes _____ No _____

Would you like to be an operator on the Queen Mary? Yes _____ No _____

Check the Queen Mary web page for more information: <http://www.mpicomputers.com/ham/queen>

Membership annual dues \$20.00

Items that can be purchased at the meeting:

Additional family membership, \$5.00

Club Badges, \$10.00

Club Hats, \$10.00

Large Club Patch, \$5.00

Embroidery order (Your name, call sign, ARALB logo on YOUR shirt or jacket), \$10.00

(ARRL Membership is available on a separate application form. See the Treasurer at any ARALB meeting.)

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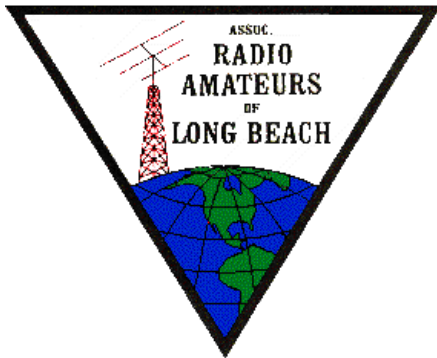
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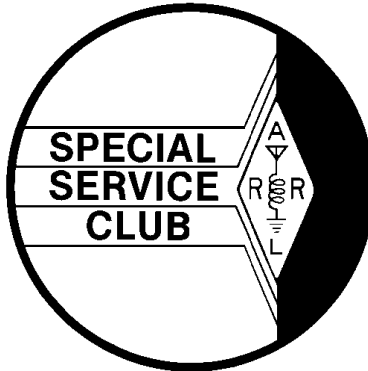
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See the ARALB web site at www.aralb.org!

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Associated Radio Amateurs
of
Long Beach



Important Nets

ARALB Net

Fridays at 7:30PM

145.520 simplex (no PL)

Net Control: Mike Yaworsky, WB6VUB

ARES/RACES Net

Thursdays at 6:30 PM

449.780 -PL 131.8

223.800 -PL 156.7

Thursdays at 6:45 PM

1282.200 - No PL

Thursdays after 6:45 Newline, about 7:10PM

145.520 Simplex

THE ASSOCIATED RADIO AMATEURS OF LONG BEACH, INC.

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Carina Lister
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FIRST CLASS MAIL

The December 5 meeting will be held at the Signal Hill Community Center, 1780 E. Hill Street, Signal Hill, beginning at 7:00 PM. There will be an Open Forum—your chance this year to tell your best ham tale!