The Coastside Communicator

Vol. 55 No. 12 ~ December 2023

WWW.COASTSIDEARC.ORG

President's Column

It's coming to the end of the year and we have just had the Club elections for the upcoming year. We will have a new President in 2024 as Jon N6SJF stepped to lead the club next year. Jon has been our number one contributor to the Club this year - he organized Field Day 2023, our participation at Fog Fest and our annual dinner in November. In addition, he has been a key contributor to getting the repeater back up and running and its ongoing development. Jon also has set up our finances in 2023 and I will transition to Treasurer for 2024 with Paul AI6BB remaining as Vice President and Tom KJ6OGL as Secretary.

Talking about the repeater, Jon NN6U drove Ralph KC6YDH and me up Montara Mountain to remove some of the unused equipment to make way for the new power supply and battery backup. We didn't quite have all the components needed to install the power supply, so that task will have to wait for our next trip. My favorite aspect of the new power supply is that distribution is handled by a West Mountain RIGrunner 4008H.

I'm a great fan of the Anderson Powerpole and all my non-battery equipment is powered through these connectors. The RIGRunner will allow us to easily add new equipment to the repeater. I use Powerpole terminated BioEnno LiFePO4 batteries for my mobile and POTA setups and my shack is powered via a RIGrunner by a LiFePO4 charged by solar panels.

After the power supply is installed, we can install the SCOM 7330 repeater controller and start installing the Motorola XPR8400 radio. My plan is to use the Motorola radio to service the VHF portion of the repeater and transfer the Yaesu DR-2X (currently our VHF repeater) to the UHF side and configure it as a full System Fusion system repeater. That way, we can experiment with the digital on UHF. I have set my Yaesu 991a into Group Mode and KN6PIV and myself own Yaesu FT3D and FT5D HTs so we can track each other on our hikes into the wilderness.

I hope to see you at our annual potluck dinner at the Linda Mar Firehouse on December 13th where we can welcome Jon into his new role.

73, Steve KN6ORM
Club President

CARC November 18, 2023 Meeting Minutes Elections Dinner Meeting

Call to Order
The November 18, 2023, meeting was called to order at 6:50pm by President Steve-KN6ORM, at Nick's Rockaway Restaurant, Rockaway Beach, Pacifica.

Self-introductions
Introductions by members and guests in attendance.

Per President Steve-KN6ORM, the main business of the meeting are tabled until the December 13th meeting

Minutes - Approval of the October and November meeting minutes published in the November and December Coastside Communicator are postponed to the December Meeting.

TREASURER'S REPORT - Tabled

COMMITTEE REPORTS - Tabled
Newsletter – November Newsletter Published and emailed to Paul.
Website – Working. November Newsletter posted.

UNFINISHED BUSINESS
A. Election of Officers for 2024. Voting approval for: President, V-President, Secretary & Treasurer

On November 1, 2023, the Executive Board met online in Google Meet to discuss the elections. There being no Term Limits in the Constitution & Bylaws, and no limit on number of offices held, Jon stated that he would accept the nomination of President, but that he would have to give up the treasurer position and would not be able to attend all meetings due to work scheduling. Steve stated he would take on the responsibilities of Treasurer. Nominations would have to be re-opened and Steve nominated for Treasurer and accepted, then closed. Elections could then be held.

Motion to open Nominations: By: Jon-N6SJF, seconded by: Jillian-KN6PIV
Motion to nominate Steve-KN6ORM as Treasurer: By: Paul-AI6BB, seconded by: Ralph-KC6YDH
As there are no additional nominations, Motion to close Nominations: By: Ron-WB9EGG, seconded by: Paul-AI6BB

As the Elections are uncontested, no ballots needed to be sent out and the election shall be done by acclamation of all present.

Motion to Open Elections: By: Barbara-K6IIP, seconded by: Jon-N6SJF
Motion to accept Jon-N6SJF as President: By: Tom-KJ6OGL, seconded by: Paul-AI6BB
Motion to accept Paul-AI6BB as Vice-President: By: Ralph-KC6YDH, seconded by: Frank-N6FG
Motion to accept Tom-KJ6OGL as Secretary: By: Jon-N6SJF, seconded by: Ralph-KC6YDH
Motion to accept Steve-KN6ORM as Treasurer: By: Jon-N6SJF, seconded by: Barbara-K6IIP
All in favor for acceptance of the above officers: Ayes by all in present.
Motion to Close Elections: By: Frank-N6FG, seconded by: Jillian-KN6PIV
Elections Closed:

NEW BUSINESS - Tabled

Adjournment
Motion made by Jon-N6SJF and seconded by Paul-AI6BB to adjourn the meeting at 6:56pm. Meeting adjourned.

Present at the Meeting
Officers: President: Steve-KN6ORM, Vice-President: Paul-AI6BB, Secretary: Tom-KJ6OGL, Treasurer: Jon-N6SJF

Members: Georgia-KE6KRT, Ralph-KC6YDH, FrankN6FG, Barbara-K6IIP, Gary-KI6HIG, Jillian-KN6PIV, Ron-WB9EGG

Visitors: Julie Lancelle, Judie Oliver, Wendell Purser (Ron's wife)

Submitted by: Tom-KJ6OGL, Secretary

After the meeting was adjourned, discussion during dinner was about the repeater(s).

The old Motorola repeater was powered off and a new (to us) Yaesu DX-2R repeater, purchased by Casey-N6TZE, has been installed. Thanks to the work of Steve-KN6ORM, Jon-N6SJF, Ralph-KC6YDH, John-NN6U, WA6TOW is back on the air. Transmit/Receive is fairly good. Further work will be done as weather permits. Steve continues to work on the new Motorola replacement repeaters project that Roy Brixen-KE6MNJ started building. We are working on a backup power system based on a West Mountain Radio PWRgate PG40S.

Communication received on 11/21/2023 via info@coastside.org: From: Susan Abelman <sabelman@intelimind.org> , Hi there, I wanted to reach out to you because the Coastside Amateur Radio Club site has been super helpful for my son Troy and his buddy Chris! They are boy scouts currently in the process of earning their Radio badge… and they thought the Links page was especially useful: https://coastsidearc.org/www.coastsidearc.org/Links.php

The boys are really enjoying scouts together and are really taking an interest in learning about radio. They have been enjoying it so much that they actually spend a lot of time at home wanting to learn more! It's super cool to see them have so much excitement about this. :) Troy's Grandpa actually took an interest in amateur radio many years ago so they've been spending a lot of time with him.. and of course, as an invested parent, I want to be as supportive as I can with my son with everything he wants to do and learn.

Together, we wanted to send you this thank you note! So thank you so much for all of your help. The boys wanted to share a resource about morse code with you to express their excitement and gratitude: https://www.uprinting.com/morse-code-signals-and-telecommunications.html

Their leader of course highly encourages the boys to take the extra time at home to develop skills and passions, so it would be awesome if you could add the site to the Links page so the boys could show their leader at their next meeting.

It would be great if you could get back to me within the next week or so. Their next meeting is the Monday after Thanksgiving. Hope to hear from you soon!

Susan, Troy, and Chris

NEWS

ARRL Hails FCC Action to Remove Symbol Rate Restrictions

11/13/2023

ARRL reports that earlier today, 11/13/2023, the FCC Commissioners unanimously voted to amend the Amateur Radio Service rules to replace the baud rate limit on the Amateur HF bands with a 2.8 kHz bandwidth limit to permit greater flexibility in data communications.

"The Federal Communications Commission today adopted new rules to incentivize innovation and experimentation in the amateur radio bands by removing outdated restrictions and providing licensees with the flexibility to use modern digital emissions," announced FCC.

"Specifically, we remove limitations on the symbol rate (also known as baud rate) -- the rate at which the carrier waveform amplitude, frequency, and/or phase is varied to transmit information -- applicable to data emissions in certain amateur bands," concluded the FCC Report and Order and Further Notice of Proposed Rulemaking, adopted November 13, 2023. "The amateur radio community can play a vital role in emergency response communications, but is often unnecessarily hindered by the baud rate limitations in the rules."

Consistent with ARRL's request, the amended rules will replace the current HF restrictions with a 2.8 kHz bandwidth limit. "We agree with ARRL that a 2.8 kilohertz bandwidth limitation will allow for additional emissions currently prohibited under the baud rate limitations while providing sufficient protections in the shared RTTY/data subbands," concluded the FCC Report and Order.

ARRL President Rick Roderick, K5UR, hailed the FCC's action to remove the symbol rate restrictions. Roderick stated that "this action will measurably facilitate the public service communications that amateurs step up to provide, especially at times of natural disasters and other emergencies such as during the hurricane season. Digital technology continues to evolve, and removing the outmoded data restrictions restores the incentive for radio amateurs to continue to experiment and develop more spectrum-efficient protocols and methods while the 2.8 kHz bandwidth limit will help protect the shared nature of our bands. We thank Congresswoman [Debbie] Lesko (AZ-08) for her efforts on behalf of all Amateurs to get these restrictions removed."

In a Further Notice of Proposed Rulemaking (FNPRM), the FCC proposes to eliminate similar restrictions where they apply in other bands. "We propose to remove the baud rate limitation in the 2200 meter band and 630 meter band … and in the very high frequency (VHF) bands and the ultra-high frequency (UHF) bands. Additionally, we seek comment on the appropriate bandwidth limitation for the 2200 meter band, the 630 meter band, and the VHF/UHF bands." ARRL has previously expressed its support for eliminating the symbol rate limits in favor of bandwidth limits where they apply on the VHF and UHF bands but suggested that the bandwidth limits themselves be reviewed in light of today's technology and tomorrow's possibilities. Similarly, when eliminating the baud limits on the 2200 and 630-meter bands, consideration should be given to what, if any, bandwidth limits are appropriate.

The FCC will announce a period for public comment on the additional proposed changes based upon publication of the FNPRM in the Federal Register.

ARISS to Celebrate 40th Anniversary of Amateur Radio and Human Spaceflight

Astronaut Owen Garriott, amateur radio callsign W5LFL, pioneered amateur radio communication from space on his STS-9 Space Shuttle Columbia flight, conducted November 28 to December 8, 1983. In his free time, during the STS-9 mission, Garriott became the first ever person from space to communicate with amateur radio operators on the ground. He was also the first to be heard directly from space by the public using simple FM receivers and scanners.

Dr. Garriott's mission, 40 years ago, transformed astronaut communications from space forever, allowing amateur radio operators (hams) and the public to communicate with people in space. Prior to this, only a few mission controllers and heads of state could talk to an astronaut in space. Garriott represents the first of many spacefarers that employed amateur radio on the Space Shuttle, Mir space station and the International Space Station for public engagement, family connections and educational outreach. To date, well over a million people on Earth have participated directly in these astronaut radio contact engagements. The educational youth contacts, coupled with pre-contact education initiatives, have inspired, engaged and educated youth around the world and encouraged them to study and pursue careers in Science, Technology, Engineering, and Math (STEM).

Great California ShakeOut Drill Reported a Success

11/03/2023

Editor's Note:

Tuolumne County Amateur Radio and Electronics Society (TCARES) members Rich Combs, KN6HSR; Ned Sudduth, K6NED, and Toni Sudduth, K6TNI reported that the October 2023 Great California ShakeOut exercise was an "outstanding" success. Here is their story as reported to ARRL News:

"This is a drill. Drop! Cover! Hold on!" was the mantra for the Great ShakeOut exercise on October 19, 2023, at 10:19 AM in Tuolumne County, California.

The Great ShakeOut is an annual international event that promotes awareness of how to prepare for and react to an earthquake. For the past 2 years, TCARES has used this event as an opportunity to test our ability to provide backup communication for the county public safety agencies. Considering that over the past year there have been two instances where primary communication systems went down -- one due to a fire, and the other due to a damaged T1 fiber optic cable -- this was a timely opportunity. It is a great chance to partner with first responder agencies, build trust, and develop awareness of mutual capabilities and needs.

There was an amateur radio operator stationed at the Tuolumne County Emergency Operations Center, which was operated by the Office of Emergency Services. After a preparatory simulated 5.0-magnitude San Francisco earthquake preamble at 10:19 AM, Ned Sudduth, K6NED, began taking check-ins from amateurs throughout the county with his wife Toni, K6TNI, who logged the reports. County Geographic Information System (GIS) staff loaded the real time of those hams on a map that was displayed on a TV. Tuolumne County is fortunate to have a backbone of four linked, 2-meter repeaters that cover almost the entire county.

There were 38 amateur radio operators providing reports on conditions throughout the county. In addition, we had four Neighborhood Radio Watch (NRW) communities using Family Radio Service radios, General Mobile Radio Service (GMRS) radios, and a few GMRS repeaters to add an additional 28 reports. Each NRW community has an embedded ham who monitors the NRW traffic, and then provides a summary to the Incident Commander during their check-in.

Considering it was a Thursday morning, we felt this was a great response. Participation increased from last year's check-ins. Although Tuolumne is a large county by area, it has a population of just more than 55,000, and it is primarily rural and mountainous in character. Nonetheless, the combination of NRW communities with embedded ham radio operators and a robust repeater system has shown that even when the power and internet are down, first responder operations can continue to operate, and communities can immediately communicate and mobilize to help themselves.

In Brief….

Via HACKADAY: Flipped Transformer Powers Budget-Friendly Vacuum Tube Amp

If you've ever wondered why something like a radio or a TV could command a hefty fraction of a family's yearly income back in the day, a likely culprit is the collection of power transformers needed to run all those hungry, hungry tubes. Now fast-forward a half-century or more, and affordable, good-quality power transformers are still a problem, and often where modern retro projects go to die. Luckily, [Terry] at D-Lab Electronics has a few suggestions on budget-friendly transformers, and even shows off a nice three-tube audio amp using them.

The reason transformers were and still are expensive has a lot to do with materials. To build a transformer with enough oomph to run everything takes a lot of iron and copper, the latter of which is notoriously expensive these days. There's also the problem of market demand; with most modern electronics favoring switched-mode power supplies, there's just not a huge market for these big lunkers anymore, making for a supply and demand equation that's not in the hobbyist's favor.

Rather than shelling out $70 or more for something like a Hammond 269EX, [Terry]'s suggestion is to modify an isolation transformer, specifically the Triad N-68X. The transformer has a primary designed for either 120 or 230 volts, and a secondary that delivers 115 volts. Turn that around, though, and you can get 230 volts out from the typical North American mains supply — good enough for the plate supply on the little amp shown. That leaves the problem of powering the heaters for the tubes, which is usually the job of a second 6- or 12-volt winding on a power transformer. Luckily, the surplus market has a lot of little 6.3-volt transformers available on the cheap, so that shouldn't be a problem.

The First Worked All States Certificate Awarded for the 33-Centimeter band

On November 4, 2023, Al Ward's, W5LUA, 38-year quest to contact all 50 states on the 33-centimeter band ended when he received the first-ever Worked All States (WAS) certificate for (902 - 928 MHz). Ward started collecting states on the band shortly after it was opened in 1985.

"I am extremely grateful to Peter Van Horne, KA6U, for his EME [Earth-moon-Earth] efforts. I was able to work Wisconsin for my last state [on] the 33-centimeter band on October 21. At the end of September, I was sitting at 32 states confirmed with cards and/or the Logbook of The World (LoTW), when Van Horne went on a 25-state expedition providing my last 18 states," said Ward. In recent expeditions, Brian McCarthy, NX9O, and Jason Baack, N1AV, also provided several states that were needed.

Ward's station consists of a 5-meter dish with 400 W of power obtained from two 300 W Motorola amplifiers in parallel. His feed is a dual polarity patch feed.

Full article: http://www.arrl.org/news

The K7RA Solar Update

11/27/2023

Because of the Thanksgiving holiday, this bulletin preview is moved back a day and does not have the full Thursday-through-Wednesday data; that will appear in Friday's bulletin.

Last weekend, conditions during the ARRL November Phone Sweepstakes were great because geomagnetic activity was so low. Planetary A index was 3 and 4, and even high-latitude indicators were low. Alaska's college A index was 2 and 1.

Solar activity has been up for the past few days. Starting on November 17, a new sunspot group appeared every day, and on Monday, November 20, six new sunspot groups emerged.

Sunspot numbers on Monday and Tuesday were 127 and 138, which is the first time the daily sunspot number has been more than 100 since November 3.

Predicted solar flux is 172, 175, and 177 on November 22 - 24; 180 on November 25 - 27; 185 on November 28 - 29; 155 on November 30 - December 1; 150, 152, 148, and 145 on December 2 - 5; 140 on December 6 - 8; 145 on December 9 - 10, and 140 on December 11 - 17.

Predicted planetary A index is 14, 12, and 8 on November 22 - 24; 5 on November 25 - 26; 10 and 8 on November 27 - 28; 5 on November 29 - December 3; 12, 16, 12, and 10 on December 4 - 7; 5 on December 8 - 11; 10 and 8 on December 12 - 13, and 5 on December 14 - 17.

A weekly, full report is posted on ARRL News.

Coming Events

The **Silicon Valley VE** group is holding online amateur radio exam sessions on the first and third Saturday morning of every month. More information can be found at https://www.svve.org, or by emailing Morris Jones, AD6ZH at ad6zh.mj@gmail.com.

Pacifica CERT (Community Emergency Response Team) For training and information

https://pacificacacert.samariteam.com/RequestInfo.aspx

email: mailto:cert@pacificapolice.org

Arv's - WA6UUT (SK) Wednesday Ham Radio Luncheon

Our 17th Year! >> Since May 2, 2007 <<

Black Bear Diner - 415 East El Camino Real, Sunnyvale, California, (Just "North" of South Fair Oaks Avenue on El Camino Real) - 11:30 AM ~ 3:00 PM

Website: www.blackbeardiner.com. Every Wednesday – Not a Club, Closed Group or Clique: Amateur Radio Operators & Friendly People Are Encouraged To Attend! Call in on the N6NFI Repeater – 145.230MHz, PL 100Hz

QCWA NorCal Chapter 11 - Lunch at Harry's Hofbrau 3rd Wednesday of every month, 1909 El Camino Real, Redwood City, CA. No host. 11:00AM to 1:00PM (approx.).

North County Fire Authority CERT Training – For information: https://northcountyfire.org/home/cert-classes/

Winter Field Day is January 23-24, 2024. According to its website: "Winter Field Day (WFD) is a communications exercise. WFD is held on the last full weekend in January. WFD can be worked from the comfort of your home or in a remote location. You can participate by yourself or get your friends, family, or whole club involved. Winter Field Day is open to participants worldwide. Amateur radio operators may use frequencies on the HF, VHF, or UHF bands and are free to use any mode that can faithfully transmit the required exchange intact. Similar to the ARRL Field Day, bonus points are earned in several ways, including using non-commercial power sources, operating from remote locations, satellite contacts, and more."

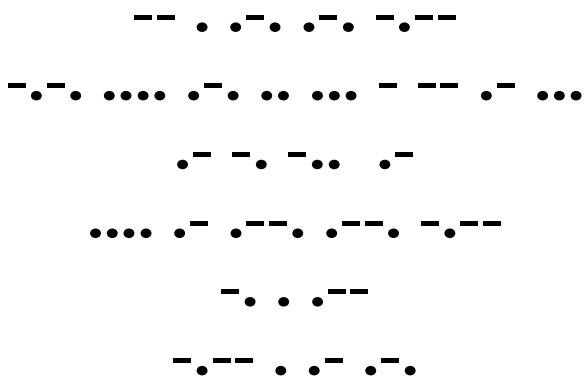
Sell / Trade / ???

If you have amateur radio item(s) you'd like to sell/trade/or?, send an email to: kj6ogl@arrl.net

Members Report

If you have local amateur radio news or related you'd like to share, send an email to: kj6ogl@arrl.net.

NET Control Operators Wanted. If you'd like to expand your skills in Emergency Communications, try being a Net Control Operator for the Daly City Net or the CARC Wednesday Night Check-In Net on WA6TOW, send an email to: kj6ogl@arrl.net.



December Puzzler

Paul Atkins, AI6BB

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Wordlist

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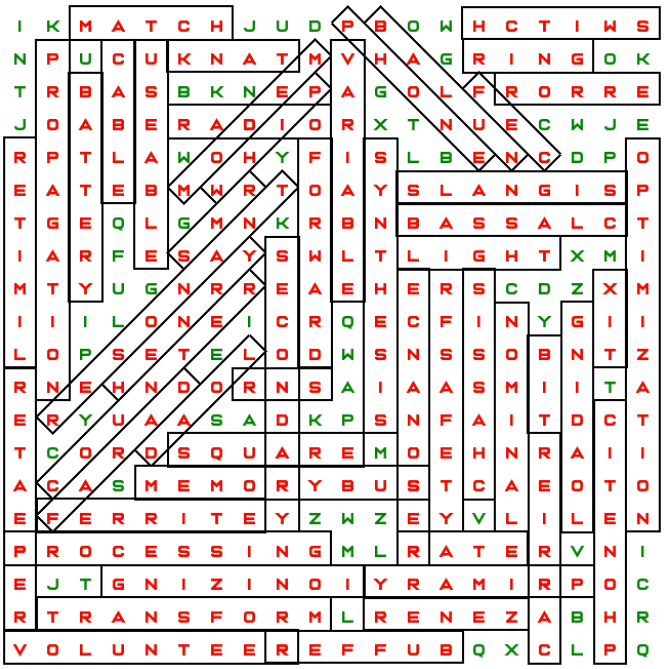
Answer to November's Puzzler



CARC Meeting/Event Schedule

Date	Event
Jan 11th	Firehouse Meeting - 2023 Agenda Planning
Feb 8th	Firehouse Meeting - 2023 Agenda Final
Mar 8th	Firehouse Meeting
Mar 12th	Daylight Savings Time Starts
Apr 12th	Pizza Meeting – Round Table Pizza
May 10th	Firehouse Meeting - Field Day Planning
Jun 14th	Firehouse Meeting - Final Field Day Planning – Flag Day
Jun 24th-25th	Field Day – Oceana HS, Pacifica
Jul 12th	Firehouse Meeting
Aug 9th	Firehouse Meeting
Sep 13th	Firehouse Meeting – Fog Fest Planning
Sep 23rd-24th	Pacific Coast Fog Fest - Pacifica
Oct 11th	Firehouse Meeting – 2024 Nomination of Officers
Nov 5th	Daylight Savings Time Ends
Nov 18th	Dinner Meeting & Election of Officers – Nick's at Rockaway
Dec 13th	Firehouse Meeting - Holiday Potluck

All meetings are held at 7:30pm, at Pacifica Fire Station #72 (Linda Mar), 1100 Linda Mar Boulevard, Pacifica, CA 94044, unless otherwise stated. If feasible, meetings will have a Zoom component.

www.smcready.org
cert@pacificapolice.org

Coastside Amateur Radio Club

The Coastside Amateur Radio Club (CARC) is affiliated with ARRL and meets the second Wednesday of each month at 19:30 hrs. in the Linda Mar Fire Station Community Room, on Linda Mar Blvd. in Pacifica. Visitors are welcome.

The CARC has been organized since 1959, serving Bay Area amateurs, and providing emergency communications services to the City of Pacifica. Membership dues are $20.00 per year for the administration of the Club and the publication of the Communicator.

CARC supports two repeaters, WA6TOW/R (VHF and UHF); a Packet Digipeater, WA6TOW-1; and an APRS Digipeater, WA6TOW-2. Users of the machines provide repeater support and maintenance strictly through donations.

VHF: 146.925 MHz –offset 600 KHz PL 114.8
UHF: 441.075 MHz +offset 5 MHz PL 114.8

PL Tone: 114.8 Hz is used on both repeaters, as needed, for noise suppression.

Packet Digipeater: 145.050 MHz, Packet Node: PAC
APRS Digipeater: 144.390 MHz.

CARC/Pacifica OES VHF Simplex: 146.535 MHz
PL Tone: 114.8 Hz is used, as needed, for noise suppression

VHF Nets

The club sponsors a VHF net each Wednesday, with the exception of meeting nights, at 20:00 hrs. for membership check-ins, notices, and QST's. Note: The WA6TOW repeater on 441.075 MHz may be used as an alternate if the WA6TOW VHF repeater is down.

HF Net

The club sponsors a HF rag chew net on 3.852 MHz, or the first clear frequency up/dn, on Saturday at 09:00 hrs. with an alternate frequency of 7.228 MHz.

◄►

64 years of Service

54 years Affiliation

COASTSIDE NETS

Monday

7:00 PM on WA6TOW
146.925 MHz, PL 114.8
Pacifica CERT Net

Tuesday

7:30 PM on WA6TOW
146.925 MHZ, PL 114.8
Daly City Net

8:00 PM on WA6TOW 146.925 MHZ, PL 114.8 and KC6ULT 146.865 MHz, PL 114.8 simultaneously, but not linked.
San Mateo County ACS Net

Wednesday

8:00 PM on WA6TOW
146.925 MHz, PL 114.8
Coastside Amateur Radio Club Wednesday Night Check-in.

Saturday

9:00 AM on 3.852 MHz, or the first clear frequency up/dn.
(alt freq of 7.228 MHz.)
Coastside Saturday Morning Group.

10:00 AM on WA6TOW
146.925 MHZ, PL 114.8
QCWA Ch. 11 NorCal. Net

Sunday:

7:00-7:45 AM on WA6TOW
146.925 MHz, PL 114.8
Knights of the Megahertz Net

Note: All 2m repeater traffic is recorded and may be replayed at audiostickerburr.net.

CLUB OFFICERS				
Office	**Name**	**Call**	**Phone**	**E-Mail Address**
President	Steve Austin	KN6ORM	(415) 420-1199	kn6orm@gmail.com
Vice President	Paul Atkins	AI6BB	(415) 810-9152	aitbb@arrl.net
Secretary	Tom Oliver	KJ6OGL	(650) 488-0704	toliver0557@gmail.com
Treasurer	Jon Lancelle	N6SJF	(650) 270-5823	n6sjf@knosys.com
CLUB STAFF				
Control Officer	Steve Austin	KN6ORM	(415) 420-1199	kn6orm@gmail.com
Emergency Services				
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Membership	Jon Lancelle	N6SJF	(650) 270-5823	n6sjf@knosys.com
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Newsletter Publisher	Paul Atkins	AI6BB	(415) 810-9152	ai6bb@arrl.net
Station Technician	Michael Herbert	WB6JKV	(650) 355-6541	wb6jkv@pacbell.net
Trustee of Club Call	Steve Austin	KN6ORM	(415) 420-1199	kn6orm@gmail.com
Website	Paul Atkins	AI6BB	(415) 810-9152	ai6bb@arrl.net

MEETING NOTICE:

DECEMBER 13, 2023 7:30 PM (FIREHOUSE & ZOOM)
WATCH FOR INVITATION VIA E-MAIL OR CONTACT CARC_INFO@COASTSIDEARC.ORG TO BE ADDED

COASTSIDE COMMUNICATOR
EDITOR
P.O. BOX 1106-6106
PACIFICA, CA 94044

FIRST CLASS

TO: