

THE COASTSIDE COMMUNICATOR

VOL. 55

NO. 4 APRIL 2023

WWW.COASTSIDEARC.ORG

PRESIDENT'S COLUMN

We have just had another month of "atmospheric river" storms - great for the California drought, but not helpful for maintenance on the repeater. During a break in the weather a few days ago I hiked up the North Peak Access Road to see what condition it was in. I didn't quite get to the top, but the road was in pretty good condition. However, the road was closed to motor vehicles, so we will have to bide our time until we can go up there to fix up the repeater. It's limping along despite being inoperative for a few days while the power was out on the hill, but it desperately needs some TLC.

There is good news about the Electronics Flea Market. It has found a new home at West Valley College in Saratoga and the next event will be on April 16th from 6am until noon. You can find out the details at <u>https://www.electronicsfleamarket.com/</u>

Don't forget that Wednesday, April 12th is our Pizza night at the Linda Mar Round Table. The meeting proper starts at 7:30pm, but it's best to arrive earlier around 7pm to order your food before the meeting starts.

73, Steve KN6ORM Club President



April 12, 2023 CARC Meeting Round Table Pizza 1285 Linda Mar Shopping Center, Pacifica Order your pizza by 7:00pm, so we can hold the meeting at 7:30pm

CARC MARCH 08, 2023 MEETING MINUTES

Call to Order

The March 08, 2023 meeting was called to order at 7:35pm by President Steve Austin-KN6ORM, at the Linda Mar Fire Station, on Linda Mar Blvd., Pacifica. Attempting to include participants via Zoom.

Self-introductions

Introductions by members in attendance.

Minutes

Motion made by Jon-N6SJF and seconded by Gary-KI6HIG to approve the February minutes as published in the March Coastside Communicator. Motion passed by unanimous vote of the membership present.

TREASURER'S REPORT

The funds provided by the Treasurer as of February 28, 2023 are:

General Fund	\$ 4,352.23
Repeater Fund	\$ 2,362.00
APRS/Digipeater	\$ 1,496.00
EOC/Public Service	\$ 15,730.00
Grand Total	\$ 23,940.23

Membership – No report

Bills needing approval – No report

Correspondence - No report

COMMITTEE REPORTS

Current Repeater

1. Status of current WA6TOW repeater: Repeater is having issues right now. Not transmitting or receiving well. Without making a trip up the hill, we don't know what the issue is. Could be the antennas or the repeater is having issues.

2. APRS – Working.

3. Emergency Services – No report

Replacement Repeater

Update on Replacement Repeater:

1. Walt-KG6YDH has found a source for the cables for the replacement repeater and will purchase.

2. There was a question as to why Casey needs a programming cable for the temporary repeater: To update the firmware. He has the repeater working in a test environment using dummy loads for the cavity filters. Again waiting for the weather to clear before going to site including the weather event coming in the next few days.

3. Gary had an update on batteries. Originally Roy-KE6MNJ built a power supply with the intent to run the new repeater run on batterie for 168 hours, in case of a power outage. We never know when PG&E would be able to return power to the hill. It was determined that there isn't enough physical space to install the required number of batteries to run the repeater for that amount of time, so it was reduced to 96 hours operation time. There were 2 batteries purchased, but the condition of them at this time is unknown.

NEWSLETTER – Published, emailed to Paul for upload to website

WEBSITE – Newsletter on website for viewing/downloading. Jon0N6SJF emailed link to members for downloading. Paul-AI6BB and Jon-N6SJF to work together on initiating PayPal. Jon said that it would be working for when next year's dues come due. Steve-KN6ORM said he hoped that when we get it up, we could send an email to those people who've not paid dues yet.

UNFINISHED BUSINESS

A. 15-meter beam antenna – Waiting for weather to clear to work on the antenna.

B. 2023 CARC Schedule of Activities: Steve to check the schedule for the USS Hornet and the Radio Museum and set possible date for Club visit.

C. Field Day reservations at Ocean HS – Jon-N6SJF has submitted request. The school is waiting for a copy of the Club's insurance. Jon is requesting to change the effective date of the Club Insurance from June to an earlier date (March/April?) as this would make it easier to submit for the insurance for Field Day. It would be nice to have the insurance paid off in advance of any applications. Motion made by Paul-AI6BB and seconded by Gary-KI6HIG for Jon to move forward on updating the insurance renewal date. Motion passed by unanimous vote of the membership present.

D. Round Table Pizza reservations. April meeting at Round Table. Steve-KN6ORM to contact Dave-KF6TWW to see if reservations have been made.

E. Speakers giving presentations via Zoom – Look further into later in the year.

F. Field Day Presentation to Oceana HS Administrators – Invite students to Field Day. Possibly do a presentation to the student body next year. Need to get approval from school administrators to be able to hold an assembly.

NEW BUSINESS

A. Steve asked if there was anything needed to be updated as far as the license goes. WA6TOW license expires in 2028. UPDATE: 03/09/23, Tom-KJ6OGL checked the FCC ULS system. Last license renewal was 20/05/2017.

B. Action item for Jon-N6SJF. He is going to submit FTB form 199n for tax year 2021 & 2022. This should bring our tax status up-to-date.

C. The next meeting will be on April 12th at Round Table Pizza in the Linda Mar Shopping Center. Be there on/or before 7pm to order your pizza, so we can start the meeting at 7:30pm.

Adjournment

Motion made by Jon-N6SJF and seconded by Gary-KI6HIG to adjourn the meeting at 8:18pm. Meeting adjourned.

Present at the Meeting

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

Members: Ralph-KC6YDH, Frank-N6FG, Gary-KI6HIG, Jillian-KN6PIV, Dennis-KN6QER

Visitors: Julie Lancelle (Jon's wife)

Submitted by: Tom-KJ6OGL, Secretary

NEWS

Schools Set to Talk with Astronauts via Amateur Radio



Amateur Radio on the International Space Station (ARISS) has announced that several schools are planning to communicate with orbiting astronauts in the coming weeks.

Lana'i High & Elementary School in Lana'i City, Hawaii, will attempt the contact between March 20 and 24, 2023. Students attending the high school already study amateur radio and the research being done on the ISS, among other scientific pursuits.

Stone Magnet Middle School in Melbourne, Florida, will make their contact between March 27 and April 1, 2023. In their application, Stone Magnet wrote that they work to inspire students to develop interest in science, technology, engineering, arts, and mathematics (STEAM) careers. The school has a special program for science research, and students from that program place well in district and statewide science fairs each year.

ARISS is a cooperative venture of international amateur radio societies and the space agencies that support the ISS. In the US, participating organizations include NASA's Space Communications and Navigation program (SCaN), the ISS National Lab - Space Station Explorers, <u>ARRL The National Association for Amateur Radio</u>®, and <u>AMSAT</u>.

ARISS is presently <u>seeking contact proposals</u> for the next round of school selections.

AMSAT Recruiting Engineering Volunteers

AMSAT is looking for an electrical engineer with RF experience to join its FOX-PLUS team. The team will be

a collaboration of up to 10 electrical, mechanical, software, and systems engineer volunteers.



There will also be an opportunity to design and build the RF communications subsystems for a series of low-Earth orbit 1U - 3U CubeSats to support AMSAT's

educational and engineering objectives.

Candidates should have working knowledge of analog and digital communications protocols (e.g., FM, PSK, and FSK) to provide digitally synthesized audio for FM modulated VHF/UHF/SHF voice and telemetry channels. Development opportunities can begin with modification of previous FOX designs and/or with an original design.

Mechanical engineers are also needed to join AMSAT's FOX and GOLF CubeSat teams. There will be a collaboration with an all-volunteer team of up to 12 electrical, mechanical, software, and systems engineers. The positions entail an opportunity to use structural design and analysis skills to develop a series of low-Earth orbit and highly elliptical orbit 1U - 3U CubeSats.

Contributions may include:

- The development of the space frame and deployable solar panel subsystem
- The analysis of the thermal characteristics of the CubeSat and the design of the thermal management system
- Preparation and oversight of the environmental testing procedure
- Management of documentation of the CubeSat's adherence to the launch provider's and space vehicle owner's specifications

AMSAT volunteers typically spend 5 hours per week on their projects and attend a weekly meeting online. An amateur radio license and CubeSat experience are helpful, but not necessary. US citizenship or proof of permanent residency is required.

Interested persons should send an email with their resume/curriculum vitae to volunteer@amsat.org.

Radio Merit Badge Sees Biggest Gain in Scouting

According to a *Scouting* magazine study of Merit Badges earned in 2022, Radio had the biggest jump.

It is now the 81st most popular Merit Badge, up from being 98th in 2021. Trailing just behind it on the biggest gains list is the Electronics Merit Badge, which jumped 15 spots, from 80th to 65th. To earn the rank of Eagle Scout, members must earn 21 badges, 14 of which are standard. The Scout gets to choose the remaining badges based on personal interests.

Many Scouts take part in Jamboree on the Air, which is being held October 20 - 23, 2023.

Amateur Radio Digital Communications (ARDC) has released its 2022 Annual Report detailing grants made for amateur radio projects. In 2022 overall, ARDC approved nearly \$6.7 million in grants, and distributed nearly \$7.7 million. An example of a standout project is the one proposed by Bay Area Mesh (BAM). BAM's goal is "to install a resilient, high-speed, wireless network throughout San Francisco and the greater Bay Area." The network would be used by responders, volunteers, and served agencies during disasters, emergencies, and large community events. ARDC is a private foundation that exists to support amateur radio and digital communication science and technology.

Amateur Radio Included in FEMA Guide for National Emergency Preparedness

03/22/2023

The Federal Emergency Management Agency (FEMA) has released a final version (March 2023) of the National Incident Management System (NIMS) Information and Communications Technology (ICT) Functional Guidance. The guidance, which provides a framework for communications resources within incident management, officially includes support from amateur radio operators. The expanded Communications Unit (COMU) structure now includes the Auxiliary Communicator (AUXC) role, which covers personnel from services that provide communications support to emergency management, public safety, and other government agencies. This includes amateur radio. NIMS guides government, non-governmental organizations, and the private sector to work together to prepare for, respond to, and recover from disasters and other emergencies. "This is a major step in the recognition of the need and usefulness of amateur radio and other communications services in our national preparedness," said Josh Johnston, KE5MHV, Director of Emergency Management for ARRL. "It also gives official guidance to pave the way for future training and education of volunteers in ARRL's Amateur Radio Emergency Service® (ARES®)," Johnston added.

The NIMS ICT guide (PDF) is available at <u>https://www.fema.gov/sites/default/files/documen</u> ts/fema_ict-functional-guidance.pdf.



The K7RA Solar Update ~ 3/24/2023

Sunspot numbers were lower again this week, with the average declining from 143.6 two weeks ago to 118.7 last

week and now 68 this week. Average daily solar flux sank 8 points from 153.6 last week to 145.6. Six new sunspot groups emerged over the week, one on March 17, another March 18, three more on March 19, one more on March 21 and another on March 22.

Predicted solar flux is 150, 145 and 145 on March 24-26, 150 on March 27-28, 145 and 150 on March 29-30, 138 on March 31 through April 1, then 136, 136 and 134 on April 2-4, 132 on April 5-7, 130 on April 8-9, then 132, 135, 138, and 140 on April 10-13, 142 on April 14-15, 143 on April 16, 140 on April 17-18, 142 on April 19-21, and 144 on April 22, 146 on April 23-24, 142 and 140 on April 25-26, 138 on April 27-28, and 136 on April 29-30.

Predicted planetary A index is 35, 30, 20, 15 and 10 on March 24-28, 8 on March 29-30, then 18, 12, 12, 10 and 8 on March 31 through April 5, 5 on April 6-9, then 15, 12, 8 and 5 on April 10-13, 8 on April 14-15, then 12, 10, 5 and 5 on April 16-19, then geomagnetic unrest returns with 10, 36, 20, 10, 8 and 5 April 20-25, then 20, 18, 12, 12 and 10 on April 26-30.

On Thursday, Spaceweather.com reported, "The forecast did not call for this. During the early hours of March 23rd, a crack opened in Earth's magnetic field, and stayed open for more than 8 hours. Solar wind poured through the gap to fuel a strong G3-class geomagnetic storm."

On Thursday it showed estimated planetary K index at 7, then dipping, and at 2100 UTC above 7. I noticed some very odd propagation. At 1900 UTC I called CQ on 10 meter FT8, and pskreporter.info showed I was only being heard in a small area in east Texas. Stations were concentrated between 1739 and 1892 miles in an area between Houston, San Antonio, Killeen and Nacogdoches. That was it! Heard nowhere else. I was running low power, using a simple end-fed one wavelength wire that is mostly indoors.

Over the next half hour coverage extended east to Louisiana, then Alabama, then Georgia and South Carolina.

At 1950 UTC I went to 15 meters, and noticed a similar oddity, this time with stations in an arc between 1510-2680 miles, bordered by N1AC in Florida, NT5EE in Texas, KI5WKB in Oklahoma and a station in North Carolina.

"If we were to assess solar activity in the last seven days by the number and size of sunspots, or by the number of energetic flares, it would not seem significant. Yet it was, but we only know that because of satellite observations. For example, NASA's SDO observatory recorded a dark plasma eruption at 0630 UTC on 17 March.

"The speed of the solar wind began to increase on 21 March. Far more noticeable was a large coronal hole in the southern hemisphere of the Sun near the central meridian. The assumption of a strong solar plasma flow from its borders pointed to a probable disturbance on March 24.

"But the flow was faster. We saw a really strong geomagnetic storm a day earlier, on March 23. During the morning hours, the concentration of free particles around the Earth began to rise rapidly, as a reliable precursor of the coming storm. The geomagnetic disturbance reached a planetary K index of 7 in the afternoon, so its intensity was rated G3.

"Earth's ionosphere responded to the storm with an increase in MUF during 23 March. Since the disturbance should continue, albeit with less intensity, we expect initially below-average shortwave propagation conditions and then a slow return to average." 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 <u>https://www.svve.org</u>, or by emailing Morris Jones, AD6ZH at <u>ad6zh.mj@gmail.com</u>.

BAEARS is happy to announce our next one day ham study session & test is scheduled for Saturday, April 22 in Santa Clara. Go to our website: <u>baears.com</u> and click on the "Session Info" link for more information. Near the top the information page is the link to register. The callsigns for our last session in San Francisco have been issued. We have: 29 new Hams, 27 Tech, 1 General and 1 Extra and we had 4 upgrades to General for an overall pass rate of 89%.

Ross Peterson ross@petersontechservices.com



April 30, 2023 - 10-4 30th Annual Pacific Coast Dream Machines Show

There are car shows, air shows, motorcycle shows,

tractor shows, maker fairs, music festivals, food festivals, and living history festivals galore. Mix them all together in one venue on one day and you've got Half Moon Bay California's remarkable, one and only **Pacific Coast Dream Machines Show**—marking its 30th year in 2023 with a massive celebration of mechanical ingenuity, power and style.

APRIL PUZZLER

DALU	ATVINC	AIGDD
PAUL	ATKINS.	AIOBB

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WORDLIST

	VVORDE	151
antenna	filter	rotator
array	fundamental	short
bandplan	gamma	signals
bias	giga	skipzone
buffer	indicator	smt
cable	ion	software
classc	limiter	solar
conductor	microwave	stacking
continuous	modulate	startbit
deflection	mount	synthesis
demodulate	open	tranceiver
doping	parallel	transmission
driven	peak	uppersideband
dummy	radiation	voltage
feedback	resonance	xcvr
	rfsafety	

ANSWER TO MARCH'S PUZZLER



COMING EVENTS

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

https://pacificacacert.samariteam.com/RequestInfo.aspx email: mailto:cert@pacificapolice.org

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.).

Arv's - WA6UUT (SK) Wednesday Ham Radio Luncheon Our 15th Year! >> Since May 2, 2007 <<

<u>Black Bear Diner</u> - 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

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Date	Event
Jan 11 th	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 – Linda Mar Shopping Center 7PM
Apr 30	Pacific Coast Dream Machines Show – 30 th Year – HMB Airport – 10AM - 4PM
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
Oct 11th	Meeting - LMFS – 2024 Nomination of Officers
Nov 5th	Daylight Savings Time Ends
Nov 11th	Dinner Meeting & Election of Officers
Dec 13th	Firehouse Holiday Potluck Dinner

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 continue to 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 checkins, 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.

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The Coastside Communicator is a monthly publication of the CARC. All articles contained herein are the opinions of the authors and not necessarily those of the club members or editor.

This newsletter contains material from The ARRL Letter as permitted by the American Radio Relay League

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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								
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Website	Paul Atkins	AI6BB	(415) 810-9152	ai6bb@arrl.net				



L.W

APRIL 12, 2023 7:30 PM (ROUND TABLE PIZZA) 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: