



RADIO-ACTIVE!

May 15, 2023, Volume 2, Issue 5



Moms as Hams

Celebrations of mothers and motherhood can be traced back to the ancient Greeks and Romans, who held festivals in honor of the mother goddesses Rhea and Cybele, but the clearest modern precedent for Mother’s Day is the early Christian festival known as “Mothering Sunday.”

Once a major tradition in the United Kingdom and parts of Europe, this celebration fell on the fourth Sunday in Lent and was originally seen as a time when the faithful would return to their “mother church”—the main church in the vicinity of their home—for a special service.

Over time the Mothering Sunday tradition shifted into a more secular holiday, and children would present their mothers with flowers and other tokens of appreciation. This custom eventually faded in popularity before merging with the American Mother’s Day in the 1930s and 1940s.

The origins of Mother’s Day as celebrated in the United States date back to the 19th century. In the years before the Civil War, Ann Reeves Jarvis of West Virginia helped start “Mothers’ Day Work Clubs” to teach local women how to properly care for their children.

These clubs later became a unifying force in a region of the country still divided over the Civil War. In 1868 Jarvis organized “Mothers’ Friendship Day,” at which mothers gathered with former Union and Confederate soldiers to promote reconciliation.

The official Mother’s Day holiday arose in the 1900s as a result of the efforts of Anna Jarvis, daughter of Ann Reeves Jarvis. Following her mother’s 1905 death, Anna Jarvis conceived of Mother’s Day as a way of honoring the sacrifices mothers made for their children. This was during the same time the first women received their ham radio licenses.

In 1914 President Woodrow Wilson signed a measure officially establishing the second Sunday in May as Mother’s Day after Jarvis’s persistence to see her holiday added to the national calendar.

The ARRL have even recognized mothers as ham radio operators publishing some “Why I love it “ responses when discussing ham radio,

What's not to love? There's challenges - testing for the license, contests, and awards. There's fun - events, clubs, and friends in all parts of the world. There's satisfaction - communications for public events, emergency communications for disasters and delivering a radiogram that says "Happy Mother's Day." There's life-long learning - new equipment, new kinds of radio transmissions, geography, and electronics. There's your unique name - your amateur radio call sign. There's something for everyone. Sherri Brower, W4STB

Ham radio is a reflection of our world in miniature. There are so many wide ranging interests, so many fascinating people all with so much dedication and passion for the service they love. And just think of it -- decades of public service and friendships that extend across town across the country and around the world. And you'll find every walk of life and every generation in ham radio. It's fascinating and challenging and rewarding! It's unique! So say "Hello", get on the air and see for yourself! Mary M. Hobart, K1MMH

See page 3 for one local mother who is an operator.

Inside this issue

Volunteers Opportunities	2
Operator’s Spotlight	3
Test your knowledge	4
In memoriam	5
Hours Corner	6
K6BJ	6
Topographical Maps	7
Skywarn Net	8
Ammeters	9
Ham puzzling	11
Found on the Web	12

Equipment available to loan

Santa Cruz Communications Support have two kits available for loaning to allow ham operators participate in a deployment when they have limited equipment. One kit is for a vehicle deployment and includes Mobile dual-band radio Icom IC-2730, mag mount antenna, battery and kneeboard. The other kit is for stationary outdoor deployments and includes the vehicle kit with additional supplies of a tripod antenna, lighting, and pop-up.

Volunteer / Training Opportunities

Here are some volunteer opportunities for the next four months.

- ▶ May 21: Strawberry Fields Forever Bicycle Ride
- ▶ July 4: Aptos Parade
- ▶ July 10-15: Active Shooter First Responder Training, SLV School campus
- ▶ July 29: Santa Cruz Mountain Challenge Bike Ride
- ▶ August 12-13: AUXCOMM Training
- ▶ August 20: Race Through the Redwoods foot race in Felton
- ▶ September 13—17: Santa Cruz Fair
- ▶ September 24: Santa Cruz Triathlon

Look for emails for sign-ups and additional details for each of these events.



From page 11, Crossword puzzle answers

Down

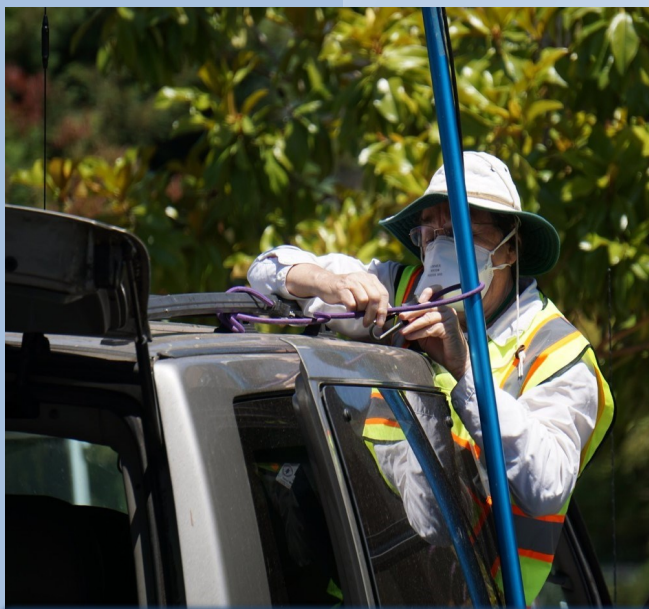
1. Moonbounce
2. Kerchunker
4. Intermod
6. Foxtrot
7. ARES
10. Beacon

Across

3. Frequency
5. RADO
8. Elmer
9. Digipeater
11. Hertz
12. CQ
13. Winlink

Operator's Spotlight—Dawn, KM6RME

Dawn, KM6RME can be called a California native after being raised in Marin County and later living in Bonny Doon for over 50 years. She is recently widowed after 53 years of marriage. Dawn has four children and three young school age grandchildren. Favorite family events are the barbecues with family and lots of neighbors. Hobbies include spinning, weaving, crochet, gardening, camping, kayaking, hiking, and reading. Dawn also likes volunteer trail work (of which she has organized many work parties). She loves caring for animals and some of her work history includes working at veterinary offices. Dawn is very capable and took part in building her home with her family.



Dawn, KM6RME setting up her pool cleaning pole 12 foot mast for a radio exercise

Dawn's husband, Russ, NW6U (silent key), was a ham operator over 61 years. Dawn was introduced to ham radio when she started dating Russ in her twenties. Russ had less involvement in ham radio while they raised their kids. After retirement, interest in the hobby had a resurgence. Dawn obtained her technician license in 2018 after the 2016-2017 winter that led to several days of no phone or internet and a husband that may need emergency services. She is on many of the local nets and is frequently called a "big gun" because of her ability to reach most areas of the county with a setup which may include a mobile Yaesu FTM 400 or Baofeng F8 handi-talkie. Her favorite activity is volunteering for events.

Her volunteer efforts also include activities with the Equine Evac and Community Emergency Response Team (CERT). She is the planning deputy and database administrator/registrant for CERT as well as instructor for the CERT Basic Training program. Dawn also provided the initial training of the MURs radio for CERT.

Dawn was the original idea person and organizer for the Bonny Doon Neighborhood Communication network. The Neighborhood Communication simply means neighbors with handheld radios talking to each other regarding emergencies and hazards when normal communications are unavailable. There are well over 20 neighborhoods connected with this effort and growing regularly. See <https://www.bonnydoonradio.org/home> for more information.



We hope Dawn had a lovely Mother's day.

Operator's Spotlight—Linda, KN6SYO

Linda, KN6SYO grew up locally in Aptos. This made her more willing to try new things that she never had done before, even if she didn't know how to do it. This ties in with her favorite quote of 'Angels can fly because they can take themselves lightly' by GK Chesterton. For Chesterton and Linda, the human experience is one which requires us to engage the world with wonder. This means examining our own life with a sense of mystery and awe. In a real way, it means not taking ourselves too seriously. There is a seriousness in our dignity; however, there is also a lightness to our existence.



Linda has lived in six different places thus far and has now returned to Aptos with her partner. She is a life-long learner and attended college at BYU, Golden Gate University, Sierra College, DeAnza College and Foothill College. Linda's career started with a med-tech start-up but now is a film producer, actor-model and does real estate. One of her most thrilling moments has been working with the FDA on getting novel, minimally invasive medical technologies to the market. Two additional favorite activities include flying an Airbus 320 under the Golden Gate bridge with her commercial pilot brother

(as co-pilot) in a professional aircraft simulator and directing her first (short) film. Linda speaks some Spanish and is learning/practicing both Swedish and Chinese!

In early 2022, Linda obtained her ham general license to be able to communicate with civilization when she lost power and/or the road is blocked by downed trees or mudslides. Linda has two proud moments since becoming licensed—1) when she made her first transmission on the net and 2) her first communication outside of a net. She states her favorite activity is getting on the radio after losing the usual communication (such as cell phone or internet), and someone responds! ...often with good, helpful information. When asked why she joined ARES her response was "For me it was more of a "why not" join ARES. I'm glad I did, as I've encountered a very nice group of people!" Her equipment is modest thus far with a Yaesu FT-20, j-pole, magnetic car antenna and headphones.

Test your knowledge

What measurement is specified by FCC rules that regulate maximum power?

- A. RMS (root mean square) output from the transmitter
- B. RMS input to the antenna
- C. PEP (peak envelope power) input to the antenna
- D. PEP output from the transmitter

See page 10 for answer

In memoriam.

NS6K (and previously known as KN6MFL), John Kienitz became a silent key (died) on April 23 while on a family vacation in Hawaii. It was quite unexpected after he got pneumonia that quickly progressed to sepsis.



John became a ham radio operator in 2020 after the PG&E Public Safety Power Shutoffs identified the lack of communication (including cellphones) in his neighborhood of Day Valley in Aptos. He quickly joined in the Day Valley Radio Network (spearheaded by Patrick, W6AJR) to assist in his neighborhood communications. Most of the neighbors talked on MURS radios but John along with a few other hams expanded the reach of communication and information outside of Day Valley. He joined ARES around the same time and participated in or was Net Control for both the Coastal and SLV ARES Nets. He also expanded into the digital world of Winlink. Besides being an early adopter of the Santa Cruz County Winlink net he also participated in the American Legion Nelson County Post 42 (Kentucky) Winlink Net on a fairly regular basis. He was one of the first local ARES operators able to get Winlink to work on a MAC.

In 2021 John expanded his license to Amateur Extra and was a VEC Volunteer Examiner. John jumped in with both feet into the hobby. He volunteered at many events in and around the county including the Sea Otter Classic.

John once again expanded his volunteerism by completing the Community Emergency Response Team (CERT) training in 2022. He acted as a bridge for the CERT MURS radio operators, primarily for the Aptos/La Selva team and information passing via Ham radio to the Emergency Operations Center (EOC).

John still was professionally working in the field of medical informatics and development engineer. John is survived by his wife, Malle, two daughters and grandchildren.



Hours Corner

In February operators logged 890.5 volunteer hours. Keep up all the great work and thank you for volunteering. Those who enter hours are eligible for the month drawing of a fabulous prize. Please remember to enter your hours on the form on <https://xczcomm.com/index.php/hours-reporting/>

And the winner is...

We collect volunteer hours from our membership for the following reasons:

- ▶ On-going training by ARES volunteers demonstrates to county public safety managers that our members will be ready when called upon.
- ▶ Some state and federal grants require matching funds from local government. Documented volunteer hours may fulfill this requirement.
- ▶ We track member participation as a measure of ARES readiness.

Any hours one spends operating or upgrading their station counts, as does participation in our meetings, nets, exercises, and deployments.

The winner of the monthly drawing has a choice from these fine prizes:

- ▶ Weller WLC-100 solder station. Used, in good condition.
- ▶ Anderson PowerPole 4-way power splitter.
- ▶ Duracell DURA12-10F2 10 amp-hour AGM rechargeable battery
- ▶ BTech NA-771 dual band whip antenna
- ▶ Assorted handy padded equipment bags
- ▶ ARRL Radio Amateur's Handbook, 1st Edition, 1926, signed by F.A. Handy (reprint)

Congratulations to last month's winner. Who will be this month's?

K6BJ Update

The transmitter has failed in the Bridgecom BCM440 link radio at K6BJ and is causing the K6BJ connection to Watsonville and K6RMW to be down. Also the Arcom RC-210 repeater controller began acting erratically. It required it to be taken out of service and the Yaesu DR-1X to operate as a simple stand-alone 2-meter repeater. This removed the connection to the 70-cm link radio to Watsonville, to IRLP and EchoLink, to the telephone line, and to the repeater shack voltage and temperature sensors. John, N6QX and others have been working on resolving the issues. We are awaiting the arrival of replacement parts.

Resources

- Website: <https://xczcomm.com/>
- Reporting volunteer hours: <https://xczcomm.com/index.php/hours-reporting/>
- Upcoming events: <https://xczcomm.com/index.php/calendar-of-events/>
- Facebook page: <https://www.facebook.com/ARES-of-Santa-Cruz-County-Ca-296232310799866>
- Facebook group: <https://www.facebook.com/groups/431308973875528>
- PIO Articles: <https://arrlsantaclaravalley.org/news/> or <https://xczcomm.com/index.php/news/>
- XCZ Comm You Tube: <https://www.youtube.com/channel/UCHZH8TU5gh4SqHTPXSWolPA>
- Submitting deployment documents: send in PDF form to EOC.ARES@santacruzcounty.us and your appropriate EC (Bob: KO6XX@slvares.org)
- Submitting personal information such as DSW application, personal data update, education certificates: email K6PDL@ARRL.net, KM6SV@SLVARES.org, and EOC.ARES@santacruzcounty.us,

Using a topographic map for radio coverage planning

Jim Nelson N6EWP, meeting trainer

Want to better understand what these pictures are trying to tell you...



The view in 2023 reveals little



The same view in 1948 shows a hill good for radio



A topographic map shows where the hill is, how high and how to access it (1955 topo)



2021 topo

Photo reminders

Next time you participate in a radio related activity, take a picture or two of yourself, your friends, your equipment, or your environment (preferably a combination of these factors) and send it to KM6RMN@SLVARES.org and KN6IAB@SLVARES.org.

With your permission, Allison will use the material to make creative Facebook posts. Extra points for natural action poses, equipment still-life, or well-framed presentations. Even a funny or awkward moment is useful. If your shots involve other people, try to get permission or identifying information so Allison can make sure it is all right to use their appearance in her posts.



Reminders

- ▶ AECs submit articles for newsletter by the Sunday before the meeting to KM6GURE@slvares.org
- ▶ Net Control sign-ups will be taken during the monthly meeting. Everyone is encouraged to take this on this role.

Find out more about topographic maps and radio coverage at the membership meeting May 17th.

Lessons learned from monitoring a Skywarn Tornado Net

Roberta, AJ6KN, Santa Cruz County ARES Net Coordinator



A tornado passes through Little Rock, Arkansas, Mar. 31, 2023.

On March 31, 2023 I received an alert on my apple watch indicating that there were a few thousand listeners on the Scanner Radio App that I subscribe to for the Little Rock, AR Skywarn Net. I picked up my phone and opened the app. I realized that I was listening to live reporting of the deadly tornados that happened that day, and was listening to the ham radio operators participating in the reporting. After monitoring for a bit I realized that there were lessons to be learned here, so I grabbed my notepad and took notes on what worked and what didn't work. This was a true emergency, as we later discovered, and not a "practice run".

WHAT WORKED (in my opinion):

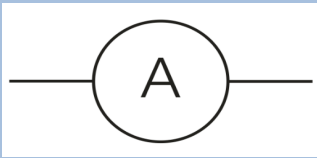
- ▶ Joshua Carroll, AA5JC, Net Control, did a fabulous job of handling the traffic and passing it on to Emergency Services via Net Logger (<http://www.netlogger.org/>) and operators who were able to log in. I had not used this program before and have only recently downloaded it to review. Apparently there is a chat function that can run concurrently. There are a lot of YouTube videos on how to use it out there. I like that Emergency Services and radio operators can log into the net and see what's happening real-time; Net Control doesn't have to keep repeating info as the operators can log on to see what's happening.
- ▶ Net Control made specific directions to those listening, 1) Directed Net 2) Advised where to find the Net Logger 3) Gave tornado warnings as they came up in real time with the counties and times of the NWS warnings, etc. 4) Requested that reporters give specific information; i.e., Location (area of town, cross streets, or addresses etc.), their name and Callsign and their observation
- ▶ Some Radio operators (RADO) replied to Net Control properly, giving only their call sign first. When called on, they reported only the information requested by Net Control with specific landmarks. Net Control thanked them for their "excellent reports".
- ▶ I was able to follow the tornado's path of destruction on Google Maps in live time based on the excellent reports

WHAT DIDN'T WORK (in my opinion)

- ▶ Some RADOs did not listen to Net Control's directions, interrupting and asking for "so and so" to call them on their cell phone, sometimes not identifying themselves. Not stating it was ER or Priority traffic
- ▶ Some RADOs would just announce their call sign and start reporting what they were seeing without giving the necessary location information, etc. Obviously, it was a very stressful time, but interrupting an emergency net without adding to the compilation of data as directed took time away from priority and emergency traffic. There were doubles and triples as folks "held forth" with their stories, resulting in little of it being useful.
- ▶ When Net Control asked if anyone had ER traffic, and requested only YES or NO as an answer in order to conduct an orderly compilation of info, RADOs just started talking instead of following instructions and answering YES or NO and waiting their turn.

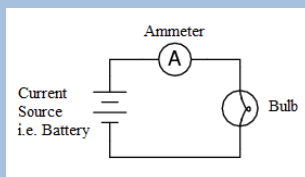
Comparison of Two Inline Ammeters

Bill, AJ6CQ, Education Coordinator



What is an ammeter?

There are many ways to measure electric current. For direct (DC), the two common ways are with a Hall-effect sensor (not used in the devices I bought) or passing the electric current through a known resistance and using Ohm's law to translate the voltage across the resistor into a current value. This is the shunt resistor. It needs to have a very small resistance so as not to interfere too much with the circuit that it's measuring, and also needs to have enough thermal capacity to handle the current. Changing the shunt resistor just changes the multiplier needed to convert from voltage to current ($1/R$), so that's really all that's needed to change the rating of an ammeter.



I was interested to know how much electric current was being drawn from my battery in a quasi-portable setup that I carry around in my car. Why? Knowing how much current my radio uses is helpful in knowing how much battery capacity I need for a given time period. Powerwerx sells a "DC Inline Power Analyzer" that handles up to 45 amperes, and displays current, voltage, watts, amp-hours, watt-hours, peak amps, minimum volts, and peak watts. The amp-hours are particularly interesting, since they are the same units that battery capacity is rated in - thus, the meter lets me know how much of the capacity I've used and thus how much is left (assuming the battery matches its rating). Powerwerx sells this unit with either Anderson Powerpole connectors or with plain wires. It gets inserted between the power supply or battery and the load, in my case a radio. It sells for \$50 plus or minus depending on whether you get it with connectors already installed.. Amazon has a similar device that handles up to 150 amps, but costs only \$14.99 with free shipping. I bought the 150 amp version, in order to compare the two. The differences between the Amazon device and the Powerwerx device are minimal, aside from the current rating. The Amazon one comes with no connectors, so I added Anderson Powerpoles. The cases are identical, the displays are identical except for color (blue versus greenish yellow). I'm sure they come off the exact same factory line with a minimal amount of change - mainly the shunt resistor for measuring current. If you get either of these meters, be sure to pay attention to the "load" and "source" labeling. Getting it backwards can fry the device.

I tested the current measuring function on both these meters. It wasn't the most rigorous test, but it still gave useful information. The Amazon and Powerwerx meters were connected in series between a power supply and a radio. I also made a straight-through pair of wires with one wire cut in the middle so that I could connect a third ammeter in series across the break. For the third ammeter, I used each of two Fluke multimeters - models 115 and 112. These ought to be more accurate than a \$14.99 do-everything meter, but I do not have access to a calibration standard to verify their accuracy.

Continued on next page.

Org. Positions

- DEC
John / N6QX, jfgerhardt@gmail.com
- Assistant DEC
Gary / K6PDL, K6PDL@arrl.net
- Assistant DEC and Deputy EC
Karen / KM6SV, KM6SV@slvares.org
- Operations and Events
Dan / N6RJX, N6RJX@slvares.org
- Webmaster
Nate / KM6THA, KM6THA@gmail.com
- Administration
Dawn / KM6RME, KM6RME@slvares.org
- Safety Officer
Stephen / KM6NEP, KM6NEP@slvares.org
- Public Information officer
Allison / KM6RMN, KM6RMN@slvares.org
- Net Manager
Roberta / AJ6KN, AJ6KN@slvares.org
- EC Loma Prieta
vacant
- EC Coastal and SLV
vacant
- AEC-Antenna Specialist
vacant
- AEC-CERT Liaison
Liz / W6LTS, W6LTS@slvares.org
- AEC-Coastal
vacant
- AEC-Education Coordinator
Bill / AJ6CQ, wtyler@gmail.com
- AEC-Logistics
{temp vacant}
- AEC- Meeting Trainer
Jim / N6EWP, N6EWP@arrl.net
- AEC-MRC Liaison
John / KN6DCA, drjohnrx54@gmail.com
- AEC-New Member Liaison
Alex / AJ6QY, AJ6QY@slvares.org
- AEC-Packet Radio /Digital
Sebastian / KK6FBF, Sebastian@steinhauer.info
Ryan / K16UAP, K16UAP@gmail.com
- AEC-Photographer
Lisa / KN6IAB, KN6IAB@slvares.org
- AEC-Scribe
JoMarie / KM6URE, KM6URE@slvares.org
- AEC-SLV Safety Officer
Tom / KK6NMZ, KK6NMZ@slvares.org
- AEC-SLVEN Liaison
vacant
- AEC-Video Production Team
vacant

Comparison of Two Inline Ammeters—*continued*

The first setup had things connected in this order: power supply, Amazon meter, Powerwerx meter, Fluke meter. In the table below, that configuration is labeled PAFR. The second setup was similar, but I reversed the order of the Amazon and Powerwerx meters (APFR). The results for current, with the radio receiving only were:

	Powerwerx	Amazon	Fluke 112	Fluke 115
PAFR	0.55 A	0.45 A	0.500 A	0.500 A
APFR	0.52 A	0.47A	0.500 A	0.500 A

The Amazon and Powerwerx meters use a small amount of power, and some of the current into each meter will return without reaching the Fluke meter in either of these configurations, explaining some of the differences when the meters are connected in different orders. What's interesting to me is that the meters were consistently off from the Fluke readings, whereas the Fluke meters were completely consistent with each other. I'm always a little suspicious when a reading comes out to a nice number with lots of zeros like 0.500 A, but since both meters were consistent and they were different models, I accepted the readings.

What do we get from all this? Just because a meter is showing 2 digits past the decimal point doesn't mean that you should trust all those digits. The Amazon and Powerwerx meters were both close in the last digit, but did not agree exactly with each other or with either Fluke meter.. The last digit is always a suspect, especially if no one has specified the error bars for the measurement, but I'd be willing to believe that these meters are reading correctly to within 10% or so. I didn't test the accuracy of the other measurements they presented. The differing measurements remind me of the old adage: if you want to trust that you have an accurate measurement, only measure once.

Lessons learned from monitoring a Skywarn Tornado Net—*continued*

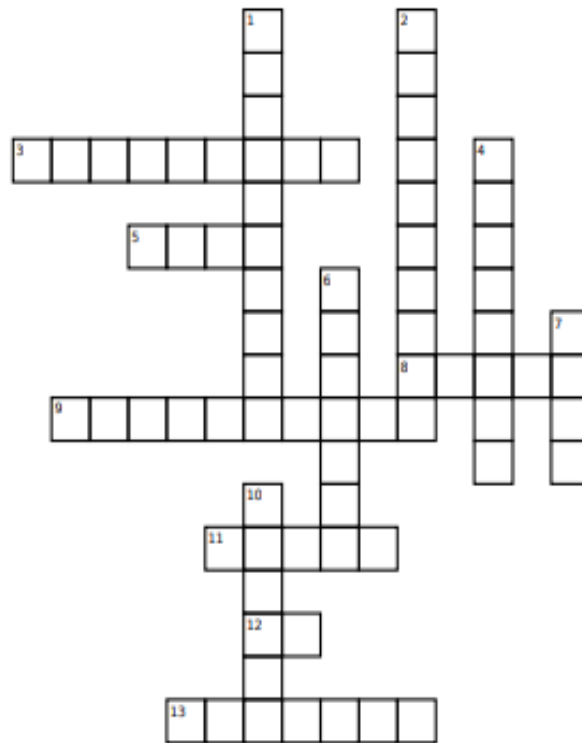
TAKEAWAYS:

- ▶ Listen to and follow Net Control's instructions unless we have priority or emergency traffic - then break in accordingly. We may need to wait our turn in the event of multiple ER/Priority reports, so we give our call sign and WAIT for acknowledgement to continue
- ▶ In a disaster, stress and emotions are high - by practicing we can get muscle memory on what to do and, hopefully, keep our emotions in check when witnessing and reporting disastrous events.
- ▶ Constantly honing our skills in logging and finding what works best for us to document information the easiest is critical in relaying information to the EOC during a disaster.

Participating in local events and following the directions of Net Control allow us to hone our skills with reporting and prepare us for the emergency deployments.

Test your knowledge answer from page 4: D. PEP (peak envelope power) output from the transmitter

Ham Puzzling



Down:

1. Slang word for "Earth-Moon-Earth," a method of communication on UHF frequencies by bouncing radio signals off the Moon.
2. An operator that activates a repeater station by transmitting on its input frequency without speaking.
4. Abbreviation for false or spurious signals produced by two or more signals mixing in a receiver or repeater station.
6. The phonetics for letter F
7. Amateur Radio Emergency Service
10. A station making one-way transmissions for navigation, homing, and propagation indication purposes

Across:

3. the wavelength of a radio signal decreases as its _____ increases
5. Abbreviation for radio operator
8. An experienced ham radio operator who mentors new hams and prospective hams.
9. A packet radio station that receives and retransmits packets intended for other stations.
11. One complete cycle of a radio wave per second.
12. A general call sent by a station to any other station that may receive it
13. A worldwide radio messaging system that can use amateur-band radio frequencies

Santa Cruz County ARES Purpose

- The Amateur Radio Emergency Service (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment with their local ARES leadership for communications duty in the public service when disaster strikes
- We are not fire fighters or police or sheriff's officers. We are volunteers who care about our communities by using our emergency communication skills.
- Before volunteering in an emergency we first take care of ourselves, our family, and our home.
- We value the every member's contributions, irrespective of license class, years of experience, or the price tag of equipment.

Ham Radio's Motto

"When all else fails – ham radio works". That is because, when all the normal communication systems stop working, Ham Radio is still in operation, helping people, conveying messages, and sometimes, even saving lives.

Found on the Web

Allison, KM6RMN, Public Information Officer

I offer two sites this month. One is well known and well-heelled, perhaps the "go-to" for whatever one wants to find out in the world of radio. The other is what we used to call the "poor-man's choice" for some of the same needs. Though not as shiny and curated as the first, it is still full of good information. Its grass-roots contributions provide a comfortable "I've tried it" point of view, which has its advantages. I'd recommend that people visit both sites for a wider window into the amateur radio world.



ARRL.org. Just a reminder to some of you, ARRL stands for American Radio Relay League, the oldest, largest club/service provider/ advocacy group for ham radio in the country.

A few months ago, I talked about a very small part of the ARRL's website, promising more to come in future reviews. This month I'll give it a quick overview, and revisit certain aspects of it later since the whole of it is much too large to cover in detail.

You can unlock a world of up-to-date information when you log in: News, advocacy, the analysis of latest in FCC laws and politics, section activities, license studies, online magazines, forums, and calendars. The site is so rich in information, the landing page itself is crowded with portals to any ham-related subject you could name. Each menu item takes you to a place that can serve as a whole website on its own. But there is a drawback: you need to be a paid ARRL member to unlock all the benefits. A lot of us ARES folk are members, but some can't afford or don't want to pay the yearly dues. Among members, I bet most rarely visit the site for much else than an occasional piece of information. That is a serious under-utilization of ARRL's services. I recommend stopping by regularly to check out

the latest offerings.



Eham.net. This site is run entirely by volunteers and enthusiasts who group-source their information and rate the usefulness some individual posts provide. The page appearance is less polished than ARRL's site, perhaps a reflection of its wiki-like structure and older site architecture. Ads and donations fund the site.

The layout and colors may make you feel like you've travelled back to 2005, but don't let its appearance turn you away. You can find up-to-date articles, forums, classifieds, dx packet spots, silent key dedications, ham exam help, URL links, bulletins, product reviews, propagation info, shack showcases, editorials, and more. All content is provided by thousands of readers around the country. An added bonus is that readers rank how well a review or link served them. If you see a lot of 5-star ratings, you know it is worth your while to investigate.

Community takes you to articles, reviews (143 thousand of them), forums, and surveys. If you need quick information about current propagation conditions or hot DX spots, there's a dedicated menu choice called operating. Find classifieds, practice exams, calendar, and links (over 5,000!) under Resources.

Comparing the two, ARRL's site is like a polished, high form-factor experience for its paid members, while Eham's is like a neighborhood garden filled with all manner of growing things supplied and nurtured by members of the community. Each is excellent in its own way and provides a great many resources. If you know a cool website, podcast, YouTube series, or online tool, email me at KM6RMN@SLVARES.org.