



RADIO-ACTIVE!

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Practicing Earthquake Readiness with Ham Radio

Every October, millions of people across the globe participate in **Great ShakeOut Day**, a coordinated earthquake drill designed to promote safety, awareness, and community resilience. **At exactly 10:19 AM on Thursday, October 16**, participants “Drop, Cover, and Hold On”—a simple but powerful action that can save lives during seismic events.

While the drill focuses on personal safety, it also serves as a critical reminder of the importance of emergency communications, especially when traditional systems fail. That’s where amateur radio operators step in.



When the Ground Shakes, Ham Radio Respond

In the aftermath of a major earthquake, cell towers may be down, internet access disrupted, and emergency services overwhelmed. Ham radio volunteers—trained and licensed amateur radio operators—provide a reliable backup. They relay messages between shelters, hospitals, and emergency responders, often using battery-powered equipment and portable antennas.

ShakeOut Day is an ideal time for ham radio operators to:

- ▶ Test their gear and go-kits
- ▶ Practice net check-ins and message relays
- ▶ Coordinate with local emergency

management teams

- ▶ Review deployment protocols and mutual aid procedures.



Building Community Resilience

Whether you’re a seasoned operator or just getting started, participating in ShakeOut Day reinforces the role of amateur radio in disaster response. It’s also a great opportunity to educate neighbors, schools, and local organizations about how ham radio can bridge communication gaps when it matters most.

Let’s use this annual event to strengthen our networks, sharpen our skills, and ensure we’re ready—because when the ground shakes, radio waves carry hope.

Attend this month’s membership meeting on Wednesday, October 15 at 7pm at the Emergency Operations Center to listen to some of the radio communications from the 1989 Loma Prieta Earthquake and discuss what went well and what needed improvement.



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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 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.

Net Control Discipline: Lessons from the W6ASH Loma Prieta Activation

This article is an AI-generated synopsis of the ham radio traffic recordings of the 1989 earthquake.

The 1989 Loma Prieta earthquake proved a definitive operational moment for Bay Area auxiliary communications, showcasing how disciplined Net Control functions can manage high-priority traffic on a single VHF frequency when primary systems fail. The command post was the W6ASH (SPECS) Ham Repeater's Net Control station, supporting emergency communications services throughout Santa Clara County and surrounding areas.

Operational coordination was paramount immediately after the event. Net Control (N6FW) enforced strict Net Control Discipline, frequently commanding stations to "stand by" to prevent QRM and maintaining focus by requesting "damage reports only". This focus allowed rapid identification and prioritization of critical incidents.

The immediate objective was life safety and EOC activation. An urgent report concerning a lady with a possible broken leg in Mountain View (K6 TJ) was instantly routed. Net Control directed the reporting station to pass traffic directly to N4DLA, the station activated at the Mountain View EOC, ensuring fire communications were notified without delay. This streamlined process circumvented failed landlines.

Hams were mobilized and dispatched via the net to staff municipal EOCs. Reports confirmed N4DLA established presence at the Mountain View EOC. Other operators were directed to the Palo Alto Red Cross, Los Altos City Hall, and the Sunnyvale EOC. Hams in Los Altos were specifically asked to

move to 145.57 as the Police Department was expected to need auxiliary support.

The net quickly compiled damage intelligence vital for first responders:

- Reports spanned heavy structural damage in Los Altos Hills, including broken walls and concerns about a leaking Purisma water storage tank.
- Infrastructure hits included a broken water main west of Foothill Expressway and a "very strong smell of gas" along the Caribbean Drive area of Sunnyvale.
- Transportation reports detailed heaves in Freeway 280 northbound near Magdalena, resulting in severe backup.

Logistical challenges requiring immediate ham support included relaying that Fire Station 3 in Sunnyvale was having trouble starting its Auxiliary Power Unit (APU) to the EOC. Another critical effort involved attempting to locate technical expertise (a person named Russ in the 408 area code) to advise on the operation of scrubbers for a plating shop chemical spill—a challenge complicated by the 408 landline being non-functional even when the reporting station had a dial tone.

This operation underscores the reliance on VHF repeaters like W6ASH, running on backup power (essential, as commercial power was out for days), to provide the local, line-of-sight communications necessary to vector resources and relay actionable intelligence when the grid goes down. The success hinged on rigorous Net Control and localized resource mapping.

Report your volunteer hours!

The reported volunteer hours for September was 578 hours. Total so far for year has been 4851 hours. Please remember to enter your hours on the form on <https://xczcomm.com/index.php/hours-reporting/>

Reporting the time you spend on ARES and ham radio activities reminds county public safety managers that we're around and ready to serve in time of need.

ARES Net Update: Adjusting for Reliability and Readiness

Roberta, AJ6KN

There have been some recent changes to our ARES nets, and we want to keep everyone informed. As many of you know, WR6AOK was linked to the K6BJ 2-meter repeater via an AllStar node, allowing us to combine the SLV and Coastal ARES nets into a single Wednesday night session.

While the idea of a unified net was exciting—bringing more operators together and fostering collaboration—the link proved to be unstable. Participants on K6BJ often experienced long dropouts, unable to hear WR6AOK traffic, which disrupted net control and created confusion.

After six weeks of testing, we've made the decision to disconnect the AllStar link during ARES nets. These nets are designed for emergency preparedness, and we shouldn't rely on internet-based connections that may not hold up under real-world conditions.

What's Changing

- ▶ The AllStar link will be **disconnected before each net** and **reconnected afterward**.
- ▶ **Net Control will choose the repeater** for each session. That information will be shared via email and posted on the Net Calendar.
- ▶ In **ad hoc situations**, check whichever repeater you can access. If no net has started, feel free to initiate one.
- ▶ If two nets happen to run simultaneously—one on each repeater—that's okay. It mirrors what might occur in a real emergency. Just check into one and proceed.

A Note on Flexibility

This has been a challenging period for our Net Control Stations, and we appreciate everyone's patience. When things shift unexpectedly, as they did during this experiment, it's important to follow net control's lead and stay adaptable. That's exactly the mindset we'll need in a real emergency.

Thanks again for your continued support as we refine our systems and strengthen our readiness.

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/UCHZH8TUSgh4SqHTPXSWolPA>
- Submitting deployment documents:
send in PDF form to
EOC.ARES@santacruzca.gov
- Submitting personal information such as DSW application, personal data update, education certificates:
email to
EOC.ARES@santacruzca.gov

Equipment available to loan

Santa Cruz Communications Support have made **FOUR** kits available for loaning to allow ham operators participate in a deployment or to trial a different setup. Two kits are for a vehicle deployment and includes mobile dual-band radio, mag mount antenna, battery and kneeboard. The other two kits are for stationary outdoor deployments and includes the vehicle kit with additional supplies of a tripod antenna, lighting, and pop-up. Contact either John, N6QX, Roberta, AJ6KN, Stephen, KM6NEP or Dan, N6RJX for arraigning for check out.

Six Degrees of Separation and Ham Radio Roberta, AJ6KN

We recently held our last Technician Class session and were going to share QSL Cards with the students. These days, we get them by email, and it's not as much fun as in the mail, so I decided to dig through the emails and print a few of the more interesting ones. Imagine my surprise when I saw a QSL Card from someone I've never met, that I believed to be a long lost 2nd cousin. See the card in the lower left.

My mother's oldest sister was Ruth Bond, her husband was Tom. They had two sons, Alan and Tommy. I asked my sister if she thought this was his son and she said absolutely. She is 10 yrs older than I and in that generation. I looked him up on the QRZ website and found he lived in Sacramento.

I got his email and sent him this email on September 30th:

Hi Aaron - I made an FT8 contact with you a while back and happened to look at the eQSL card and recognized your name as possibly my Aunt Ruth and Uncle Tom's grandson. If your dad was Alan or Tommy Bond then we are 2nd cousins. I asked my sister Kathy if she thought it was you and she said yes (she's 80 now, I'm 70). Anyway, if it is you, Hello from the Roberts side of the family - my mom was Ruth's sister, Betty Roberts (nee Jones). My brother Roger is still around, as well. If it's not you, then sorry to bug you!

73,
Roberta, AJ6KN
Santa Cruz, CA

He responded on October 1st:

Well hello! What a small world it is and how HAM can bring us together!

I remember making the contact and thinking, wow, she looks a lot like my grandma Ruth! So yes, I am Tom and Jenny's son and Ruth and Tom were my grandparents. I am now 63. I think I remember your mom from my childhood, albeit a bit blurry now.

It is really nice to know I still have some family left on grandma's side... and it's nice to know that there is another Ham in the family as well!

So hello from this side of the family, hope to stay in touch!

73,
Aaron - W1ATB

Who would have thought that you could meet a long lost family member on FT8! We are staying in touch and hope to get together one of these days. I just thought it was a fun story to share!



2025 SCC ARES Events

Date	Event	Approx. or confirmed date?	Description
October 24, 2025 1530 - 2030	Halloween Trunk or Treat 5200 Soquel Ave, Santa Cruz	Confirmed	Trunk of Treat is organized by the Santa Cruz Sheriffs. ARES provides monitoring of participants along with closed road staffing and shuttle parking location. Sign-up: https://www.signupgenius.com/go/10C0D4DA9A822A4F4CE9-58866637-trunk
October 25, 2025 10am	Equine Evacuation - horse handling and the trailer loading demonstration	Confirmed	Equine Evac is hosting a horse handling and the trailer loading demonstration at the Posse House on Ocean Street Extension.

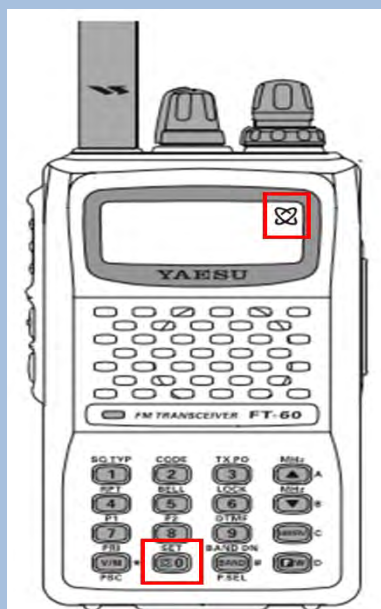


2025/2026 Other Radio Events for Ham Operator Participation

Date	Event	Approx. or confirmed date?	Description
Each Wednesday 10am - 12pm	Loft Coffee 2701 Cabrillo College Dr, Aptos		Gathering of general interest, sharing of ideas, getting some elmer help
2nd and 4th Saturdays of the month 10am	C.A.K.E. @ Loft Coffee 2701 Cabrillo College Dr, Aptos		C.A.K.E. = Coffee/Caffeine Assisted Knowledge Exchange. Gathering of general interest, sharing of ideas, getting some elmer help
1st Saturday of each month [11/1/25, 12/6/25] 10am - 2pm	POTA	Approximate	Play radio at a scenic park near by. Not formal and any mode can be used. Emails sent prior to event to indicate the specific park. 11/1 will be at Castro Adobe Park in Watsonville.
December 7, 2025	Holiday Gathering	Confirmed	Sharing the festivities with the Santa Cruz County Radio Club. Potluck 2 - 4 pm at the Posse House on the Ocean Street Extension
January 24 - 25, 2026	Winter Field Day	Confirmed	Located at the Posse House on the Ocean Street Extension. Lots of radio demonstrations being planned along with an exercise.

'Disabling' WIRES

1. Verify radio is unlocked.
To unlock—Long press #6
2. Press the F/W key (lower right button) then immediately press the 0 key to enter the menu mode.
3. Rotate the Dial knob to menu 23 – INT MR.
4. Press the F/W key then rotate the Dial knob to select a memory (d1 through d9) that is empty, i.e. it contains •••••• (six dots) = no tone.
5. Press the F/W key to store the setting.
6. Rotate the Dial knob to menu 21 – I NET.
7. Press the F/W key then rotate the Dial knob to select INT.MEM.
8. Press the F/W key to store the setting.
9. Press the PTT button to exit the menu mode.



Yaesu WIRES

(A repeat article from July 2024—it is left here as a resource)

So, you bought yourself the Santa Cruz County ARES recommended Yaesu FT-60 handi-talkie. You programmed it to our frequencies. Then you start participating in Nets and events. And you try to transmit. Either you are not heard at all or the first part of your transmission is cut off. Net control asks for a repeat of the information but this time hears a DTMF tone at the beginning of your transmission. Net control or other listeners may chime in and state the station (you) has "Wires" turned on. How did that happen? *Very easily.* Most of us have experienced this phenomenon with this radio. Yaesu's WIRES stands for **W**ide-coverage **I**nternet **R**epeater **E**nhancement **S**ystem. It is an internet communication system that allows amateur radio repeaters to connect over Voice over IP (VoIP). WIRES uses DTMF signaling to connect, so any radio with a DTMF encoding keypad can be used to establish an internet link. When your radio sends out the DTMF tone, it simultaneously mutes your voice audio (or lowers it significantly). That's why Net Control and the rest of the Net can't hear you! When you are saying your call sign, the radio has muted or lowered your voice signal. Additionally, most repeaters automatically mute the audio when they hear DTMF tones, cutting off the user. The person

making the transmission generally has no idea this is happening other than a small, easy to miss indication on their display.

WIRES is a feature that is well used elsewhere but has had challenges in getting a foothold in the US. According to some, the introduction of Echolink or Allstar may have influenced this.

On the FT-60R, which uses WIRES-II technology (and not the current X version), the key that is used to turn on WIRES is the "0 Set" key, located on the bottom row, second from the left (see diagram to left). Press it momentarily to turn WIRES on (or off). You might do this by accident if you want to enter Set mode and forget to first hit F/W key. You can tell WIRES is on if the small 'atom' symbol appears in the top right corner of the display. When participating with an event, we encourage locking your radio after setting your frequencies for the event and verifying the WIRES is not active.

If you do not plan on using this feature consider an alternative way of handling it by following the steps in the left-hand column. After performing the steps, it's still possible to 'activate' the WIRES and the symbol will appear, *but it will not send tones over the air and mute your audio!*