RADIO-ACTIVE!

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Santa Cruz County
Amateur Radio Emergency Service

Equipment and Supply Management

Ham radio activations and events—such as Parks on the Air (POTA)—offer exciting opportunities for amateur radio operators to connect, operate in unique locations, and promote the hobby. Successful participation, however, depends on careful planning and having the right equipment and supplies. Whether you're a seasoned operator or a newcomer, here are key considerations to ensure your activation is safe, efficient, and enjoyable.

Core Radio Equipment

▶ Transceiver: Choose a portable, reliable radio suited for your operating bands (HF, VHF/UHF). Consider power output and modes you plan to use.

▶ Antenna: Lightweight, collapsible antennas are ideal for field use. Options include verticals, dipoles, end-fed wires, or magnetic loops. Bring extra coax and connectors (attend an ARES meeting and get a nice package of connectors).

▶ Power Source: Portable batteries, solar panels, or generator depending on activation length. Don't forget chargers and backup options.

▶ Tuner: If your antenna isn't resonant on all bands, a compact antenna tuner can help maximize your signal.

Real-Life Experience: The Importance of Redundancy
While activating a remote national park, one operator recounted that their primary battery unexpectedly failed midway through the event. Thanks to a backup battery and a compact solar charger, they were able to continue making contacts without interruption. This experience highlights the value of always packing redundant power sources and checking all gear before departing.

Supporting Supplies & Accessories

▶ Logging Tools: Paper logs, pencils, and clipboards or a digital logging device (laptop, tablet, or smartphone)—make sure it's charged and weather-protected.

▶ Headphones/Earbuds: Useful in noisy environments or for privacy.

▶ Spare Parts: Fuses, connectors, adapters, tape, and basic tools for on-the-spot repairs.

▶ Signal Accessories: Filters, SWR meter, and frequency counter if needed for troubleshooting.

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.

Equipment Management—Continued

Real-Life Experience: Field Repairs Save the Day
During a group activation, a participant's coaxial cable developed a short due to rough terrain setup. Having a spare cable and some electrical tape on hand, the group quickly repaired the issue and got the station back on air within minutes. Being prepared for small repairs can mean the difference between a successful activation and a cut-short outing.

Personal Comfort and Safety
▶ Weather Protection: Bring appropriate clothing for the season, rain gear, hat, sunscreen, and bug spray.
▶ Shelter: Consider a pop-up tent, canopy, or tarp for shade and protection from rain and wind.
▶ Seating: Folding chair or camp stool for comfort during long operating periods.
▶ Food and Hydration: Pack plenty of water, snacks, and meals, especially for remote locations.

Real-Life Experience: Weathering the Elements
One operator shared how a sudden downpour caught them by surprise during a summer activation. Luckily, with a tarp and waterproof bags for their gear, neither the equipment nor logs suffered any damage. This story underscores the necessity of weatherproofing and always being ready for changing conditions in the field.

Site Considerations
▶ Permissions: Verify park or site regulations, including antenna placement and generator use. Obtain required permits.
▶ Leave No Trace: Bring trash bags and clean up thoroughly to preserve the site for future activations.
▶ Emergency Preparedness: Carry a first aid kit, maps, and a cellphone or other emergency communication device.

Final Checklist
▶ Test all equipment at home before heading out.
▶ Charge batteries and pack spares.
▶ Review site access, weather forecast, and local regulations.
▶ Inform someone of your plans and expected return time.

Proper preparation and thoughtful packing are crucial for a successful ham radio activation. By considering the equipment and supplies outlined above—and learning from real-life experiences shared by fellow operators—you can focus on enjoying the event, making contacts, and promoting amateur radio in the great outdoors. As Jim, KN6NCG always states a good activation is not perfect and when you can learn something new to implement the next time. Happy activating!

Report your volunteer hours!

The reported volunteer hours for October was 570 hours. Total so far for year has been 5421 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.

Join us for the SCCARC / ARES Annual Holiday Party
When: Saturday, December 7th, 2025 from 12:00 PM to 3:30 PM
(note time change from prior communications)
Where: Santa Cruz County Sheriff's Posse House, 2127 Ocean St Ext, SC
Bring: Finger food potluck

Get ready for an afternoon of great food, socializing with your fellow members, and our hilarious White Elephant Gift Exchange!

The formal invitation, including all details and the gift exchange rules, will be sent out at the end of November.

Equipment and POTA Patrick, W6AJR

As one of the new Parks on the Air (POTA) activators, Patrick (W6AJR) reported a rewarding experience during his November 1st activation at Rancho San Andrés Castro Adobe State Historic Park. Situated in Larkin Valley near Watsonville, the park features the two-story Castro Adobe, recognized as one of the premier examples of a rancho hacienda in the Monterey Bay region.

This outing marked Patrick's inaugural use of the Icom IC-705 radio and accompanying tuner, in combination with a Packtenna End Fed Half-Wave antenna elevated to 30 feet and tuned for operation on both the 20-meter and 10-meter bands. Appreciation is extended to John (KJ6WKT) for his assistance in ensuring the correct assembly of the antenna system. The operating station was set up on the tailgate flip-down table of a Bronco, with the antenna mast secured to the vehicle's spare tire via zip ties. While the arrangement proved effective, Patrick noted that the camping chair provided was too low, prompting much of the operation to be performed standing.

POTA.app, the official mobile platform for Parks on the Air®, supports operational logging for both "activators" operating from parks and "hunters" making contact. This international program, which originated following the ARRL's 2016 National Parks on the Air event, aims to promote amateur radio activity in outdoor settings, foster park stewardship, and build community through its accessible interface for operators of all skill levels. In lieu of a laptop to use the POTA.app, Patrick utilized a mobile phone application named POLO to log contacts, marking his first experience with the app.

The POLO app demonstrated excellent usability, with intuitive design requiring no reference to documentation. Notably, it automatically populated the contacted operator's POTA location upon entry of the call sign, presumably utilizing data sourced from POTA.app. Additionally, the app facilitated self-spotting, which likely contributed to additional contacts. The generated ADI file was seamlessly exported and submitted to POTA.app post-operation. POLO is highly recommended for similar operations, provided internet or cellular service is available at the chosen park. During this session, Patrick (W6AJR) completed eight contacts on the 20-meter band. Although an official "activation" was not achieved, plans are in place for future participation and continued engagement with the POTA program.

Reflections of Falling Roberta, AJ6KN

The Annual Sherriff Office Halloween Trunk or Treat is always a fun, busy and exciting event. This year was no different but it did end up with an unexpected situation. Below describes what happened and my own debrief.

Excerpt from my ICS 214:

~2000 hours: Crowd was dying down; I was moving a barricade for a car to exit and caught my left foot under the stand/leg, losing my balance and falling back and to the right, hitting my skull, mandible and hip on the asphalt. Someone was immediately there to help me. I called and notified Dan (Supervisor) that I had fallen and needed someone to take my position. Bruce got traffic handled, I was assisted to the sidewalk where I discovered my head was bleeding quite a lot; husband Mark, KN6DBW, had finished with his shift and was there. He got supplies out of my car to stop the bleed and we left for Dominican Hospital.

2400 hours: I was released from the ER at Dominican after head CT and hip Xrays with report of no fractures.

What factors may have led to this accident?
- ▶ Fatigue after almost 4 hours on my feet moving the barricade back and forth and doing crosswalk assistance
- ▶ Not accepting help when Dan, N6RJX offered another person to relieve me if I needed it, at least ½ hour earlier.
- ▶ Not asking to switch with my partner, Bruce, KN6DBR, instead of staying in that position.
- ▶ Starting the position an hour earlier than expected - not eating but grabbing bites in between duties.
- ▶ When Mark, KN6DBW, returned from his position, he asked if he could help, and I didn't accept it.
- ▶ The attitude of "toughing it out" that I have sometimes, not wanting to ask for help.

What I did right:
- ▶ Bringing food with me instead of relying on whatever was offered (we were sent out early so wouldn't have had a chance to eat anyway)
- ▶ Having a "Stop the Bleed" box in my car, and parking my car close by - I never thought it would be used on me!

Lessons Learned:
- ▶ Be aware of physical or mental fatigue and ask for help when needed and accept it when offered.
- ▶ Make a plan with your partner to share the duties
- ▶ Don't **become** the Emergency - had this been worse - loss of consciousness, etc, I would have required resources (fire, ambulance) to be used for me instead of the incident I was serving.
- ▶ Know your limitations and plan your position accordingly.
- ▶ Don't try to be a Hero!

I hope this "confession" helps others who volunteer!

Equipment available to loan
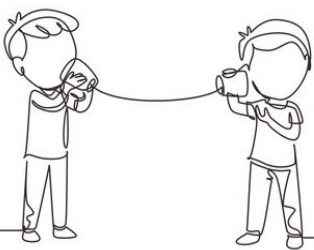
Santa Cruz Communications Support have made FOUR kits available for loaning to allow ham operators participate in a deployment or to trial a different setup. Two kits are for a vehicle deployment and includes mobile dual-band radio, mag mount antenna, battery and kneeboard. The other two kits are for 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.

- ▶ 13 SLV1 147.555 MHz
- ▶ 14 SLV2 446.875 MHz
- ▶ 15 SLV3 147.450 MHz
- ▶ 16 CSTL1 146.535 MHz
- ▶ 17 CSTL2 441.000 MHz
- ▶ 18 CSTL3 147.570 MHz

Special Request

We have invited recent students of Bob's Technician class to attend the meeting. Many from the class passed the test but are still waiting for their call sign from the FCC which was hampered by the shutdown. We would like to ask operators be willing to partner up with these people and have them talk and be a part of the exercise.

Come play radio at this month's Membership Meeting

Our monthly ARES meeting will be this Wednesday, November 19, 7:00 - 9:00 PM, this time in person, **outdoors** in the parking lot of the County EOC, 5200 Soquel Ave., Santa Cruz. Why outside? It's a repeat of the fun Comm Post Message Passing Exercise we held at prior meetings. Bring your go-kit and set up in the parking lot as though you were creating an emergency communications post in an area lacking power and phone coverage. Send and receive short, tactical messages. Here's our suggested list for a complete go-kit: https:// xczcomm.com/wp-content/ uploads/2020/11/PSPS-Go-Kit.pdf

Don't have all this gear? Come anyway and play along. At a minimum all you need is:
- ▶ 2M-70cm dual band radio. A hand-held is fine.
- ▶ Clipboard, pen, and ICS-214 log sheet
- ▶ Light source
- ▶ Suitable clothing

Anticipated schedule: (expect last minute changes):
- ▶ 7:00 PM (or earlier): Arrive at EOC. Claim a parking spot and set up your communications post. Come to the building's main entrance to get a paper containing your tactical call sign for the exercise and some messages to be transmitted to other stations. Messages will be short bits of tactical information for quick, informal transmission, not word-for-word transcription.
- ▶ 7:15 PM: Roll call and check in on a directed net on simplex Coastal 1. Contact Net Control to find a station you have traffic for. Move to another frequency as directed by Net Control to send or receive messages. Send your messages and receive any messages sent to your station. Messages may be sent by voice or Winlink (if your recipient is equipped to receive Winlink). Summarize all messages sent and received on your ICS-214 sheet.
- ▶ 8:00 PM: End of message-passing exercise. Hand in your ICS-214 log sheets. Hot-wash discussion and critique of exercise, at the building's main entrance. Sign up for future ARES Net Control openings.
- ▶ 8:15 PM Wander around and look at everyone else's setups. Steal good ideas and improvements in your own setup.
- ▶ 8:45 PM Pack-up your comm post and depart.

Be sure your radio is ready to operate simplex on the exercise frequencies listed on the left panel.

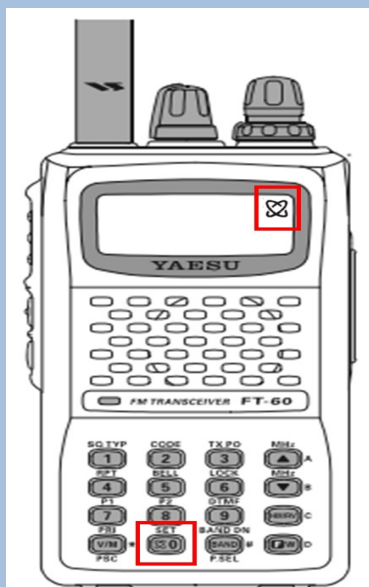Join us this coming Wednesday evening. This will be fun.

2026 SCC ARES Events

Date	Event	Approx. or confirmed date?	Description
May 17, 2026	Strawberry Fields Forever Bike Ride	Approximate	Strawberry Fields Forever is an annual benefit bike ride through some of the most beautiful regions of Santa Cruz County. ARES provides comms between rest stops and SAG vehicles.
June 2nd or 3rd week, 2026	Santa Cruz Regional Active Shooter and Casualty Care Response Training	Approximate	This event is sponsored by the Santa Cruz County Sheriff's department and provides first responder training for an active shooter. ARES along with CERT provides perimeter monitoring in maintaining a closed event location.
July 4, 2026	Aptos 4th of July Parade	Approximate	We provide monitoring of the public to provide information to the Sheriffs
8/16/2026 (est)	Race through the Redwoods	Approximate	Race through the Redwoods is a 10K foot race that starts and finishes at Roaring Camp but the majority traverses the redwoods in Henry Cowell Redwoods State Park. It is promoted by the Felton Business and Community Association. ARES provides monitoring of runners positions and safety for the organizers.
9/20/2026 (est)	Santa Cruz Triathlon	Approximate	Santa Cruz Triathlon is a non-profit that donates proceeds to various athletic programs in the county. ARES provides monitoring of participants positions and safety for the organizers.
October 30, 2026 (est) 1530 - 2030	Halloween Trunk or Treat 5200 Soquel Ave, Santa Cruz	Approximate	Trunk of Treat is organized by the Santa Cruz Sheriffs. ARES provides monitoring of participants along with closed road staffing and shuttle parking location.

2026 Other Radio Events for Ham Operator Participation

Date	Event	Approx. or confirmed da	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 [12/6/25, 1/3/26] 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.
December 7, 2025	Holiday Gathering	Confirmed	Sharing the festivities with the Santa Cruz County Radio Club. Finger Food Potluck 12-3:30 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.
April 16 - 19, 2026	Sea Otter Classic	Confirmed	Large scale bicycle event that takes place at the Laguna Seca Raceway and Park, Monterey
April 26, 2026	Big Sur International Marathon	Confirmed	Point to Point foot race/run along Highway 1 from Big Sur to Carmel. Ham radio operators provide communications along the route.

'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!*