

September 2023



Newsletter of the County of Orange Radio Amateur Civil Emergency Service

# County of Orange RACES

## NetControl

### CRO's Nest

by Ken Bourne, W6HK, OCRACES Chief Radio Officer

#### Lithium-Ion Battery Fires

Lithium-ion batteries are everywhere, in our handheld radios, cellphones, laptops, electric vehicles, rechargeable lawn mowers, power tools, e-bikes, scooters, etc. Tragically, many of these batteries catch fire. As a result, some agencies have instigated regulations to deal with this danger. For example, in New York City, the city council enacted local ordinances related to the storage, service, sales, and charging of these devices.

The danger is highest when charging a lithium-ion battery. For example, I was lucky to catch a battery for my Yaesu VX-8R becoming too hot to touch while charging one day. The problem could have been either a faulty charger or a faulty battery. In this case, it was the battery. If I had not been home and if the battery had been on paper or a wood surface, a tragic fire could have resulted. A rule to follow: do not charge a lithium-ion battery when you are not in the vicinity to check it often, and be sure to place it on a nonflammable surface when charging.

There are some rare cases of lithium-ion batteries catching fire even when not being charged. Cellphones have been destroyed by such occurrences. If you are running some video or other apps on your cellphone that require considerable processing, you probably noticed that your phone becomes quite hot (and your remaining battery charge decreases rapidly). If you leave that app running while your cellphone is unattended, disaster could strike!

Besides overcharging and overheating, physical damage can also cause a lithium-ion battery to catch fire or explode.

So how do you extinguish a lithium-ion battery fire? First, do NOT use a dry-chemical fire extinguisher. It doesn't provide cooling to curb the thermal runaway. CO2 fire extinguishers will not be effective (contrary to some advice posted on the internet) Rather, use water, which is still the best extinguishing agent, though an enormous amount of water is needed. The objective is to cool the battery pack and eventually stop the thermal runaway. A small lithium-ion battery could simply be tossed in a bucket of water or bathtub, but be careful not to burn your hands. Use a shovel or tool to pick up the battery.

How do lithium-iron-phosphate (LiFePO4) batteries compare with lithium-ion batteries, in terms of fire safety? Unfortunately, they are not available in a form factor for handheld radios, and they have a lower energy density than lithium-ion batteries. However, if you are choosing a battery for portable operation, the LiFePO4 battery has better fire safety as well as four times the cycle life of a lithium-ion battery. Its chemical and mechanical structure typically does not overheat to unsafe levels. The iron-phosphate bond is stronger than the cobalt-oxide bond when the battery is overcharged or physically damaged. The LiFePO4 battery is incombustible. It can withstand high temperatures without decomposing. It's not prone to thermal runaway. If it's short-circuited, it won't start a fire or explode. ★

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**Next  
OCRACES  
Meeting**  
**Online on Zoom**  
**Monday,  
Sept. 11, 2023  
at 7:30 p.m.**

## RACES Stands By for Tropical Storm Hilary

We had dire predictions leading up to the arrival of Tropical Storm Hilary on Sunday, August 20, 2023. On Thursday, August 17th, the National Weather Service (NWS) issued a flood watch from late Saturday through Monday evening, with possible heavy rainfall. We forwarded this alert to county and city RACES members and coordinators. The next day, August 18th, NWS issued eight alerts forecasting tropical-storm-force winds with gusts to 70 mph, and we requested all members to advise of availability. We also encouraged them to fill their gas tanks (good suggestion from Ray Grimes, N8RG), in case of power outages that would disable gas-station pumps. Some of the other OC-RACES members available to report local conditions via the 2-meter repeater included: Assistant Radio Officer Randy Benicky, N6PRL; Steve Livingston, NJ6R; Fran Needham, KJ6UJS; Joe Selikov, KB6EID; Robert Stoffel, KD6DAQ; and Chuck Streitz, KK6HFS.

NWS predicted “catastrophic and life-threatening flooding” from Hilary, the first tropical storm to hit Southern California in 84 years. The NWS warning issued Friday night was for a wide swath from the Pacific coast to interior mountains and deserts. On Saturday, officials urged residents and visitors to flee Catalina Island and part of San Bernardino County. The region’s beaches were expected to see massive waves. In

Newport Beach and Huntington Beach, waves were expected to rise to 8 to 10 feet tall. At the Wedge in Newport Beach, bigger sets were said to possibly reach 15 and even 20 feet. Warnings were issued Saturday afternoon for Silverado and Williams Canyons. A shelter was planned to open at 7:30 p.m. Saturday at the Norman P. Murray Community and Senior Center in Mission Viejo.

Governor Gavin Newsom proclaimed a state of emergency for much of Southern California to support response and recovery efforts. His office said “there are currently more than 7,500 boots on the ground deployed to help local communities.” The Federal Emergency Management Agency (FEMA) had pre-positioned staff and supplies in the region. The Cal OES Emergency Management Department activated its EOC.

The California Military Department pre-positioned 22 high-water vehicles. The California National Guard had soldiers and airmen on standby. Caltrans had 96 workers out on storm patrol in Orange County, with 20 on standby. They also had 10 dump trucks ready to deploy to clear local roadways.

OCSO Emergency Management Division Deputy Director Lee Kaser, KK6VIV, advised that the Orange County EOC was activated at 0800 hours on Sunday, August 19th. Ready to take shifts were Chief Radio Officer Ken Bourne, W6HK; Radio Of-

ficer Scott Byington, KC6MMF; Scott MacGillivray, KM6RTE; Ron Mosher, K0PGE; and Chi Nguyen, KE6MVS.

We were also in contact with city RACES units, including: Costa MESA RACES (MESAC) (Chief Radio Officer Ashley Fisher, KM6UJD; and Gordon West, WB6NOA); Fullerton RACES (Rose Richardson, KB4GOD); Los Alamitos RACES (Art Remnet, KM6RSY); Mission Viejo RACES-ARES (Charley Speelman, WA6RUZ); Seal Beach RACES (Dick Crowe, KG6XJ); Tri-Cities RACES (Chief Radio Officer Bill Kreutinger, KM6SLF); and Westminster RACES (Chief Radio Officer Adam Valek, N6HVC). Other contacts included Orange County SKY-WARN (Coordinator Scott O’Donnell, WX6STO); Ventura County ACS (Wayne Woodhams, N6WIX); Cal OES CRU (Tim Peters, K6TVP); and Orange Section ARES (Robert Turner, W6RHK).

Rainfall totals in Orange County were less than an inch to almost 1 $\frac{2}{3}$  inches, with 1.41 inches in Garden Grove and 0.98 inch in Anaheim as of 6 p.m. Sunday. The highest rainfall was in Silverado Canyon, with 2.05 inches. Brea had 1.61 inches.

At 2000 hours on Sunday, the OC EOC moved to Duty Officer status. At 0202 hours Monday morning, August 21st, NWS canceled the Tropical Storm Warning for all of Orange County. ★

## Next OCRACES Meeting: Sept. 11th on Zoom

The next OCRACES meeting will be online on Zoom, on Monday, September 11, 2023, at 7:30 p.m. This is the second Monday in September, due to the Labor Day holiday. There was no net or meeting on September 4th. During the September 11th meeting, OCRACES cybersecurity consultant Greg Kutzbach will give a presentation on the susceptibility of infrastructures to cyberattacks. Responding to emergencies after major infrastructures are

disabled by such devastating cyberattacks will be the scenario for the October 7th City/County RACES & EmComm ACS Drill. Greg achieved his Certified Information Systems Security Professional (CISSP) on July 31st. The CISSP is the world’s premier cybersecurity certification. It recognizes cybersecurity professionals with the knowledge, skills, and abilities to lead an organization’s information security program. ★

## City/County RACES & EmComm Drill: Oct. 7th

The next City/County RACES & EmComm ACS Drill will be on Saturday, October 7, 2023, from 0900 to 1200 hours. The drill plan and scenario will be a massive cyberattack against most infrastructures, including power and gas utilities, water and wastewater facilities, telephone companies, cable systems and internet service providers, hospital networks, banks and other financial institutions, law-enforcement and other government administrative systems, transportation systems, dams, education, and postal and shipping services. This might seem a bit extreme, but foreign cyber experts are poised for massive attacks and have already successfully launched attacks against major U.S. facilities. How we respond to emergency activations when major infrastructures (including those used by our agencies) are disabled is a challenge. Professional cybersecurity expert Greg Kutzbach will give us valuable information on the threats of cyberattacks during our September 11th OCRACES meeting on Zoom at 7:30 p.m.

As in recent drills, we will assume that our repeaters are not operational. All operations will be at field locations, using simplex frequencies for FM voice and peer-to-peer Winlink. Operations at home locations will be limited

to battery or generator power. EOC operations will assume using backup generators.

The first part of the drill will be for city and county net controls to call their own members on their primary simplex frequencies and receive short simulated disabled-infrastructure reports. The last part of the drill will be for OCRACES net control to call each city and EmComm unit on 146.595 MHz simplex and ask for a report on the number of members who checked in on their simplex frequency and for city requests for resources that are not locally available. OCRACES net control will also be active on 60 meters to take requests for resources and to communicate with Cal OES and surrounding counties to request resources that are not available in Orange County. The exact time schedule for these segments and other details will be announced in the drill plan, to be released in September.

The Winlink portion of the drill will utilize the peer-to-peer (P2P) operating mode, and may extend to about 1500 hours. Cities may report their check-in results using the Field Situation Report form, and may request resources from the county via Winlink rather than via voice simplex.

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## Solar Flare Disrupts HF Signals on August 7th

On Monday, August 7, 2023, an X-class solar flare disrupted radio and navigation signals across North America, as reported by Metro.co.uk. X-class solar flares are the largest, most disruptive of flares. This one, classified as an X1.5, disrupted HF radio communications, especially on the amateur radio bands, on the sunlit side of Earth. The flare burst out of the largest and most active sunspot group currently visible on the sun's disk.

This was the 20th X flare of the current 11-year solar cycle, which is due to reach its peak in 2024. This flare followed another weaker X-class solar flare just two days earlier. The activity was detected by NASA's Solar Dynamic Observatory (SDO), which captured an image of the action.

Solar flares are powerful bursts of energy that can impact radio communications, electric power grids, and

navigation signals, and pose risks to spacecraft and astronauts. The sun has seen a flurry of activity on its surface this year, with NASA astronomers spotting multiple corona holes on our star. Coronal holes aren't exactly literal holes on the sun, rather they are large areas that are much cooler than the rest of the sun, causing them to appear black. These are places where the sun's magnetic field lines don't close back on themselves, but instead stick straight out into space. This leaves an open channel for solar wind to blast through. A solar flare is an intense burst of radiation coming from the release of magnetic energy associated with these sunspots.

The sun's magnetic field goes through a "solar cycle" approximately every 11 years. We are currently in Solar Cycle 25, which forecasters didn't expect to be this strong. NASA observes the sun and our space environment constantly with a fleet of

spacecraft that study everything from the sun's activity to the solar atmosphere, particles, and magnetic fields in the space surrounding Earth.

Now, it may be on track to rival some of the stronger cycles of the 20th century. The monthly average sunspot number for June 2023 was 163, according to the Royal Observatory of Belgium's Solar Influences Data Analysis Center. This is more than every month since September 2022.

The last time sunspot numbers were this high, the sun was on the verge of launching the Great Halloween Storms of 2003, which included the strongest X-ray solar flare ever recorded (X45), auroras as far as the south of the U.S., and a coronal mass ejection (CME) so powerful it was ultimately detected by the Voyager spacecraft at the edge of the solar system.

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## Countywide Winlink P2P Drill: September 9th by Scott MacGillivray, KM6RTE, [KM6RTE@gmail.com](mailto:KM6RTE@gmail.com)

Based on the successful previous drills, the next countywide Winlink Peer-to-Peer (P2P) practice drill is planned for the morning of Saturday, September 9th, 9:00 a.m. until noon. This drill continues to expand on the various ways Winlink P2P communication mode can be utilized, as well as gain experience using Winlink P2P communications.

The drill will again include the option of sending a Winlink P2P message with an attached form to “Drill Ops” located at Loma Ridge. This time, you will have the option of using either the Winlink Check-In form, Field Situation Report form, or any other form listed under the MAPPING-GIS FORMS (except the USGS DYFI form; appears to not work properly with P2P). The goal is for everyone to document your Latitude and Longitude information so results can be mapped. Those new to Winlink can forgo including an attached form and just send a simple P2P message. Growing your Winlink P2P experience is the main drill goal. Operators are encouraged to send their message directly to Drill Ops and/or try using a nearby Winlink gateway as a relay station.

Due to the expected amount of traffic on the frequency, please be patient and judicious with your transmissions. In past drills, the most traffic was during the first half of the drill period. Waiting until the last half of the drill period may provide opportunity for less congestion. Though, I will operate Drill Ops until no one is sending any more messages. Hey, I’m retired.

Drill details are described in the attached Winlink Peer-to-Peer Drill document (File: WinlinkP2P-Drill\_2023Jun10\_V1). In addition, supplemental instructions for preparing a P2P message (“Winlink Peer-To-Peer Message”) and creating a Check-In form (“Message with Winlink Check-In Form”) are also attached. These general instructions have been prepared for use with this practice drill, as well as can be used to support other exercises or an actual emergency event.

It is important to note that this is an informal practice drill (organized by me) and not associated with any organization. Your participation is solely for your own personal benefit, and the drill is not to conflict with any official city or county government activities.

You are encouraged to forward this information to other individuals and organizations in Orange County (and adjacent areas that might be able to communicate with Loma Ridge) that you feel might be interested in taking advantage of this practice drill.

The number of Winlink Radio Message Servers (aka “gateways”) in Orange County continues to grow. This is awesome and a great way for OC to be prepared for an emergency. For those individuals or organizations that operate a gateway, this is your opportunity to “refresh” your gateway to ensure that it’s ready and fully functional to support the county on September 9th.

If you have questions or comments, please don’t hesitate to contact me. ★

## RACES & ARES Respond to Hawaii Wildfires

Hawaii RACES and Hawaii ARES members responded following deadly wildfires on Maui. On Tuesday, August 6, 2023, wildfires, fueled by the strong winds of Hurricane Dora, were burning in Maui and Hawaii Counties. By the next day, much of Lahaina on Maui had been destroyed.

ARRL Section Manager Joseph Speroni, AH0A, who serves the Pacific Section including Hawaii and U.S. territories in the Pacific, said it was difficult to know immediately the status of radio amateurs and equipment on Maui, including repeaters and gateways. “Sadly, there are now confirmed deaths and several of our ham friends have lost their homes.”

Speroni reported that the ARRL Hawaii ARES website, <https://hawaii.ares.net>, was modified to provide the latest emergency communications news. The website includes updates on Maui’s amateur radio and communication infrastructure, including affected and operational radio

systems, repeaters, and other emergency communication details.

“Wildfires have affected phones, internet, and cell services across Maui. Very limited cell contact was established with Lahaina or its ham operators, due to burned fiber lines and very limited hams in the area,” included one of the updates.

Hawaii has many amateur radio repeaters and an extensive internet-linked repeater system, including KH6COM, a VHF/UHF Maui countywide system with emergency backup power. An update, as of August 11, 2023, shared that the KH6COM repeater system was operational in Central Maui, Haleakala Summit, Lanai, and Molokai. “Repeaters on the Whaler and Kaanapali Beach Hotel lost linking due to fiber optics cables burned. Those in Lahaina can utilize the Pu’u O Hoku Ranch repeater at the east end of Molokai.”

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## Randy Benicky, N6PRL, Promoted to ARO

**R**andy Benicky, N6PRL, became an OCRACES Assistant Radio Officer on Monday, August 7, 2023, and has served as a member since April 2007.

Randy has been a radio amateur since 1986, when he earned his Novice license and Technician Plus. In 2003, he earned his General license. In 2006, during a Friday morning briefing at work, he learned of Gordon West's Extra licensing class, which began that same night. Randy said he arrived at Gordon's class that night, and the first thing Gordo did was to ask the students to hand in their pre-study work. Randy thought to himself, "This isn't good. What pre-study work?" He hadn't even had a chance to open the Extra Class book, which he had just bought on his lunch hour that same day. Somehow he passed the Extra Class that same weekend!

In 1990, Randy was asked by the Orange County Sheriff's Department's Baker to Vegas running team if he could ask OCRACES to provide communications for the running teams. OCSD Emergency Communications Coordinator/OCRACES Coordinator Walt Wilson, N6VYB (now K7WWW), created the procedure and manual for 1992 and many years afterwards. With improvements each year, OCRACES established an APRS GPS location backbone system in 1993 for each running team. Anyone could

track OCSD and other follow vehicles on the race course. This allowed runners and support people to know the runners' current location.

In May 1977, Randy was hired as a Deputy by the Orange County Sheriff's Department. After completing the Department's Training Academy, he worked in the Jails, Courts, and Patrol. In 1983, he was promoted to Investigator. He worked Warrants, General Investigation, and Narcotics. In 1985, he was promoted to Sergeant. He worked the Jail, Patrol, Emergency Communications Bureau, and Courts. He retired in 2007.

Being on the Sheriff's Department as a sworn deputy before his retirement, the Department would not allow him to officially join OCRACES. He could assist OCRACES in normal activities, but, under emergency conditions, his responsibilities were to the Sheriff's Department first.

After retiring from the Sheriff's Department, Randy joined OCRACES in April 2007. He said it's been a pleasure to work with his fellow ham radio operators. He plans to continue his commitment to OCRACES in his new position as Assistant Radio Officer. ★



Randy Benicky, N6PRL.

## Welcome to Ted Lavino, KG6LZP

**W**e welcome OCSD PSR Ted Lavino to OCRACES membership. Ted is a long-distance sailor (crossed both Atlantic and Pacific oceans), which brought him into the world of HF radio, both in terms of voice participating in various cruising nets around the world, and Winlink over HF to receive weather forecasts, satellite imagery, and other health and safety related information while out of range of VHF and cellular communication. He received both Technician and General Amateur service licenses in 2003 through Gordon West and also holds Restricted Radio Operator, Marine Radio Operator, and GMRS licenses. He became a PSR in January 2023 and became an OCRACES member on August 7, 2023. Ted is also a member of OCHEART and Laguna Niguel ACS, as well as the Costa Mesa wing of the Civil Air Patrol (he is a licensed private pilot), involved mostly in their aviation missions, but shortly may also be helping out with their communications services as well.

Ted is very familiar with the Winlink client software and with the various ways to connect radios with laptops (sound cards and both software and hardware TNCs), and (to a lesser extent) Winlink gateway software (RMS Pack-

et, RMS Relay, and RMS Trimode) serving both HF and VHF frequencies. He also brings a bit of "off the grid" expertise in terms of power systems (batteries, solar arrays, etc.) from his cruising days. Lastly, his day job is managing IT infrastructure (servers, desktops, storage, and networking) for several enterprise-level organizations, and brings both tactical and strategic expertise to the team as needed.

Ted is currently able to communicate on all HF amateur bands from a base station at home, plus amateur HF, 2-meter and 440-MHz bands except 6 meters and 220 MHz via a portable rig and amateur 2-meter, 220-MHz, and 440-MHz bands via handheld. Regarding Winlink in particular, he is capable of sending and receiving messages at his base station or via mobile using AX.25 (VHF packet), VARA FM, VARA HF (licensed for both), and Pactor 1, 2 and 3.

Ted is pleased to bring his participation and expertise to serve in OCRACES.



Ted Lavino, KG6LZP.

# Countywide RACES/EmComm News

**“RACES/EmComm News” provides an opportunity to share information from all City & County RACES/ACS units and EmComm organizations and supportive amateur radio clubs in and near Orange County, as well as from Cal OES and federal agencies.**

**Please send your news to NetControl Editor Ken Bourne, W6HK, at:**

**[kbourne.ocsd@earthlink.net](mailto:kbourne.ocsd@earthlink.net)**



## Psychological First Aid Training

The Orange County Health Care Agency Mental Health and Recovery Services Disaster Response will present Psychological First Aid training on Thursday, September 14, 2023, from 6:00 p.m. to 8:00 p.m., at the Lake Forest Civic Center, The Performing Arts Center, 100 Civic Center Drive, in Lake Forest.

In this training, attendees will learn about Psychological First Aid (PFA), an evidenced-informed modular approach that can help individuals in the immediate aftermath of a disaster of critical incident. This training will include general information on PFA, such as the basic objectives and tips for working with specialty populations, as well as cover the 8 Core Actions that will enable responders to deliver PFA to those in need.

Objectives include:

- Have a basic understanding of Psychological First Aid
- Understand and perform 8 Core Actions of Psychological First Aid
- Learn cultural considerations for delivering Psychological First Aid

To register, send an email to [OAdmin@ocsheriff.gov](mailto:OAdmin@ocsheriff.gov) with the subject line: Att: PFA– Class Registration. Include your first name and last name, affiliated agency/city/organization, email, and course name and date. A confirmation of registration will be sent to the email provided. If you have not received a confirmation email within one week, please contact the OCSO Emergency Management Division at (714) 628-7054.

## National Weather Service—San Diego

NWS Meteorologist Adam Roser issued a notice on August 17, 2023, to Spotters (including members of Orange County SKYWARN), hoping they were prepared for quite the event approaching Southern California. Hurricane Hillary was predicted to weaken as it approached our region, producing areas of heavy rain, gusty winds, in-

creased surf, and beach erosion, starting Saturday, August 19, through Monday, August 21.

Adam said this would be a great time to provide storm total rainfall for a rare system like this. Those with a reliable rain gauge were to feel free to submit a weather report to <https://inws.ncep.noaa.gov/report/> or on social media or to Adam’s email at [nwssgxspotter@gmail.com](mailto:nwssgxspotter@gmail.com). Gusty winds were also predicted to be a concern, so spotters were to advise if they had any photos of wind damage from trees or property that would be very important for NWS’s weather data records.

(See the article on page 2 of this newsletter on preparations to respond if this tropical storm had become intense.)

## Orange County Amateur Radio Club

The next meeting of the Orange County Amateur Radio Club (OCARC) is Friday, September 15, 2023, at 7:00 p.m. This meeting will be the 90th Club Anniversary Reunion. It will be a hybrid meeting on Zoom and at the American Red Cross (George M. Chitty Building), 600 Parkcenter Drive, in Santa Ana. Online visitors can receive Zoom sign-on information on the day of the meeting by an email link that will be provided at <https://www.w6ze.org> at 9:00 a.m. PDT.

## Fake USPS Scam

If you are expecting delivery of a package via the United States Postal Service, beware of a scam text that several RACES members have been receiving. One such message says, “The USPS package arrived at the warehouse but could not be delivered due to incomplete address information. Please confirm your address in the link.” Then a link with “usps” in the URL is given, but it is not a valid USPS link and goes to a site that could infect your computer with malware or solicit private information that could steal your identity. The message continues, “Please reply, then exit the text message and open it again to activate the link, or copy the link and open it in your Safari browser. The USPS team wishes you a wonderful day.”

If you follow the instructions in this text, your day will not be wonderful!

# September 2023

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2 Weekly 60 m ACS Net
3	4 Labor Day	5	6	7	8	9 Weekly 60 m ACS Net & PSR Pre-screen
10	11 Weekly 2 m ACS Net & OCRACES Meeting	12	13	14	15 Orange County Amateur Radio Club Meeting	16 Weekly 60 m ACS Net
17	18 Weekly 2 m ACS Net	19	20	21	22	23 Weekly 60 m ACS Net
24	25 ACS Nets on 4 Bands	26	27	28	29	30 Weekly 60 m ACS Net

### Upcoming Events:

- **September 4:** Labor Day, no net, no meeting
- **September 9, 0900 hours:** Pre-screen for PSR Applicants, Sheriff's Regional Training Academy, Tustin
- **September 11, 1930 hours:** OCRACES monthly meeting online on Zoom
- **September 15, 1900 hours:** Orange County Amateur Radio Club Meeting, American Red Cross (George M. Chitty Building), 600 Parkcenter Drive, Santa Ana
- **October 7, 0900-1200 hours:** City/County RACES & EmComm ACS Drill
- **November 8, 1830 hours:** Orientation for PSR Applicants, Sheriff's Regional Training Academy, Tustin
- **November 18, 0900 hours:** Pre-screen for PSR Applicants, Sheriff's Regional Training Academy, Tustin



<https://ocraces.org>

## Mission Statement

County of Orange RACES has made a commitment to provide all Public Safety departments in Orange County with the most efficient response possible to supplement emergency/disaster and routine Public Safety communications events and activities. We will provide the highest level of service using Amateur and Public Safety radio resources coupled with technology, teamwork, safety, and excellence. We will do so in an efficient, professional, and courteous manner, accepting accountability for all actions. We dedicate ourselves to working in partnership with the Public Safety community to professionally excel in the ability to provide emergency communications resources and services.

### County of Orange RACES Frequencies

- 60 m: 5371.5 kHz USB (dial) (Channel 4) (OC ACS Net—Saturdays, 1000 hours)
- 40 m: 7250 kHz LSB
- 10 m: 29.640 MHz output, 29.540 MHz input, 107.2 Hz PL (down for repair)
- 6 m: 52.620 MHz output, 52.120 MHz input, 103.5 Hz PL
- 2 m: 146.895 MHz output, 146.295 MHz input, 136.5 Hz PL\*
- 2 m: 146.595 MHz simplex
- 1.25 m: 223.760 MHz output, 222.160 MHz input, 110.9 Hz PL
- 70 cm: 446.000 MHz simplex
- 70 cm: 448.320 MHz output, 443.320 MHz input, 141.3 Hz PL (private)
- 70 cm: 449.100 MHz output, 444.100 MHz input, 110.9 Hz PL (private)
- 70 cm: 449.180 MHz output, 444.180 MHz input, 107.2 Hz PL (private)
- 70 cm: 449.680 MHz output, 444.680 MHz input, 131.8 Hz PL (private)
- \*Primary Net—Mondays, 1900 hours

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Ernest Fierheller, KG6LXT

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**“W6ACS ...  
 Serving  
 Orange County”**

## Meet Your County of Orange RACES Members!

**Officers** →



Ken Bourne W6HK    Scott Byington KC6MMF    Randy Benicky N6PRL    Ernest Fierheller KG6LXT

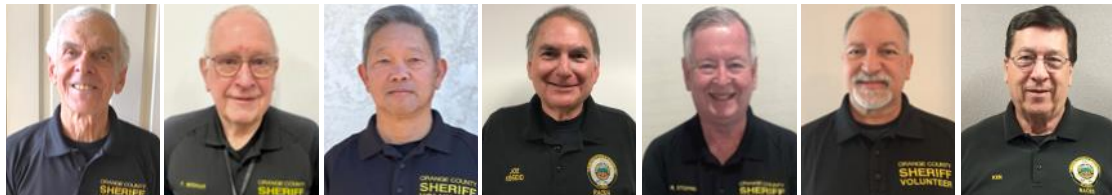
**OCSD  
 RACES  
 Coordinator** →



Lee Kaser  
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Heide Aguire K3TOG    Jack Barth AB6VC    Eric Bowen W6RTR    Ray Grimes N8RG    Ted Lavino KG6LZP    Steve Livingston NJ6R    Scott MacGillivray KM6RTE



Ron Mosher K0PGE    Fran Needham KJ6UJS    Chi Nguyen KE6MVS    Joe Selikov KB6EID    Robert Stoffel KD6DAQ    Chuck Streitz KK6HFS    Ken Tucker WF6F