

March 2024



**Inside this issue:**

<b>CRO's Nest</b>	<b>1</b>
<b>OCRACES Meeting</b>	<b>3</b>
<b>EchoLink Web</b>	<b>3</b>
<b>Land Use Restrictions</b>	<b>4</b>
<b>SDRplay RSP1B SDR</b>	<b>4</b>
<b>RACES Guidebook</b>	<b>5</b>
<b>Extra Class Errata</b>	<b>5</b>
<b>Solar Eclipse Project</b>	<b>5</b>
<b>RACES News</b>	<b>6</b>
<b>Events Calendar</b>	<b>7</b>
<b>OCRACES Members</b>	<b>8</b>

**OCRACES Meeting**

**Monday,**  
**March 4, 2024**  
**at 7:30 p.m.**

**Online on Zoom**

Orange County Sheriff's Department  
Emergency Management Division



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*

#### Landline Pros and Cons

Should a RACES member have a landline telephone, in addition to their cell phone? Most people, including RACES members, no longer have a “copper” landline, and consider it unnecessary and an added expense, when cell phones provide all the communications they need, with additional features. But are there still some security and reliability aspects of landlines that should not be ignored, especially for RACES members who need to be reached during emergencies?

I still have my landline phone, in addition to my cell phone. I like redundancy! If my cell phone goes out, either because of local cell-site failure or because I forgot to charge it, or because of an extended power outage that prevented me from charging it, I still have my landline for sending and receiving phone calls. As long as the phone company's (telco's) central office has power, the landline should continue to work. Conversely, if my landline doesn't work (which happened during a recent rainstorm that flooded a nearby below-ground telco vault), I still have my cell phone (especially for calling AT&T and informing them of a landline outage). Landline voicemail is also handy, for one spouse to remind the other of doctor's appointments and other matters.

“Copper” landlines are powered from the telco's central office. Phone service provided over a fiber line by a cable company or even by the telco not using “copper” requires your “VoIP” phone to be powered locally. This removes the secure redundancy of relying on the telco's central office power over an old-fashioned landline.

The case for retaining a “copper” land-

line was made on Thursday, February 22, 2024, when AT&T cell-phone customers suffered a widespread outage. This prompted the FBI and the U.S. Department of Homeland Security to investigate the outage. The Federal Communications Commission also contacted AT&T to try to ascertain the cause.

Outages were reported from such cities as New York, Houston, Atlanta, Miami, Chicago, and Dallas. This disrupted communications with emergency responders. AT&T customers were urged to use landlines to call 9-1-1 for emergencies—but most customers no longer have landlines! Many customers who noticed they still had cell service nevertheless called 9-1-1, simply to see if it worked! That overloaded the 9-1-1 operators and prevented legitimate 9-1-1 emergency calls from going through, even in systems that were working!

The outage lasted for more than 12 hours. Various potential causes were speculated at first, such as a cyberattack against AT&T and strong solar flares occurring at that time, but those scenarios have been pretty much dismissed. The actual cause is not yet fully confirmed, but AT&T said it was an incorrect process while they were expanding the wireless network, not a cyberattack. AT&T customers filed more than 1.5 million outage reports on Downdetector (<https://downdetector.com>), which is a tracking site that relies on user submissions.

AT&T is the third largest U.S. retail wireless carrier, with about 87 million subscribers. Verizon and T-Mobile are the largest, and they said their services continued working normally.

This was not the first time that AT&T

*(Continued on page 2)*

## CRO's Nest *Continued from page 1*

has had a widespread outage. In 2008, the company had an extensive wireless internet failure in the U.S. northeast, caused by a glitch in the way their network was routing traffic. In 2020, AT&T's internet and phone service in Nashville was disrupted by an explosion in the downtown area. T-Mobile has also had widespread outages, including one in 2020 and another in February 2023 that prompted the FCC to launch a probe.

We can expect future cell-phone outages, possibly from cyberattacks (which are becoming more frequent). With cell phones now so popular, most homeowners have opted to cancel their landline service. Currently, only about 28 percent of American households have an old-fashioned landline.

Perhaps we have become too dependent on our cell phones and stress out if the battery goes dead or if the cell system fails or if (gasp!) we accidentally left our cell phone at home or at some other location. Over a year ago, I panicked when I got home and realized I didn't have my iPhone with me. I didn't know where I had left it, after stopping at various locations on my way home. I dashed to my desktop computer and ran "Find iPhone" on iCloud.com. There it was—at Loma Ridge! I accidentally left it at the HF position in the EOC RACES Room. Whew! It's so important to have our cell phones with us while driving, to report an accident (especially if it's our own) or to advise someone if we are running late for an appointment, for example. It's a sinking feeling if we discover that we didn't bring our cell phone with us. (This is another reason to install an amateur radio transceiver in our vehicles, to contact another ham, especially during an emergency, if we accidentally left our cell phone behind.)

Our daily lives, including our RACES responsibilities, rely on cell phones (plus amateur radio during emergencies). We feel we need to be reachable at all times, whether by regular calls, text messaging, or emails. If

you can't respond, you could suffer consequences. Constant communication is critical for such things as RACES or agency activations, coordinating lunch or dinner meetings, car problems, etc. Cell phones have trained us to expect a constant flow of information that we unconsciously use to constantly readjust our activities. We rely on complete information, including GPS to help us find our destination, and news updates to check on local (or nationwide) situations or weather reports. Having access to endless sources of information, being able to order anything online, or being able to navigate has led us to consider online access via cell phones as a highly critical asset.

During the outage, AT&T advised affected customers to use Wi-Fi for their smartphone requirements. Wi-Fi can keep you connected if you stay in one place and don't need to use the cell network-only services such as SMS. But that isn't applicable while driving or away from your home or office and not near trustworthy Wi-Fi access.

Even though we rely so heavily on cell phones, landline phones are still important to retain. In 2004, more than 90 percent of U.S. adults lived in a house with a landline telephone. Now that percentage is about 29 percent, according to a 2022 survey by the U.S. Centers for Disease Control and Prevention. In areas prone to hurricanes, tornadoes, flooding, and earthquakes, power can be out for days, which can disrupt charging your cell phone and even powering your home phone if it needs local power, such as a VoIP phone on a fiber network.

Copper landline phones operate on an infrastructure that does not depend on cellular networks prone to dropped "out of range" calls in marginal areas. Landlines keep working during power outages, unless the telco's central office also loses power and has depleted batteries. This is a big plus for RACES members. Facilities that use analog fax machines also need a reliable landline.

Because the FCC is phasing out

requirements for telcos to provide landline services (Plain old Telephone Services or POTS) across the U.S., more new homes and business offices are being built with Ethernet jacks rather than phone jacks. Not all landlines use copper phone lines. Telcos (and cable companies that provide telephone service) are layering the phone systems on their internet connections, referred to as Voice over Internet Protocol (VoIP). Because VoIP relies on your locally powered internet modem and connection, POTS is more secure and reliable. Companies providing VoIP typically offer a backup power system or uninterrupted power supply (UPS).

There are some ways to make your landline more useful, such as Google Voice, which provides a phone number that acts as a hub. When receiving a call, Google Voice calls every phone that is connected, which could be a home landline, a cell phone, a work phone, etc. A landline phone can also connect with home security systems and medical alert systems.

While we realize the benefits of having a copper landline, AT&T has requested to be relieved of its Carrier of Last Resort (COLR) obligations in certain areas of California, including most of Orange County. If approved, AT&T California would no longer be required to offer landline telephone service where it is currently required to offer Basic Service in those areas. Basic Service includes nine service elements such as Lifeline rates for eligible customers, free access to 9-1-1, Telephone Relay Service, and directory and operator services. In addition, AT&T requested to give up its designation as an Eligible Telecommunications Carrier (ETC). An ETC is a telco operating in a specific geographic area, which receives financial assistance from the federal government-established Universal Service Fund to provide high-quality and affordable telephone service to customers at all income levels in specific geographic areas. ★

## March 4th OCRACES Meeting Moved to Zoom

We were originally planning to hold the next OCRACES in-person at Loma Ridge. However, our featured speaker was suddenly assigned to an out-of-town event and had to postpone his presentation. Therefore, the next OCRACES meeting will be on Zoom, hosted by Joe Selikov, KB6EID, on Monday, March 4, 2024, at 7:30 p.m. We will discuss

planning for the May 4th City/County RACES & EmComm Drill. The Zoom ID and passcode will be emailed.

The postponed in-person OCRACES meeting has been moved to Monday, April 1, 2024, at 7:30 p.m. It will be at the Orange County EOC at Loma Ridge. Our featured speaker will be Erik Schull, KE6BVI. He is a

senior telecom engineer with the Sheriff's Technology Division, Technical Services Unit. He will give us an informative presentation on repeater duplexers, circulators, and combiners. All county and city RACES and EmComm members are welcome to attend both the March 4th Zoom meeting and the April 1st in-person meeting at Loma Ridge. ★

## EchoLink Now Has a Web Interface

Some RACES members and other radio amateurs have been using EchoLink software to communicate with each other over the internet, using streaming audio technology. The program allows worldwide connections to be made between stations, or from computer to station. There are more than 350,000 validated users online, in 159 of the world's nations, with about 6,000 online at any given time. The program runs on Microsoft Windows, with editions also available for Android and iOS. All editions are free. EchoLink Web is now available, which is an edition of EchoLink that runs entirely within a Web browser. It runs on various browsers and OS platforms and does not require any app to be installed—just click and go.

To get started with EchoLink Web, go to <https://webapp.echolink.org/> and enter your existing EchoLink call sign and password. EchoLink Web requires a single-user-mode EchoLink call sign (with no -L or -R suffix). If you enter a call sign that has not yet been validated, you will be prompted to begin the validation process. If you get the message “incorrect password,” you can reset your EchoLink password on the Validation page.

During audio transmissions, EchoLink Web uses about 650 kbps downstream and 128 kbps upstream; this is similar to other audio/video applications such as Skype. If you select the Low Bandwidth option in Settings, the downstream bandwidth becomes 128 kbps, with slightly lower audio quality.

You do not need to open firewall ports or set up router port forwarding. EchoLink Web is a client-server application, and all its connections operate through EchoLink's proxy network, so it should work over nearly any good internet connection, without any special settings. All data in transit is encrypted, for privacy.

When you launch the EchoLink Web page, the page may ask for permission to use the microphone. Granting permission to use the microphone is required if you wish to transmit. If you deny permission, the app will be re-

ceive-only. If your computer has more than one speaker or microphone, normally EchoLink Web uses the system-default sound devices. To change this, you can choose a specific pair of sound devices in the app's Settings.

Once you are logged in and connected to another station, you can begin and end transmitting by clicking on the Transmit button, or by pressing and holding the space bar. (You can only transmit when the EchoLink Web page is in the foreground.)

EchoLink currently supports Favorites, and Alarms will be supported in the near future. Your lists can be accessed from any browser on which you log in to EchoLink Web. However, these lists are initially empty. Even if you have set up Alarms or Favorites already on another platform, you will need to do this again for EchoLink Web, the first time you use it.

When you are logged in, EchoLink Web will automatically accept and connect an incoming request, unless you have disabled this feature in the Settings.

EchoLink Web supports the CQ feature. You can click the Call CQ button after you have logged in. See the Calling CQ page (<https://www.echolink.org/cq.htm>) for an overview of how CQ works.

You cannot log in to EchoLink Web from more than one machine, browser, or browser tab at the same time, with the same call sign. When you log in on one browser, you will be automatically logged out from EchoLink on any other browsers. You should not try to run EchoLink at the same time with the same call sign on any other platform (such as Windows, iOS, or Android). This causes erratic operation and is against EchoLink's Access Policies.

EchoLink Web has been tested with modern versions of Chrome, Edge, and Firefox on Windows, and on Chrome and Safari on MacOS. Some older browser versions, or other platforms, might not run EchoLink Web properly. ★

## Senators' Bill to Stop Land Use Restrictions

On January 30, 2024, U.S. Senators Roger Wicker (MS) and Richard Blumenthal (CT) introduced S.3690, the Senate companion bill to H.R.4006, introduced last June. Both bills reflect the Congressional campaign efforts by ARRL The National Association for Amateur Radio® to eliminate homeowner association land use restrictions that prohibit, restrict, or impair the ability of an amateur radio operator to install and operate amateur station antennas on residential properties they own.

Amateur radio operators repeatedly are relied upon to provide essential communications when disaster strikes, but their ability to do so is being impaired by the exponential growth of residential private land use restrictions that hinder their ability to establish stations in their homes with which to train and provide emergency communications when called upon.

In announcing the introduction of S.3690, Senator Wicker said: "Because communication during natural disasters is often hindered, we should be making every attempt to give folks more options. Reliable access can make the difference between life and death in an emergency. Our legislation removes roadblocks for amateur radio

operators looking to help their friends, families, and neighbors."

In a similar announcement, Senator Blumenthal stated: "Our measure will help clarify the rules so ham radio enthusiasts can successfully continue their communications. In the face of emergency or crisis, they help provide vital, life-saving information that allows listeners to properly and safely respond, but prohibitive home association rules and confusing approval processes for installing antennas have been an unnecessary impediment. The Amateur Radio Emergency Preparedness Act resolves these bottlenecks and ensures that radio operators can function successfully."

ARRL President Rick Roderick, K5UR, and Director John Robert Stratton, N5AUS, Chair of the ARRL's Government Affairs Committee, both extended on behalf of ARRL, its Members, and the Amateur Radio community their thanks and appreciation for the leadership of Senator Wicker and Senator Blumenthal in their continuing efforts to support and protect the rights of all Amateur Radio Operators.

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## SDRplay Announces RSP1B SDR Receiver

The SDRplay RSP1B is an enhanced version of the popular RSP1A powerful wideband full-featured 14-bit SDR that covers the RF spectrum from 1 kHz (VLF) to 2 GHz (microwaves) with up to a 10 MHz visible bandwidth. The RSP1B comes in a ruggedized black painted steel case and has significantly improved noise performance (compared to the RSP1A) below 1 MHz and in the 50-60 MHz region. There are also noticeable noise improvements in the 3.5-5.5 MHz and 250-320 MHz spectrum. It also has improved signal-handling at HF frequencies compared to the RSP1A. All it needs is a computer and an antenna to provide communications receiver functionality. It comes with a choice of SDRUno for Windows (10 and 11) and Multiplatform SDRconnect SDR software for Windows, MacOS, and Linux (supplied free of charge by SDRplay). You can monitor up to 10 MHz of

spectrum at a time. The SDRUno software has all the popular ham bands and shortwave broadcast bands as "presets" for instant setup.

Multiple high-performance preselect filters minimize phantom signal problems. Software-selectable AM/FM and DAB broadcast band notch filters minimize intermodulation problems from strong interfering signals. The RSP1B powers over the USB cable with a simple, robust-type B socket. A software-selectable 4.7-V bias-T powers an external remote antenna amplifier.

A calibrated S meter measures RF power and signal-to-noise ratio.

The receiver is compatible with many third-party software digital decoders. To check compatibility with your choice of computer hardware, operating system, and SDR application software, go to <https://www.sdrplay.com/downloads/>.

A documented API allows devel-



**SDRplay RSP1B 14-bit SDR.**

opers to create new demodulators or applications around the platform.

Radio amateurs will find the RSP1B useful for shortwave radio listening, broadcast DXing (AM/FM/TV), panadapter, aircraft (ADS-B and ATC), slow-scan TV, multiple amateur band monitoring, WSPR and digital modes, weather fax (HF and satellite), satellite monitoring, geostationary environmental satellites, trunked radio, utility and emergency service monitoring, and fast and effective antenna comparison. ★

## 2024 RACES Guidebook Is Now Available

**O**CSD Emergency Management Division Deputy Director Lee Kaser, KK6VIV, advises that the Twenty-Sixth edition of the *RACES Guidebook* (“Yellow Book”) is now available, and copies will be mailed to each listed city

and regional RACES Unit Coordinator. Chief Radio Officers should coordinate the distribution of the books to each member, as there is a limited supply.

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## Errata Released for Extra-Class Question Pool

**T**he National Conference of Volunteer Examiner Coordinators (NCVEC) Question Pool Committee (QPC) has released errata for the new 2024-2028 Element 4 Extra Class Question Pool, which goes into effect

on July 1. The errata includes minor question changes, the removal of one question, and one modified graphic. These updates are reflected in the new downloadable files, dated January 31, 2024. The [ARRL VEC](#) advises the

community to regularly check the NCVEC website at <https://www.ncvec.org/> for updates to the question pools. [Submit](#) feedback or questions to the Question Pool Committee. ★

## Hams Needed to Help on Solar Eclipse Project

**M**onday, April 8, 2024, will bring a total solar eclipse across much of North America. This celestial event will be followed widely by hams because of the sudden and dynamic changes that occur in the ionosphere during an eclipse.

The Ham Radio Science Citizen Investigation is encouraging amateurs to get on the air and operate as part of the HamSCI Festivals of Eclipse Ionospheric Science. Propagation experiments will include the Solar Eclipse QSO Party using CW, FT4/8, SSB, and other digital modes and The Gladstone Signal Spotting Challenge (GSSC) using CW, WSPR, and FST4W modes.

The April 8th event will run from 1400-2400 UTC and amateurs may operate on any band and any mode from 6-160 meters (except the WARC bands.) The partial eclipse begins ~1710 UTC in Texas and ends ~2040 UTC in Maine).

Participants are encouraged to operate before, during, and after the eclipse passes over the continental U.S. Doing so will create baseline data (pre- and post-eclipse), and eclipse influenced data (during annularity or totality) for the research team. All the details may be found at <https://www.hamsci.org/eclipse>.

The Case Amateur Radio Club, W8EDU, the club station at Case Western Reserve University in Cleveland, Ohio, is asking for amateur radio operators to help with a research project centered around the April 8th solar eclipse.

W8EDU club member Adam Goodman, W7OKE, said the project centers around studying the effects of the eclipse on propagation to better understand the recombination time of the ionosphere.

“To do this, we are recruiting North American amateur stations interested in recording the Canadian time standard station CHU (Canada's WWV) for two weeks surrounding



the eclipse,” added Goodman. “Anyone with a KiwiSDR or a rig that can interface with analysis/recording software such as Fldigi is encouraged to reach out to us to participate.”

W8EDU club member and project software manager Maris Usis, KE8TXG, said that while the software is simple to use, there is some detailed work involved. “We can help make it easier and there are good online instructions as well,” said Usis.

All of the participation details are on the club's website at <https://w8edu.wordpress.com/chu-eclipse-data-collection/>.

W8EDU club faculty advisor David Kazdan, AD8Y, said the research project has received positive attention from the ARRL Collegiate Amateur Radio Program community, the Ham Radio Science Citizen Investigation (HamSCI) community, and Case Western Reserve University's engineering deans. “It is already a truly international effort, and we are collaborating with more than 20 stations across the continent, from collegiate and high school stations, to a representative from the Radio Amateurs of Canada, to a station in Mexico,” said Kazdan.

The 2024 solar eclipse will occur over Mexico, the United States, and Canada. ARRL is a partner with HamSCI to help promote this opportunity for radio amateurs to participate in an active science experiment, through the Solar Eclipse QSO Party. ★

# 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)**



## OC Countywide Winlink P2P Drill *By Scott MacGillivray, KM6RTE*

Based on the successful previous drills, the next countywide Winlink Peer-to-Peer (P2P) practice drill is planned for the morning of Saturday, March 2, 2024, from 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.

**Importance of Winlink P2P:** For those not familiar with Winlink P2P, it is one of the four Operating Modes that Winlink supports and does not rely on intermediate “Gateways” or connection to the internet. It is extremely valuable to understand how to operate Winlink since it is expected to be a vital operational mode after a major disaster when internet services are not available in the surrounding region. I highly recommend that you take advantage of this drill if you have not operated P2P before. Though, make sure your Winlink equipment can operate using Conventional Mode (i.e., using a local RMS “gateway”) before participating in this drill. The purpose of this drill is not to verify that your Winlink equipment works, but instead focuses on becoming familiar with how to operate P2P mode.

The drill will again include the option of sending a Winlink P2P message with an attached Form to “Drill Ops” located at Loma Ridge, in central Orange County. 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. 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 to the last half of the drill period may provide an opportunity for

less congestion. Though, I will operate Drill Ops until no one is sending any more messages.

Drill details were described in the Winlink Peer-to-Peer Drill document (File: WinlinkP2PDrill\_2024Mar02\_V1) that was attached in my recent email to the ocsd-races.groups.io list. 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”) were 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.

## Orange County Amateur Radio Club (OCARC)

The next meeting of the Orange County Amateur Radio Club will be on Friday, March 15, 2024, at 7:00 p.m., at the American Red Cross (George M. Chitty Building), 600 Parkcenter Drive, in Santa Ana. Bodo Fritsche, DF8DX, will present: “High Power RF: transmitters, antennas, amplifiers.” Interested on-line 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> after 9:00 a.m.

## Los Angeles County Disaster Communications Service (DCS)

### Rick Norwood, KD6KHJ, Silent Key

With great sadness we report that Rick Norwood, KD6KHJ, Staff 10, Chief Communications Officer, Los Angeles County Disaster Communications Service (LACDCS), passed away on Tuesday, February 20, 2024, at Kaiser Permanente Hospital in Downey. Rick had been battling the advanced stages of diabetes for a long time. He is survived by his wife Nancy Norwood. Rick joined DCS more than 40 years ago.

# March 2024

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2 Weekly 60 m ACS Net & Winlink P2P Practice Drill
3	4 Weekly 2 m ACS Net & OCRACES Zoom Meeting	5	6	7	8	9 Weekly 60 m ACS Net
10	11 Weekly 2 m ACS Net	12	13 Orientation for PSR Applicants	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 & PSR Applicant Prescreen
24	25 ACS Nets on 4 Bands	26	27	28	29	30 Weekly 60 m ACS Net
31						

### Upcoming Events:

- **March 2, 0900-1200 hours:** Winlink Peer-to-Peer practice drill
- **March 4, 1930-2130 hours:** OCRACES meeting, online on Zoom
- **March 13, 1830 hours:** Orientation for PSR Applicants, Sheriff's Regional Training Academy, Tustin
- **March 15, 1900 hours:** Orange County Amateur Radio Club meeting, American Red Cross (George M. Chitty Building), 600 Parkcenter Drive, Santa Ana
- **March 23, 0900 hours:** Prescreen for PSR Applicants, Sheriff's Regional Training Academy, Tustin
- **April 1, 1930-2130 hours:** OCRACES meeting, in-person at OC EOC, Loma Ridge
- **April 8, 1400-2400 UTC:** HamSCI Festivals of Eclipse Ionospheric Science
- **May 4: 0900-1200 hours:** City/County RACES & EmComm ACS Drill



### 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

<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.

### OCSD RACES Coordinator

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 It's Where It's @!

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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

**OCSD  
 RACES  
 Coordinator** →



Lee Kaser  
 KK6VIV



Heide Aguire K3TOG    Jack Barth AB6VC    Joel Bishop AJ6ZP    Eric Bowen W6RTR    Ray Grimes N8RG    Ted Lavino KG6LZP    Steve Livingston NJ6R    Scott MacGillivray KM6RTE



Robert Moore KW6B    Ryan Moore KN6WSJ    Ron Mosher K0PGE    Fran Needham KJ6UJS    Chi Nguyen KE6MVS    Joe Selikov KB6EID    Robert Stoffel KD6DAQ    Chuck Streitz KK6HFS    Ken Tucker WF6F