

November 2019



Newsletter of the County of Orange Radio Amateur Civil Emergency Service

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## Captain's Corner

by RACES Captain Ken Bourne, W6HK, Chief Radio Officer

### Technology and Emergencies

Radio amateurs should be well-rounded. Amateur radio is not only a technical hobby, with a history of hams developing advanced radio-electronics technology, but also a service that provides emergency communications. Hams should not limit themselves to exploring radio technology or providing emergency communications; rather, they should strive for expertise in both areas. The FCC rules say that one purpose of the Amateur Radio Service is "Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art." Another purpose listed in the FCC rules is "Recognition and enhancement of the value of the amateur service to the public as a voluntary communication service, particularly with respect to providing emergency communications." A ham who acquires a license to participate only as a RACES (or ARES or other EmComm) member for emergency communications is shirking his responsibility to acquire technical knowledge, which he can share with other hams. On the other hand, a ham who acquires a license only to experiment with radio technology is shirking his/her responsibility to provide emergency communications. A ham should be *both*—a radio-electronics experimenter and an emergency communicator.

A technically oriented ham will enjoy his experience even more if he is practical and keeps in mind that his discoveries could enhance his/her (or other hams') capabilities in improving emergency communications systems. An EmComm-oriented ham who continues to increase his/her technical knowledge will appreciate how his/her radio equipment performs and will expand his

communications capabilities by knowing how to program his radios (important if he is deployed to a city with frequencies that are not already programmed in his radio), how to troubleshoot problems, how to improve his antenna system for more effective radio coverage, how to choose an appropriate band for effective coverage (based on current propagation conditions), and how to use the many modes of communications.

A ham who focuses on technology, or rag-chewing, or contesting might think he is prepared to jump into a RACES or other EmComm operation during an emergency and offer assistance, without being trained to do so. He/she might not realize that RACES is not a club, but rather is a government auxiliary communications unit, consisting of trained and vetted members.

When a non-RACES ham offers assistance during an emergency, but cannot be used because of government policies, he/she should be treated with respect, thanked for his/her offer of service, and given information. Becoming a RACES involves passing a background check, having appropriate radio equipment, and attending training meetings or classes.

### NIMS and ICS

The agency that a RACES unit serves has an emergency response management system in place. This system follows Federal Emergency Management Agency (FEMA) guidelines, using the National Incident Management System (NIMS). "NIMS provides a common, nationwide approach to enable the whole community to work together to manage all threats and hazards." A ham receiving FEMA training will acquire an understanding of emergency mitigation. I recommend enrol-

### Next OCRACES Meeting:

Monday,  
November 4, 2019,  
at 1930 Hours

840 N. Eckhoff  
Street, Suite 104,  
Orange

Phil Burtis, KF6NFA  
Huntington Beach  
RACES and CERT



Orange County Sheriff's Department  
Communications & Technology Division

## Captain's Corner *Continued from page 1*

ling in an AUXCOMM (auxiliary communications) course. There are prerequisite FEMA Incident Command System (ICS) courses: IS-100.C (Introduction to the Incident Command System, ICS 100); IS-200.C (Basic Incident Command System for Initial Response); IS-700.B (An Introduction to the National Incident Management System); and IS-800.C (National Response Framework, an Introduction). These are free online courses. Upon successfully passing an exam at the end of each course, you will be able to download a certificate. OCRACES members are required to pass the IS-100, -200, and -700 courses.

Government agencies typically use several different standardized ICS forms. ICS acronyms, flow charts, procedures, and forms may seem overly bureaucratic to untrained technical hams, but they are necessary to function in an ef-

fective manner and to provide records for later after-action reviews of an event. OCRACES uses several different ICS forms (some modified for clarity or to improve operations), which may be downloaded from <https://ocraces.org/forms.html>:

- ICS 205 Incident Communications Plan
- ICS 211A Incident Personnel Check-in List (modified multi-purpose)
- ICS 213 General Message Form (FEMA standard or compliant amateur)
- ICS 214 Unit Log (modified for ACS/RACES or template for Severe Fire Weather Patrol)
- ICS 309 Communications Log (modified for ACS/OCRACES)

## SCS Announces PACTOR Monitoring Software

*The following information was posted on the ARRL website.*

SCS, the company that created PACTOR, has unveiled software that offers the ability to monitor the content of PACTOR 1, 2, and 3 transmissions over the air. The free PMON software runs under the Linux operating system. A software version to monitor PACTOR 4 is scheduled to become available next year. PMON will offer “thorough observation and documentation of all presently available PACTOR 1, 2, and 3 transmissions,” SCS said.

“PMON covers all PACTOR levels with the appropriate speed levels and packet variations,” SCS said. “PMON will read in parallel PACTOR 2 and PACTOR 1. The very wide receiving range (frequency offset  $\pm 200$  Hz), as well as automatic sideband recognition, ease routine operation of PMON with PACTOR 2 and PACTOR 3 considerably.”

According to SCS, only minimal hardware is required to use PMON. The equipment complement includes a Raspberry Pi 3 Model B+ (minimum) computer and a USB sound device. SCS noted in an October 11 news release that all SCS PACTOR hardware modems include a command to allow PACTOR monitoring on the fly. The German company says PMON now makes this possible without a modem and adds the ability to decode B2F/LZHUF-compressed messages—Winlink email and others.

“This exciting new software development for Raspberry Pi complements and surpasses previously released SCS software that leveraged PACTOR modems’ ability to monitor PACTOR to read Winlink for meaning,” SCS said. The company also said the new software permits modem-less monitoring of all kinds, something that would be useful for monitoring Winlink e-mail traffic.

The Winlink Development Team called the new software a “welcome contribution to the Amateur Radio community.”

The issue of message transparency arose in recent months with respect to renewed attention to ARRL’s so-called “symbol rate” petition for rulemaking (RM-11708) and the accommodation of automatically controlled digital stations (ACDS)—many of which employ Winlink. Some commenters on ARRL’s petition have asserted incorrectly that PACTOR facilitates de facto message encryption, which would violate FCC Amateur Service rules.

## OCRACES Stays with OCSD/Communications

Lee Kaser, KK6VIV, who was the OCSD RACES Program Coordinator, is now the Assistant Emergency Manager with OCSD’s Emergency Management Division. He continues to be the direct contact from EMD to OCRACES and will be involved in activating OCRACES when EMD requires emergency backup communications. OCRACES will remain with OCSD’s Communications & Technology Division. Sharing the position of OCSD RACES Program Coordinator are Emergency Communications Coordinator Pete Jimenez, KI6UTE, and Senior Telecommunications Engineer Erik Schull, KE6BVI.

## Next OCRACES Meeting: Monday, Nov. 4th

The next County of Orange RACES meeting will be on Monday, November 4, 2019, at 7:30 PM, at OCSD Communications & Technology Division, 840 N. Eckhoff Street, Suite 104, in Orange. At this meeting, Phil Burtis, KF6NFA, will give a presentation on Huntington Beach CERT hams working closely with Huntington Beach RACES. RACES members from cities in Orange County are urged to attend, to get an idea of how to make RACES and CERT work together in their cities.

## OCSD/EMD Activates RACES Fire Patrols

As is typical every year in October, Santa Winds start howling and RACES Severe Fire Weather Patrols are activated. There has been no exception this October. On October 8th, the National Weather Service issued a Red Flag Warning for Orange County from October 10th at 3:00 AM to October 11th at 6:00 PM. OCSD Emergency Management Division then activated all fire patrols for that period. On Thursday morning, October 10th, Chief Radio Officer Ken Bourne, W6HK, hopped in Assistant Radio Officer Jack Barth's, AB6VC, truck and they patrolled along Santiago Canyon Road and other canyons (Black Star, Silverado, Williams, and Modjeska) for almost 6 hours, while Randy Benicky, N6PRL, patrolled the Trabuco Canyon and Live Oak Canyon area. The next day, Friday, October 11th, Ken patrolled for 4 hours. Randy patrolled again in South County. They communicated with each other via the OCRACES 146.895 MHz repeater. Non-RACES Fire Watch participants set up stationary observation points, mostly to county parks and along Santiago Canyon Road and Black Star Canyon Road. Those who were hams communicated via the SOARA UHF repeater.

On October 22nd, NWS issued a Red Flag Warning from October 24th at 5:00 AM to October 25th at 5:00 PM. OCSD/EMD activated all fire patrols for that period. On Thursday morning, October 24th, Ken Bourne, W6HK, and MESAC Chief Radio Officer Patrick Williams, KJ6PFW, headed down Santiago Canyon Road, but were diverted onto the 241 toll road because of a fire-caused road closure. They exited at Santa Margarita Parkway and patrolled the southern canyons for 5 hours and stopped to exchange information with several Fire Watch members, while OCRACES Radio Officer Scott Byington, KC6MMF, and Jack Barth, AB6VC, patrolled Carbon Canyon and other areas to the north.

As we go to press, RACES has been activated for additional fire patrols under increasingly threatening conditions.

## Great ShakeOut Drill Has 35 Participants

In support of the Orange County Sheriff's Department Emergency Management Division (EMD), County of Orange RACES activated at the EOC on Loma Ridge for the Great California ShakeOut on Thursday, October 17, 2019, from approximately 10:00 AM to 11:00 AM. Chief Radio Officer Ken Bourne, W6HK, in the EOC RACES Room took calls on the 146.895 MHz repeater from OCRACES members as well as from members of City RACES and MOU units.

The Great California ShakeOut is an annual opportunity to practice how to be safe during big earthquakes: "Drop, Cover, and Hold On." At the beginning of the drill, Ken announced over the air (beginning and ending with "This is a drill!") that a severe earthquake shook the EOC at "Mike-Mike VIII," which signifies "Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned." He also announced that the bridge over the 241 toll road collapsed, isolating everyone at the EOC. Ken then asked for simulated "Mike-Mike" reports from everyone on the repeater, referencing the Modified Mercalli Earthquake Intensity Scale.

Twelve RACES and MOU units were active in the drill, with 35 participants checking in to OCRACES net control. Besides Ken Bourne, W6HK, OCRACES participants included Scott Byington, KC6MMF, Tony Scalpi, N2VAJ, Robert Stoffel, KD6DAQ, and Applicants Kathy Gary, KK6RZC, Duke Walls, W6EIF, Julie Warrick, KN6AOC, and Mark Warrick, KM6ZPO. City RACES participants included: Fullerton (K6FUL)—Gene Thorpe, KB6CMO; COAR (Orange)—Al Alba, K6EGA, Toni Bush, KN6CHX, Quentin Cassin, W6RI, Hy Finkelstein, KM6KQG, Jeff Mikoleit, KK6YUP, Don Poysa, KØVNJ, Robbie Robinson, KB6CJZ, and Will Stoddard, KJ6IA; Huntington Beach—Bill Rose, K6HMS, Greg Turlis, K6GAT, and Jeff Turlis, KE6BNS; IDEC (Irvine)—Pete Bergstrom, K6PB; Laguna Niguel (WE6ACS)—David Gorin, KB6BXD; Laguna Woods—John Pilger, K6PIO; Newport Beach—Steve Livingston, KM6JON; Placentia—Bill Spear, KN6AVU; Westminster—Chi Nguyen, KE6MVS; Tri-Cities—Phil Greenberg, W6SOI, Bret Gross, KJ6WNQ, Dick Hilde, K6JRW, Andy Holtz, KI6IZD, Joe Lopez, W6BGR, and Bob Thompson, KE6RKG. Red Cross also participated—John Butler, KJ6ITN, and Robert Gimbel, KG6WTQ.

## Deployment Drill Conducted on October 5th

City and County RACES units conducted a deployment drill on Saturday, October 5, 2019, from 0900 to 1100 hours. American Red Cross also participated. Unit members set up portable stations on 60 meters as well as on OCRACES repeaters on 2 meters and 70 centimeters, looking for areas that were difficult for accessing the repeaters, such as deep in canyons or below seaside cliffs, and overcoming these difficulties with simplex relays through stations at high locations and via NVIS (near vertical incidence skywave) propagation on 60 meters. Many of the portable and mobile stations beamed their locations via APRS, either over the air or via a cell-phone app.

At 0830 hours that Saturday morning, OCRACES Chief Radio Officer Ken Bourne, W6HK, made sure that all positions in the Orange County EOC RACES Room were operational on the 2-meter repeater and two of the 70-centimeter repeaters, on Winlink, and on 60 meters. One position monitored <https://aprs.fi> for stations in the field that were beaming APRS. Ken then assigned OCRACES Member Tom Wright, KJ6SPE, and Applicant Julie Warrick, KN6AOC, to operate on the 2-meter and 70-centimeter repeaters, Applicant Mark Warrick to operate on 60 meters and on Winlink, and Applicant Joanne Hubble, KM6ZDF, to log contacts. After all positions were operational, Ken and OCSD Assistant Emergency Manager Lee Kaser, KK6VIV, departed to the field in an OCSD Chevy Tahoe, to check repeater and APRS coverage along Loma Ridge Jeep Trail and at the eastern end of Silverado Canyon Road, where they were going to set up a 60-meter portable station. Unfortunately, Ken had transferred a wrong Hamstick to the Tahoe and they were unable to produce an adequate signal on 60 meters. Repeater coverage was virtually nonexistent at the eastern end of Silverado Canyon Road. Ken beamed their locations via APRS, using a Byonics Micro-Trak MT-AIO 2-meter tracking transmitter. Access to an APRS gateway was achieved only along Loma Ridge Jeep Trail, but not along Silverado Canyon Road. Using the [aprs.fi](https://aprs.fi) app on his iPhone, Ken could be tracked about half way down Silverado Canyon Road.

OCRACES Assistant Radio Officer Bob McFadden, KK6CUS, set up a portable station in the Strand Beach parking lot in Dana Point during the drill. He observed repeater coverage on 2 meters and 70 centimeters, and successfully contacted the EOC on 60 meters via NVIS propagation. He used a dual-Hamstick 60-meter dipole on a tall tripod mast. He successfully sent Winlink messages to the EOC, using his Kenwood TH-D74 handheld radio and a laptop.

OCRACES Member Tony Scalpi, N2VAJ, set up a portable station at Belmont Park in Orange. The city gave him a permit to go beyond a gate to a spot that was over 860 feet above sea level. There he operated as a relay station on 2-m and 70-cm simplex, 60 meters, two OCRACES 70-cm repeaters, and the OCRACES 2-meter repeater, using a Yaesu FT-897D HF/VHF/UHF all-mode transceiver and a Yaesu FT-1DR dual-band handheld that beamed APRS. Antennas included an Elk 2-m/70-cm log-periodic and a vertical 60-m Hamstick with radials. Tony's primary function was to provide simplex relays between field stations and from field stations to the EOC. Contacts included Brea RACES in Brea



At the Orange County EOC are OCRACES Applicants Julie Warrick, KN6AOC (left), Joanne Hubble, KM6ZDF (center), and Mark Warrick, KM6ZPO (right). Behind Joanne is OCRACES Member Tom Wright, KJ6SPE.



Sgt. Bob McFadden, KK6CUS, checked the 2-m and 70-cm repeaters from Strand Beach in Dana Point and contacted the OC EOC via 60-m NVIS (using a dual-Hamstick dipole) and via Winlink with a Kenwood HT and laptop.



OCRACES Member Tony Scalpi, N2VAJ, set up this 2-m/70-cm/60-m portable relay station at Belmont Park, high in the hills of Orange. He beamed APRS with a Yaesu FT-1DR HT.

*Continued on page 2*

## October 5th Deployment Drill *Continued from page 4*

Canyon and Carbon Canyon, Fountain Valley RACES at Harper Park and elsewhere, Orange RACES (COAR) at Irvine Park and elsewhere, and Mission Viejo RACES at El Dorado Park.

OCRACES Member Randy Benicky, N6PRL, operated along Ortega Highway in South County, checking for VHF/UHF repeater dead spots and 60-meter coverage.

Simplex relays from Bob and Tony as well as from some city RACES units at high points proved valuable, especially since the Orange County EOC did not activate a simplex position until the last half hour of the drill, due to shortage of operators.

OCRACES had fewer participants than last year that were available for this drill. We had no team to cover Carbon Canyon this year, which is an important area to test for coverage. Fortunately, Brea RACES provided excellent coverage in Carbon Canyon during this drill. From Olinda Village, they communicated to other city and county locations using UHF/VHF and 60 meters. They successfully used different transceivers and antenna configurations at various power levels from behind Brea Fire Station #4. Communications conducted from Kraemer and Lambert were also successful, using the OCRACES repeaters and simplex, with only a 5-watt handheld.

Laguna Woods RACES set up their net control at the Clubhouse 1 Radio Room and also deployed units to Clubhouse 3 and Clubhouse 4. Communications with OCRACES was successfully accomplished on the planned frequencies from the Clubhouse 1 Radio Room, using the Disaster Radios located there. Their Yaesu FT-1200DX was used with an outdoor 60-meter dipole. The antenna consisted of a pair of MFJ Hamsticks and a tripod base. They made several contacts with OCRACES using this setup. Bruce Bonbright, NH7WG, beamed his location via APRS. In addition, he unsuccessfully tried to communicate with OCRACES via DMR radio. Communications with Clubhouse 3 and 4 was accomplished using the IC-880 and BTECH Disaster Radios in the Radio Room. After an initial check-in using the W6LY repeater (147.615MHz), stations were requested to move to either the LWRACES primary or secondary simplex frequencies (146.580 MHz and 144.320 MHz). Two Captain Disaster Physical Injury and two Building Damage reports were successfully passed to net control by each station.

Other city RACES and MOU units had similar results while conducting extensive communications tests. Besides OCRACES, Brea RACES, and Laguna Woods RACES, participants included RACES/ACS units from Fountain Valley, Fullerton, Irvine, Laguna Niguel, Mission Viejo, Newport Beach, Orange, San Juan Capistrano (as Tri-Cities RACES builds its activities), and Westminster. Huntington Beach RACES was extremely busy providing communications (with assistance from Costa Mesa RACES) during the city's "The Great Pacific Airshow" that weekend. Nevertheless, Jeff Turlis, KE6BNS, took the time to check into the City/County drill. Cal OES CRU (Paul Gussow, W6GMU) and American Red Cross also participated.

Winlink was activated during the drill, with eight messages received at the OC EOC from KK6CUS (OCRACES), KE6MVS (Westminster RACES), NI6E (Newport Beach RACES), N6IPD (IDEC), KM6ZPO (on his own equipment at the OC EOC), and KJ5RG (Mission Viejo RACES).

OCRACES Applicant Mark Warrick, KM6ZPO, operated the 60-meter station at the OC EOC, with a lot of activity on "channel 4" (5371.5 kHz upper sideband, which is the same frequency used on the weekly Saturday morning OCRACES 60-meter nets). He communicated with other OCRACES members in the field (KK6CUS at Dana Point, N6PRL mobile on Ortega Highway, and N2VAJ at Belmont Park in Orange), and with Brea RACES (W6RUW in Carbon Canyon, as well as KM6BRC and K6UDW), Fountain Valley RACES (N6NQN), IDEC (N6IPD), Laguna Woods RACES (K6EEE), Mission Viejo RACES (W6EDT and KJ5KG), Newport Beach RACES (NI6E at Corona Del Mar, K6GSX at Signal Peak and at Crystal Cove, and K6GVG). Other 60-meter contacts included Cal OES CRU (W6GMU), Ventura County ACS (N6WIX), Nye County EmComm in Pahrump, Nevada (KE7KHE), a couple of stations in Orange (WD6AJR and KB6KPK), and a station in Seal Beach (K6BUW). When communications were poor between stations in Orange County, relays were effective through the stations in Ventura and Pahrump.



**Laguna Woods RACES net control at the Clubhouse 1 radio room during the City/County RACES & MOU deployment exercise.**

# RACES/MOU News from Around the County

## Laguna Woods RACES

The City of Laguna Woods and the Laguna Woods Village participated in the Great ShakeOut exercise on Thursday, October 17, 2019.

At 0900, the City of Laguna Woods sent residents a text message and e-mail message via the AlertOC system. Residents registered their cell phones and e-mail addresses to receive the message. Chief Radio Officer Bruce Bonbright, NH7WG, received the message at 0901.

At 1017, the simulated 7.1 earthquake occurred and the Laguna Woods RACES/Disaster Task Force Radio Operators checked into an emergency net operated by Bruce, NH7WG, on the W6LY repeater (147.615 MHz).

By 1020, all seven Laguna Woods RACES members checked into the net and were given deployment locations. Four Laguna Woods Radio Club members checked in and received deployment locations.

At 1025, the Laguna Woods Village sent out a "CodeRed" alert as a test of the Village alert system. Bruce, NH7WG, received his alert e-mail message at 1025.

The Emergency Operations Center was established by Tim Moy at the Clubhouse 5 main ballroom, and the EOC radio operators set up their stations in the loading area near the stage.

The EOC Radio Operators included Bruce Bonbright, NH7WG; Jim Riedel, K6EEE, and John Pilger, K6PIO. The EOC was capable of receiving voice messages via amateur radio and digital images sent via cell phone text or e-mail. A laptop and printer supported the digital messages.

At Clubhouse 1, Don Schwab, K6IAA, manned the disaster radios at the Radio Room. In addition to sending emergency messages to the EOC radio operators, Don also conducted a Radio Drill on the Disaster Task Force radios, using the "Security 2" channel. Don had three units respond to his drill.

At Clubhouse 3, Tom Soule, K6ZMS, served as the Clubhouse Coordinator and Alan Clark, KJ6TXY, served as the Radio Operator. Alan set up his handheld radio and passed emergency messages to the EOC.

At Clubhouse 4, Bob Matonti, KN6CVB, and Don Martin, N6LLC, served as Radio Operators. Bob set up his BTECH radio and UHF antenna, and they passed a number of emergency messages (some via digital image) to the EOC.

At Clubhouse 5, Mike Epstein, KA6VPG, and Carol Epstein, KB6OTB, set up their BTECH radio and handheld radio at the entrance and sent a number of emergency messages (some via digital image) to the EOC.

At Clubhouse 6, Dave Southworth, KS6RFI, set up his handheld radio and sent numerous emergency messages (some via digital image) to the EOC.

Roving Photographer Allan Robertson, KD6PYX, visited each site and documented the stations.

John Pilger, K6PIO, contacted OCRACES on their primary 2-meter repeater and advised them of simulated earthquake damage in Laguna Woods.

### Lessons Learned:

1. Several of the emergency messages that had items circled as critical did not require immediate action by the EOC. In one case, "two dogs" being in a manor was circled as critical. This issue was raised to Tim Moy at the debrief that followed the exercise. LWRACES had new guidance! Their radio operators made a judgement call. If something doesn't look to be immediate by the EOC, don't pass it. Develop a procedure for their radio operators to note that the item was not passed.

2. You can't operate more than one BTECH radio on the same frequency in the same room (and with the transmit antennas within 15 feet). For successful operation, each co-located BTECH radio needs to be on a different frequency. In addition, the 25-watt transmit power of the BTECH can swamp a handheld that is tuned to the same frequency while being operated in the same location. Bottom line: operate just the BTECH radio and have the other radio(s) either on a different frequency or turned off. If multiple radios are operated at the same location on the same frequency, handhelds work best.

3. Digital images (photos taken with your cell phone) sent via text message (best) or e-mail (not as easy) work well and are extremely fast. If cell-phone service is available, this is the fastest way to get a critical item in need of immediate attention. In a real disaster, hundreds of messages might need to get to the EOC. Cell phones should be used to pass these messages when the volume gets high on voice amateur radio. It is critical to take a high-resolution image of the emergency message and to capture all of the message. For example, if building number or manor number isn't in the photo, no one will know where to go to respond to the situation.

**"RACES/MOU News" provides an opportunity to share information from all City & County RACES/ACS units and MOU organizations and supportive amateur radio clubs in Orange County.**

**Please send your news to NetControl Editor Ken Bourne, W6HK, at: kbourne.ocsd@earthlink.net**

# November 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2 No Net
3 Daylight Saving Time End	4 Weekly 2 m ACS Net & OCRACES Meeting	5	6	7	8	9 Weekly 60 m ACS Net
10	11 Veterans Day & Weekly 2 m ACS Net	12	13	14	15	16 Weekly 60 m ACS Net
17	18 Weekly 2 m ACS Net & Cooperative T-Hunt	19	20	21	22	23 Weekly 60 m ACS Net
24	25 ACS Net on Five Bands & Cal OES Nets	26	27	28 Thanksgiving Day	29	30 Weekly 60 m ACS Net

## Upcoming Events:

- **November 4:** OCRACES Meeting, 1930-2130 hours, OCSD Communications & Technology Division, 840 N. Eckhoff Street, Suite 104, Orange
- **November 11:** Veterans Day (OCRACES ACS net in operation)
- **November 18:** Cooperative T-Hunt (immediately following 2-meter ACS Net)
- **November 28:** Thanksgiving Day
- **December 2:** OCRACES Holiday Dinner, 1830 hours



[www.ocraces.org](http://www.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  
 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)  
 23 cm: 1287.650 MHz, 1287.675 MHz, 1287.700 MHz, 1287.725 MHz, 1287.750 MHz, and 1287.775 MHz outputs, -12 MHz inputs, 88.5 Hz PL  
 \*Primary Net—Mondays, 1900 hours

OCSD Emerg. Comm's Coordinator  
 Pete Jimenez, KI6UTE, 714-704-8080

Radio Officer (Lieutenant)  
 Scott Byington, KC6MMF

OCSD Sr. Telecommunications Engr.  
 Erik Schull, KE6BVI, 714-704-7937

Assistant Radio Officers (Sergeants)  
 Jack Barth, AB6VC  
 Ernest Fierheller, KG6LXT  
 Bob McFadden, KK6CUS  
 Tom Tracey, KC6FIC

Chief Radio Officer (Captain)  
 Ken Bourne, W6HK, 714-997-0073

## County of Orange RACES

OCSD Communications & Technology Division  
 840 N. Eckhoff Street, Suite 104, Orange, CA 92868-1021  
 Telephone: 714-704-8080 or 714-704-7937 • Fax: 714-704-7902  
 E-mail: [pjimenez@ocsd.org](mailto:pjimenez@ocsd.org) or [eschull@ocsd.org](mailto:eschull@ocsd.org)

# County of Orange RACES

OCSD/Communications & Technology  
 840 N. Eckhoff Street, Suite 104  
 Orange, CA 92868-1021

Telephone – 714-704-8080 or 714-704-7937  
 Fax – 714-704-7902  
 E-mail – [pjimenez@ocsd.org](mailto:pjimenez@ocsd.org) or [eschull@ocsd.org](mailto:eschull@ocsd.org)

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Questions or Comments?  
 Contact *NetControl* Editor Ken Bourne, W6HK  
[kbourne.ocsd@earthlink.net](mailto:kbourne.ocsd@earthlink.net)



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

## Meet Your County of Orange RACES Members!

**Officers** →



Ken Bourne W6HK    Scott Byington KC6MMF    Jack Barth AB6VC    Ernest Fierheller KG6LXT    Bob McFadden KK6CUS    Tom Tracey KC6FIC

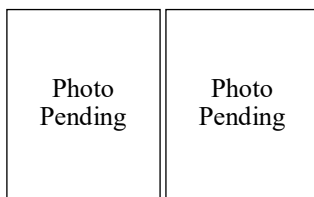


Randy Benicky N6PRL    Ray Grimes N8RG    Lee Kaser KK6VIV    Walter Kroy KC6HAM    Martin La Rocque N6NTH    Don Mikami N6ELD



Harvey Packard KM6BV    Tony Scalpi N2VAJ    Joe Selikov KB6EID    Robert Stoffel KD6DAQ    Ken Tucker WF6F    Tom Wright KJ6SPE

**OCSD  
 RACES** →  
**Coordinators**



Peter Jimenez K16UTE    Erik Schull KE6BVI