May 2019

County of Orange RACES

NetControl

Newsletter of the County of Orange Radio Amateur Civil Emergency Service

Next OCRACES Meeting

**Monday,
May 6, 2019,
at 1930 Hours**

840 N. Eckhoff Street, Suite 104, Orange

Mojave Death Race by Vivian Jui, KK6DTS

Orange County Sheriff's Department
Communications & Technology Division

Captain's Corner
by RACES Captain Ken Bourne, W6HK, Chief Radio Officer

Password Managers

During my presentation on cybersecurity at the April 1st OCRACES meeting, I was asked several times for my recommendation for the best password manager. Except for recent experiments with a free password manager, I have not used one and therefore I did not have a recommendation. However, I promised to do some research and share the results in this column.

I mentioned four common methods of storing passwords:

- Paper: hackerproof, but someone could find your file (especially in an office environment); you could lose your notes or they could be lost in a fire, flood, or burglary

- Flash drive or external drive: hackerproof; a flash drive can be kept in your pocket (but subject to loss); subject to failure and complete loss (but so is your computer's built-in hard drive)

- Password-manager software: encrypted and password-protected file on the cloud or on your computer

- Cloud: encrypted and password-accessed; can be hacked; no access to your passwords during an Internet outage

Those attending my presentation appeared to favor the password-manager method of storing passwords, but wanted deeper insight on what's available and the pros and cons.

A password manager assists in generating and retrieving complex passwords, potentially storing such passwords in an encrypted database, or calculating them on demand.

There are risks to using a password manager and putting all your passwords in one place. If a hacker gains access to your master password, all of your accounts would be in jeopardy. If a hacker gets into the central vault of the password-manager company, it's possible that millions of account credentials could be stolen. I haven't seen "breaking news" of such a disaster, but perhaps it's only a matter of time. Or maybe not. Most password managers use multifactor authentication, so your credential vault can only be reached with both a correct password and a correct authentication code sent to a device you own. Master vaults are usually protected by the vendor encrypting your information locally, before it leaves your device. That encrypted information is stored on the vendor's servers. That's supposed to be very secure (we hope!).

A typical recommended password managers provides browser plug-ins for capturing and replaying passwords automatically. It can save your credentials when you log into a secure website and fills in those credentials when you return to that site. It also offers multiple account logins for the same site. Saved logins appear in a toolbar menu.

Some password managers flag weak and duplicate passwords and replace them with tough-to-crack passwords. The best ones automate this process. Although in my presentation I recommended a 14-character password, *PCMag* recommends at least 16 characters. If you go with their recommendation, make sure you get a password manager that has a built-in random password

Captain's Corner *Continued from page 1*

generator.

While most password managers auto-fill stored credentials, make sure that yours also automatically fills in personal data on Web forms. Don't accept a website's offer to save your address, credit-card details, etc., or you will risk your personal data. Let your password manager fill the form each time.

Never log into a website that asks for your username and password, unless it's a secure site (https:// URL) with a valid certificate. Even on such a secure site, bad guys can snoop your activity and learn your IP address. Browsing via a virtual private network (VPN) adds protection. Some top password managers, such as "Dashlane," include a simple VPN. "RememBear" includes the same source as the respected TunnelBear VPN.

Most of the best password managers can sync between Windows, Mac, Android, and iOS devices. Some let you authenticate on iOS or Android with your fingerprint or face, rather than typing the master password, including two-factor authentication.

PCMag's editors' choice for a free password manager is "LastPass." I'm experimenting with it and, so far, it looks good. It is also available in a premium version for $24.00, but I don't see a real need for the paid options.

As I looked at *PCMag*, *CNET*, and other sites that review password managers, it seems to me that "Dashlane" and "Keeper" get the best reviews. Dashlane's price is almost $60.00/year for the version that syncs across all your Windows, Mac, Android, and iOS devices. It includes VPN protection, scans the Dark Web for compromised accounts, and captures online shopping receipts. Compared to others, it's expensive and has some negatives, such as no special handling for nonstandard logins, and limited support for Internet Explorer.

At almost $30.00/year, "Keeper" gets good reviews. It supports all popular platforms and browsers. It has two-factor authentication plus secure password sharing and inheritance. It retains full history of passwords and files. It fills web forms (although somewhat limited) and app passwords. There are no fully automated password updates.

At the April 1st OCRACES meeting, I was asked to do some research on the "RoboForm" password manager. *PCMag* and *CNET* like "RoboForm 8 Everywhere" ($19.95/year), but don't consider it one of the top products. The cloud storage system syncs across many device types and browsers. Its Security Center identifies weak and duplicate passwords. It includes digital inheritance and secure sharing, as well as comprehensive web-form filling. It also manages application passwords. Complaints include limited import capability and a confusing user interface. Password generator defaults aren't optimal. Two-factor authentication is limited. The free version of "RoboForm" can store passwords locally on your computer or mobile device, but without sync or backup services.

David Corsiglia, WA6TWF, Moving to Georgia

We will be saying "73" to OCRACES Member David Corsiglia, WA6TWF, by about the middle of May, as he and his wife Sharon, N6YNK, are moving to Augusta, Georgia. David has been a well-known and respected Southern California ham for many decades and has been a valuable OCRACES member. He has given informative presentations at our meetings, served as the fox on some of our cooperative T-hunts, helped at Field Day, supported our Saturday 60-meter nets with his mountaintop remote system, and advised us on technical matters. David is a repeater/remote-base expert. He owns the WA6TWF Super System, a Southern California 440-MHz system with six repeaters in the greater Los Angeles area. The system includes HF capabilities, a low-band remote, and D-STAR repeaters.

David Corsiglia, WA6TWF.

For many years David was a Senior Communications Technician at OCSD's Communications & Technology Division. He has served for 46½ years as an OCSD Reserve Deputy, with the last several years as a Reserve Lieutenant in the OCSD Aero Squadron Reserve Unit. Prior to working at OCSD/Communications, David was an airline pilot. He started taking flying lessons when he was 15 years old and obtained his private pilot license when he was 17. He obtained his instrument, commercial, and single and multiengine instructor ratings by age 20. By the time he was 24, he had over 5,000 flight hours. At 26 he finished his four-year degree at Long Beach State in applied electronics. He then became a field service engineer with Communications Components Corporation and was sent to Iran, Sudan, South Africa, and Sweden to train pilots on a low-frequency navigation system. At 30 he started a two-way radio company, sold it in 1982, and got hired as a pilot by Continental Airlines. During his 17½ years at Continental he was a flight engineer on the Boeing 727 and the Douglas DC-10. He was a first officer on the Boeing 737. David said the best part of his airline experience was flying to Tokyo, New Zealand, Australia, Guam, Hawaii, Paris, and London.

We will miss David in the Orange County Sheriff's Department, as an OCRACES member and as a Reserve Lieutenant in the Aero Squadron Reserve Unit. He will remain our valued friend and we hope to work him often on HF after he "plants" his antenna farm in Augusta, Georgia.

Next OCRACES Meeting: Monday, May 6th

The next County of Orange RACES meeting will be on Monday, May 6, 2019, at 7:30 PM, at OCSD Communications & Technology Division, 840 N. Eckhoff Street, Suite 104, in Orange. At this meeting Vivian Jui, KK6DTS, will give a presentation on the Mojave Death Race, which will occur on the weekend of June 1-2, 2019. The race begins and ends in Primm, Nevada, over a 250-mile course with a counterclockwise loop to the south through Ivanpah Dry Lake Bed, the Mojave National Preserve, Essex, and Goffs. Due to remote locations, ham radio is the primary means of course communications, using linked repeaters, simplex, and rovers.

At this meeting we will have an "after-action" discussion of the May 4th ACS Radio Rodeo (see article below).

ACS Radio Rodeo: Saturday, May 4th

County and City RACES and MOU Units will participate in the annual ACS Radio Rodeo on Saturday, May 4, 2019. Set-up will begin at 0800 hours. A mandatory briefing will be at 0830 hours. Operations will be from 0900 to 1100 hours. This exercise, which began as an Orange County event, is now hosted by the California Governor's Office of Emergency Services (Cal OES), and covers the 11 counties of the Southern Region. The primary purpose of the event is to conduct radio tests among RACES/ACS mobile communications vehicles and portable stations within an Operational Area and with the Cal OES Regional EOC, which then tests communications with a station in each Operational Area central location. Each participating county in the exercise will have at least one central location where emergency communications vehicles will be gathered. The Orange County central location will be in the rear parking lot of OCSD Communications & Technology Division, 840 N. Eckhoff Street, in Orange.

The exercise will follow standard ICS procedures. Everyone must sign the ICS 211 A Incident Personnel Check-in List when they arrive at the central location. An exercise plan (Incident Action Plan) has been e-mailed to all agencies. An ICS 205 Incident Radio Communications Plan lists the roll-call frequencies.

The first operational hour (0900-1000) will consist of local roll calls of vehicles and portable stations at Eckhoff. Instead of 40 meters, our HF operation will be on 60 meters Channel 2 (5346.5 kHz upper-sideband dial frequency), and stations in other Operational Areas may also check in on that band. We will also have a full roll call on the 146.895 MHz repeater, followed by abbreviated roll calls on the 448.320 MHz, 52.62 MHz, and 223.76 MHz repeaters. Scheduling and coordination will be on 146.595 MHz simplex.

During the second operational hour (1000-1100), Cal OES Southern Region will conduct roll calls from their Regional EOC in Los Alamitos. These roll calls will be on 60 meters Channel 2, Cactus 70-cm linked system, SCRN 70-cm linked system, EARN 1¼-m linked system, OCRACES 448.320 MHz repeater, LACDCS repeaters, and a Riverside County 1¼-m RACES repeater. Only one or two stations at Eckhoff will participate in the Cal OES Southern Region roll calls. During that second operational hour, local participants will inspect each other's mobile communications vehicles and portable stations, and optionally contact their EOCs or other non-centralized stations on their agencies' RACES/ACS frequencies. Antenna analyzers will be available for those who wish to adjust their portable HF antennas.

Debriefing will be at 1100 to 1115 hours, followed by demobilization.

Fire Watch Symposium: May 11th

Orange County Fire Watch and Fire Watch Network Partners have begun their 2019 training and community interactive activities to spread the wildfire awareness message. Orange County Fire Watch will host the 2019 Fire Watch Symposium on Saturday, May 11, 2019, to coincide with California Wildfire Awareness Week. The symposium is open to those interested in wildfire awareness in their community and volunteers active with their respective Fire Watch programs.

The symposium will be at the Quail Hill Community Center, 39 Shady Canyon Drive, Irvine. There will be a feature presentation on the AlertWildfire Camera Network by Professor Neal Driscoll, UC San Diego, Geosciences Research Division. There will be additional presentations and discussions with fire-prevention specialists, wildland resource planners, meteorologists, park rangers, and fire agency representatives.

To register, go to https://letsgooutside.org/; activity search: 2019 Fire Watch Symposium.

Petition: Amateur Digital Mode Transparency

The FCC is accepting comments on a *Petition for Rule Making* (RM-11831) seeking to amend FCC Part 97 rules that require all ham radio digital transmissions to use techniques "whose technical characteristics have been documented publicly." The Petition, filed by Ron Kolarik, KØIDT, of Lincoln, Nebraska, expresses concerns that some currently used digital modes are not readily and freely able to be decoded, and it asks the FCC to require all digital codes to use protocols that "can be monitored in [their] entirety by third parties with freely available, open-source software," per §97.113(a)(4).

Kolarik said his petition also aims to reduce levels of amateur-to-amateur interference from Automated Controlled Digital Stations (ACDS) on HF operating under §97.221(c)(2). Kolarik wants the FCC to delete §97.221(c), which permits automatic control of digital emissions provided the station "is responding to interrogation by a station under local or remote control, and [n]o transmission from the automatically controlled station occupies a bandwidth of more than 500 Hz." The petition does not call for eliminating ACDS, however. Under current rules, ACDS are allowed in specific sub-bands.

In his *Petition*, Kolarik maintains that interference from ACDS continues to be "a major problem on the amateur bands." He suggested that an absence of formal complaints may be due to the fact that such stations are "difficult to identify."

The *Petition* also proposes to amend §97.309(a)(4) to ease monitoring of certain digital transmissions. "Without open, over-the-air interception capability for all transmissions in the Amateur Radio spectrum, there is no way to determine if there is commercial or other prohibited, inappropriate content in ongoing communications…" Kolarik's Petition asserts. He said problems arise when "protocols and devices used in commercial, government, and marine services are used in the Amateur Service with no adequate means to fully decode transmissions," thwarting any efforts at self-policing of such transmissions. He said simplifying the language "would remove ambiguity about what constitutes 'publicly documented technical characteristics' by requiring any protocol to be freely decodable," and lead to "amateur digital mode transparency, present and future."

Kolarik contended in his petition that FCC action stemming from ARRL's 2013 "symbol rate" *Petition for Rule Making* could increase congestion (i.e., interference) problems. In July 2016, the FCC in WT Docket 16-239 proposed to revise the Part 97 rules to eliminate current baud-rate limitations for data emissions, consistent with ARRL's Petition, but declined to propose a bandwidth limitation for MF and HF digital to replace current baud-rate limitations. ARRL had asked the FCC to delete the symbol-rate limits in §97.307(f) and replace them with a maximum bandwidth for data emissions of 2.8 kHz on amateur frequencies below 29.7 MHz.

FCC Agrees to 90-Day Pause in Consideration of WT Docket 16-239

It has been almost six years since the ARRL requested the FCC to consider changes to the Amateur digital rules in 11-708 and almost three years since the ARRL filed comments in the resultant proceeding (WT Docket 16-239).

The Commission's proposed changes differed from the ARRL's initial filing and caused the ARRL to be concerned about possible interference to current users resulting from the deletion of the ARRL's requested 2.8 kHz bandwidth limitation. Due to those concerns the League filed comments with the FCC opposing the deletion of the requested bandwidth.

Since the ARRL's initial filing many individuals and groups have commented to the FCC and publicly regarding issues and potential consequences they passionately believe are implicated by the FCC's proposals embodied in 16-239/11-708. Additionally, in the six years since the initial filing of 11-708 new information has been presented by individuals and groups who support and oppose the FCC's proposed adoption of 16-239.

Due to the time that has elapsed since the ARRL's initial digital rules change request, the new information that has become available and the extent of both support and opposition to the proposed rules change, the ARRL asked the FCC to grant a delay in its consideration of the proposed rules change to provide the League the opportunity to clarify the issues and determine whether a consensus can be reached on some or all of the issues raised by the FCC's proceeding.

At the League's request, the FCC Staff has agreed to a 90-day pause in the consideration of WT Docket 16-239.

ARSFI Claims RM-11831 Would Shut Winlink Down

The Amateur Radio Safety Foundation, Inc. (ARSFI), whose primary project is Winlink, submitted their response to RM-11831, which they claim would shut Winlink down in the US Amateur bands if adopted. They say that RM-11831

Digital Transmissions *Continued from page 4*

suggests that all digital modes be "open source," and easily readable over the air by anyone listening.

According to ARSFI (Winlink), RM-11831 also suggests that all unattended operations under 500 Hz would be cramped into the FCC §97.221(b) sub-bands with the elimination of FCC §97.221(c). As an example, that would put all such operations within the current band space on 40 meters of only 5 kHz, and up to 15 kHz maximum for other §97.221 sub-bands. That would be for *all* such operations, and not just Winlink. With no space and only "open protocols," it would also render these operations useless for US radio amateurs.

Radio amateurs are asked to file comments endorsing ARSFI (Winlink) efforts or to provide their own views. Otherwise, says ARSFI (Winlink), "We will be off the US ham bands if we leave it up to the 'other guy.' Unfortunately, that is what usually occurs with these Rule Making proceedings, at least for our proponents. For those who have commented in other FCC Rule Makings, we thank you, and our job is still not done. Also, those agencies we serve off and on the ham bands will certainly be heavily impacted should this Ruling become law. If you have others that have an interest in Em-Comm or digital enabling technologies, please enlist their assistance as well."

Below is the URL on the Winlink website that provides access to both proposals—one to respond to the current RM-11831 and the other to ask that the Rule Making be dismissed.

https://winlink.org/content/fcc_petition_rm_11831_threatens_amateur_digital_operations_winlink

Included are ARSFI's two responses to the Rule Making and talking points that will assist in understanding the issues.

ARSFI (Winlink) says, "Without ARQ point-to-point protocols used in our US amateur spectrum, we will all be set back many years. In today's communications environment, digital data transfer is dominant in virtually every aspect of all communications as store-and-forward messaging. This is also true for amateur radio, especially for public and emergency communications. We need your help to keep our US amateur spectrum relevant. Many times in the last few years, the ARQ protocols used by Winlink have done much to provide real-life emergency communications for those who needed it. We do not want this to come to an end in the United States. Please comment."

KC6TWS and K6PB Hide in Mission Viejo

Peter Gonzalez, KC6TWS, and Pete Bergstrom, K6PB, were the fox on the monthly cooperative T-hunt on Monday, April 15, 2019. They hid the fox box in Mission Viejo behind Trader Joe's in a shopping area east of Marguerite Parkway and south of La Paz Road. First to find the fox was Ron Allerdice, WA6CYY. Coming in second were Ken Bourne, W6HK, and Roger Kepner, W6SQQ. Taking third place was Richard Saunders, K6RBS.

The next hunt will be on Monday, May 20, 2019, immediately following the OCRACES 2-meter net (approximately 7:20 PM). Ed Kane, W6ONT, will be the fox, and he will hide on paved, publicly accessible property in the Cypress/Los Alamitos/Seal Beach area. He will transmit tones on the input (146.295 MHz) of the 146.895 MHz repeater. Hunters will compare bearings via the 448.320 MHz repeater and are encouraged to beacon their positions via APRS while hunting.

Fox-hunt loops and beams are available from Arrow Antenna and HRO, including the Arrow Model FHL-

At the fox's den are (left to right) Richard Saunders, K6RBS, with his five-element tape-measure beam, Pete Bergstrom, K6PB, Peter Gonzalez, KC6TWS, Ron Allerdice, WA6CYY, and Roger Kepner, W6SQQ.

VHF fox-hunt loop (covers 1 MHz to 600 MHz) and the Arrow Model 146-3 three-element portable hand-held yagi.

The cooperative T-hunts are usually held on the third Monday of each month (except in October). The hunts provide excellent practice in working together to find sources of interference quickly. The hunts are not official RACES events, so DSW (Disaster Service Worker) coverage does not apply. Please drive carefully!

RACES/MOU News from Around the County

"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:

w6hk@ ocraces.org

Orange County Amateur Radio Club (OCARC)

The next Orange County Amateur Radio Club meeting will be on Friday, May 17, 2019, at 7:00 PM. The meeting will be at the American Red Cross (George M. Chitty Building), 600 Parkcenter Drive, in Santa Ana. Enter at the west door.

Amateur Radio License Exams

May 11, 2019; 9:00 AM (walk-ins allowed)
Sponsor and Contact: Harrison Spain, AC6TI
714-886-8039; hmspain@gmail.com
VEC: ARRL/VEC
Siemens PLM Software, 10824 Hope St., Cypress

May 16, 2019; 5:30 PM (walk-ins allowed)
Sponsor: West Coast ARC
Contact: Ken Simpson, W6KOS
714-651-6535; w6kos@arrl.net
VEC: ARRL/VEC
Coastal Community Fellowship Church, 10460 Slater Ave., Fountain Valley

May 16, 2019; 6:00 PM (walk-ins allowed, pre-registration preferred)
Sponsor: Western ARA
Contact: George Jacob, N6VNI
562-544-7373; jac2247@gmail.com
VEC: ARRL/VEC
La Habra Community Center, 101 W. La Habra Blvd., La Habra

May 20, 2019: 6:00 PM (walk-ins allowed)
Sponsor: SOARA
Contact: Sean Reigle, AJ6B
714-261-1717; aj6b.ham@gmail.com
VEC: ARRL/VEC
Norman P. Murray Community & Senior Center, 24932 Veterans Way, Mission Viejo

May 25, 2019; 9:30 AM (no walk-ins, call ahead)
Sponsor: PAPA System Repeater Group
Contact: Jack Suchocki, W6VFR
954-816-8721; jack@w6vfr.com
VEC: Greater LA VEC
Marie Callender's Restaurant & Bakery, 540 N. Euclid St., Anaheim

Fountain Valley RACES

At the Fountain Valley RACES meeting on Saturday, April 6, 2019, Vivian Jui, KK6DTS, gave a PowerPoint presentation about the Mojave Death Race, which begins in Primm, Nevada, with a counterclockwise loop to the south. Vivian emphasized that due to the remote locations, ham radio is the primary means of course communications.

Vivian and her husband Dave Molinaro, KK6DTX, are looking for communicators. If you are interested in taking part in a really unique experience (see article on page 3 of this issue), please contact Vivian or Dave at 909-224-8726 or at vivianjuidmd@gmail.com or at david.molinaro@gmail.com.

Seal Beach RACES

Mike Maronta, KC6YNQ, Silent Key

With great sadness we have learned that Seal Beach RACES Chief Radio Officer Mike Maronta, KC6YNQ, passed away on Wednesday, April 24, 2019.

Mike contributed much to the Seal Beach/Los Alamitos RACES program, including amateur television (ATV) and Winlink. He produced a detailed Winlink manual that was of considerable use throughout Orange County.

Please keep Mike's family in your prayers.

OCFA and SART

Capt. Steve Snyder, KI6EYQ, Silent Key

We are profoundly sad to report that recently retired Orange County Fire Authority Captain Steve Snyder, KI6EYQ, passed away on Saturday evening, April 6, 2019. Steve and his wife Barbara had relocated to Dallas, Texas.
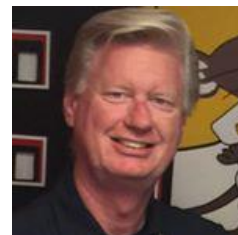
Before OCFA was contracted by Santa Ana to provide fire protection to their city, Steve was a Captain in the Santa Ana Fire Department and was the city's RACES Program Coordinator before the Santa Ana Response Team (SART) was disbanded.

Captain Steve was a highly admired leader in emergency management in Orange County and deeply involved in amateur radio emergency communications and other areas of ham radio. He held an Extra Class license.

We hold Steve's wife Barbara and their family in our prayers.

May 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4 ACS Radio Rodeo
5	6 Weekly 2 m ACS Net & OCRACES Meeting	7	8	9	10	11 Fire Watch Symposium
12	13 Weekly 2 m ACS Net	14	15	16	17 Orange County Amateur Radio Club Meeting	18 Weekly 60 m ACS Net
19	20 Weekly 2 m ACS Net & Cooperative T-Hunt	21	22	23	24	25 Weekly 60 m ACS Net
26	27 Memorial Day (no nets)	28	29	30	31	

Upcoming Events:

- **May 4:** ACS Radio Rodeo, 0830-1115 hours
- **May 6:** OCRACES Meeting, 1930-2130 hours, OCSD Communications & Technology Division, 840 N. Eckhoff Street, Suite 104, Orange
- **May 11:** Fire Watch Symposium, 0800-1200 hours, Quail Hill Community Center, 39 Shady Canyon Drive, Irvine
- **May 17:** Orange County Amateur Radio Club Meeting, 1900 hours, American Red Cross (George M. Chitty Building), 600 Parkcenter Drive, Santa Ana
- **May 20:** Cooperative T-Hunt, 1920 hours
- **May 27:** Memorial Day (no nets)
- **June 10:** City/County RACES & MOU Meeting, 1930-2130 hours, 840 N. Eckhoff Street, Suite 104, Orange
- **June 22-23:** ARRL Field Day

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: 5346.5 kHz USB (dial) (Channel 2) (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

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Lee Kaser, KK6VIV
714-704-8080

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

Radio Officer (Lieutenant)
Scott Byington, KC6MMF

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

County of Orange RACES

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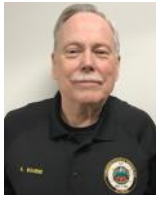**http://www.ocraces.org**
It's Where It's @!

Questions or Comments?
Contact *NetControl* Editor Ken Bourne, W6HK
w6hk@ocraces.org

"W6ACS ...
Serving
Orange County"

Meet Your County of Orange RACES Members!

Officers ⟶

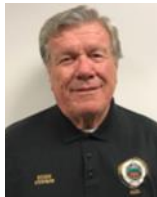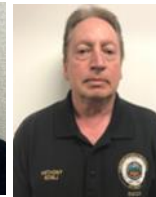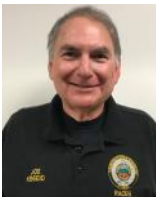|					
Ken Bourne W6HK	Scott Byington KC6MMF	Jack Barth AB6VC	Ernest Fierheller KG6LXT	Bob McFadden KK6CUS	Tom Tracey KC6FIC
Randy Benicky N6PRL	Roger Berchtold WB6HMW	David Corsiglia WA6TWF	Ray Grimes N8RG	Walter Kroy KC6HAM	Martin La Rocque N6NTH
Matt Luczko KM6CAO	Don Mikami N6ELD	Fran Needham KJ6UJS	Harvey Packard KM6BV	Tom Riley K6TPR	Tony Scalpi N2VAJ
Joe Selikov KB6EID	Robert Stoffel KD6DAQ	Ken Tucker WF6F	Tom Wright KJ6SPE		Lee Kaser KK6VIV