

December 2013



Newsletter of the County of Orange Radio Amateur Civil Emergency Service

Inside this issue:

Captain's Corner	1
Philippines Radio	2
Holiday Dinner	3
KF6UYW the Fox	3
SKYWARN Day	4
Smartphone Apps	4
Illinois Tornadoes	5
Symbol Rate Filing	5
RACES/MOU News	6
Events Calendar	7

Captain's Corner

by RACES Captain Ken Bourne, W6HK, Chief Radio Officer

The Sky Is Falling!

Some radio amateurs love meteor showers—which contribute to the excitement of exotic propagation. I am one of those “propagation nuts” who have communicated via meteor scatter on 6 meters, for example. But meteors can be frightening to some people, and are even the cause for alarm and preparation for disasters not commonly contemplated.

On Wednesday, November 7, 2013, at about 8:00 PM, a fireball lit up the sky in Southern California. Sightings were also reported in Arizona, Nevada, and Utah. The National Weather Service said the fireball was likely a meteor associated with the South Taurids meteor shower.

Last winter, a meteor streaking at 42,000 mph exploded over Chelyabinsk, Russia. Scientists studying that event say the threat of space rocks smashing into Earth is bigger than they thought, according to an article in the November 7th edition of the *Orange County Register*. Even larger and more dangerous meteors “are probably four, five, or even seven times more likely to hit the planet than scientists believed before the fireball,” according to three studies published on November 6th in the journals *Nature* and *Science*.

Until the Chelyabinsk incident, NASA had looked only for space rocks and asteroids about 100 feet wide and larger, and considered anything smaller to be of little danger. However, the meteor that burst over Chelyabinsk was only 62 feet wide and burst with the force of 40 Hiroshima-

type atom bombs. Its shock wave shattered thousands of windows, and 70 people were temporarily blinded by its flash. It also caused dozens of skin-peeling sunburns. More than 1,600 people were injured.

Previously, scientists assumed an incident like this would occur only once every 150 years, based on the number of space rocks identified in orbit. However, one study now indicates it is likely to happen about once every 30 years.

NASA is reassessing what size rocks to look for, while scanning for dangerous objects. NASA and the Federal Emergency Management Agency are evaluating the need for evacuations if it is determined that an asteroid is headed for Earth. The two agencies held a disaster drill last spring in Washington, DC, with a scenario of a space rock slightly bigger than the Chelyabinsk meteor threatening the East Coast.

Purdue University astronomer Jay Melosh wrote, “The biggest hazard from asteroids right now is the city-busting airbursts, not the civilization-busting impacts from 1-km-diameter objects that have been the target of most astronomical surveys.”

What if NASA and FEMA suddenly determined that a space rock was headed toward Southern California, and recommended an evacuation? Can you imagine the stress this would place on all public-safety and emergency-management agencies, and how much emergency radio traffic such a situation would generate? Perhaps we should design one of our next City/County RACES & MOU drills on such a possibility.

**Annual
OCRACES
Holiday Dinner**

December 2, 2013
1830 Hours

Katella Grill

1325 W. Katella Ave.,
Orange



Ham Radio Remains a Mainstay in Philippines

The following information was posted on November 26, 2013, on the ARRL Web site:

Ham Emergency Radio Operations (HERO) stations activated by the Philippine Amateur Radio Association (PARA) remain in demand after Typhoon Haiyan (Yolanda) devastated the central Philippines on November 8. PARA Vice Chief Operating Officer Ramon Anquilan, DU1UGZ, said that mobile radio services are available in some places, but they are patchy and unreliable. Relief trucks are transporting aid supplies and personnel from multinational and local groups. Anquilan said the HERO station staffed by DV6ILA and DW6WAV at Panay Island in Roxas City got a surprise visit from the bureau chief of the UN Office for the Coordination of Humanitarian Affairs (UN OCHA), Fernando Arroyo, EA4BB.

“He could not believe his eyes when he saw the station,” Anquilan said. He said Arroyo had a few short QSOs on the spot. After visiting the HERO station nearly every day, he appointed DV6WAV to head his convoy team to meet international aid volunteers at the airport. More than 29 foreign agencies have so far arrived to carry out relief and recovery aid.

The HERO station in Roxas City reported that power has been restored to shops that also have banking facilities, but most residential areas are still with no power. 4F6UUX reported a similar lack of power in parts of Iloilo City. A ham radio transceiver was provided to the Office of Civil Defense in Roxas City as a secondary means of communication.

In his report on the Leyte-Samar area, Anquilan said the Don Bosco Technical College’s DX1DBT is being staffed by students, while priests are reported at the helms of DU7/N1PK in Cebu and DV1WDJ/5 in Borongan, with DV5PO. Don Bosco supplied more diesel fuel for the generator at the DV5PO HERO station. Paul Ancheta, DV1WDJ, a student and member of the Don Bosco Technical College Amateur Radio Club DX1DBT, spent time at Borongan with other priests to set up an HF station. He reported that, while he was able to get cell service at his location, it was intermittent. DV1WDJ said he was able to install an inverter and would soon test out solar panels. Randy Pancito, DV7NGG, has set up the Don Bosco Liloan station serving as the Cebu link to the Don Bosco Borongan lifeline.

Jerick Silva, DV5JMS, of ACCESS 5 updated HERO by reporting that they can operate on 7.095 MHz only when the military is not transmitting. He said the military was using his other transceiver at the grandstand command post in Tacloban City. The Albay Province Office of Civil Defense team was reported to be moving an ACCESS 5 team to Borongan, Eastern Samar. DV5JMS requested that DV5PO monitor both 40 meters and VHF 145.650 MHz for better coordination. He said the Office for Civil Defense command post in Manila was also monitoring 7.095 MHz. Reni Ellaba, 4F5RAG, was reported to be embedded with the Department of Health teams at the city hospital.

James Uy, DU7JGU, reported that another NORAD 7 team was on its way to Tacloban to help at a hospital there. The team has VHF radios but no HF gear. DX9EVM members from Davao reaching the interior of Palo, Leyte, brought relief goods and handled health-and-welfare traffic. RADNET 5 members are assisting a feeding program and relief distributions.

Roy Garbonera, DV8BQI, in Barangay, recounted his experience in crossing to Bantayan Island via Hagnaya Pier and said there was a long queue for loading relief goods. He distributed the goods he had with him and reported a need for nails and tarpaulins as temporary repair material for houses. Mobile phones work, but there is no residential power.

An initial assessment meeting was held in the PARA offices in Manila, although the extent of the HERO contribution may not be known for some time. “Our HEROs are now stretching their resources and capabilities,” Anquilan said, “not only as communicators but also as individuals whose personal lives and families have been greatly affected by this disaster.” — *Jim Linton VK3PC, Chairman IARU Region 3 Disaster Communications Committee.*

OC Sheriff’s Museum Christmas Hat/Ride Sale

Buy a Sheriff’s Museum ball cap for \$35 and get a ride in a rare 1962 Chrysler Newport Orange County Sheriff’s patrol car plus a digital color photograph with you and the car (e-mailed) or a 5-inch by 7-inch color print (mailed). The package includes a Sheriff’s Museum 1962 Chrysler ball cap, a ride certificate, and a tax donation letter.

Up to four people may ride in the Chrysler per hat purchase. Car rides will be in Tustin by appointment. The offer is valid through January 15, 2014, redeemable for six months after purchase. All proceeds support the Orange County Sheriff’s Museum & Education Center. Tax and shipping are included with purchase. Call 949-364-7233 or mail a check to OC Sheriff’s Museum at P.O. Box 6899, Laguna Niguel, CA 92607.

OCRACES Holiday Dinner: December 2nd

County of Orange RACES members and their families are looking forward to the annual OCRACES Holiday Dinner on Monday, December 2, 2013, at 6:30 PM, at the Katella Grill, 1325 W. Katella Avenue, in Orange. There will be no regular OCRACES meeting in December, and no net on December 2nd. Nets will resume on December 9th. The next regular OCRACES meeting will be on Monday, January 6, 2014, at 7:30 PM, at 840 N. Eckhoff Street, Suite 104, in Orange.



KF6UYW Fools T-Hunters on November 11th

OCSD Emergency Communications Manager Delia Kraft, KF6UYW, was the fox on the November 11, 2013, OCRACES cooperative T-hunt. She was hidden in a parking structure at the Brea Mall. The hunt began immediately after the 2-meter OCRACES net on the input of the 2-meter repeater. Hunters compared bearings on the 449.100 MHz repeater. Hunters included OCRACES Chief Radio Officer Ken Bourne, W6HK, with Carol, N6YL, OCRACES Member Bob McFadden, KK6CUS, Orange County SKYWARN Coordinator Scott O'Donnell, KG6IJC (now WX6STO), and Ron Allerdice, WA6CYY.

Signals were reflecting in unusual directions, throwing all hunters off course during the first half of the hunt. One of the hunters was certain that the fox was in Newport Beach. He convinced another hunter to head in that direction, and then realized he was taking bearings on the repeater's output! W6HK and N6YL started at Eisenhower Park at the north end of Orange, and picked up a strong signal to the west, which turned out to be a reflection. Nevertheless, he convinced the other three hunters to head to that area, and they also had many strong, but erroneous, bearings in the north part of Orange. After quite some time chasing bad bearings, WA6CYY headed north and eventually advised the other hunters (via the 449.100 MHz repeater) that the fox was extremely strong in the area of the Brea Mall. Bearings were fairly consistent then, until the hunters were close to the parking garage where Delia was hidden—then reflections took over! WA6CYY, who had excellent direction-finding (DF) equipment, finally had to abandon the hunt because he had to get up early the next morning for work. W6HK/N6YL and KK6CUS were using their 3-element Arrow Antenna Model 146-3 hand-held portable yagis and Model FHL-VHF loops. Hunters also used the Foxhunt app on their iPhones and beamed their locations via the OpenAPRS app, to aid in triangulating bearings from various locations.

The OCRACES cooperative T-hunts are intended to provide practice for quickly locating interference to our repeaters or public-safety frequencies. They are not competitive, and there is no winner declared according to the first to find the fox or the hunter with the least amount of mileage. Because the hunts are held on a week night, and to encourage beginners to participate, the following guidelines are established (including some new rules for the December 9th hunt) to make the hunts short, easy, and enjoyable:

- ◆ The fox will begin transmitting immediately after the OCRACES 2-meter net concludes (the net begins at 7:00 PM), on the second Monday of the month, on 146.295 MHz (the input of the OCRACES 2-meter repeater) with a 136.5 Hz PL (to activate the repeater), with a duration of at least 15 seconds per transmission. If using a tone-sequence fox box (recommended), transmission sequences should start every 30 seconds. These are recommended sequences, and slight variations are permitted.
- ◆ The fox's transmissions must remain steady in output power, and no variations in antenna gain, directionality, or polarization are permitted. (This rule may be deleted in the future, after hunters become more proficient.)
- ◆ Hunters may start from anywhere.
- ◆ The fox must hide on publicly accessible property, allowing hunters to drive on hard pavement directly to the hidden transmitter. Hunters must not be required to pay a fee or toll to drive to the fox. Hunters in high-profile vehicles (such as SUVs with quad antennas mounted on top) must be able to drive to the fox without concern for low overhangs (such as in most parking structures).
- ◆ The fox will declare prior to the beginning of the hunt in which quadrant of Orange County or within which city limits he/she will be hiding. (On December 9th, WA6CYY will be the fox, and will hide in Costa Mesa.)
- ◆ Hunters will share bearing information via the 449.100 MHz repeater. It is recommended that they beacon their locations via APRS.

SKYWARN Recognition Day: December 7th

WX4NHC, the amateur radio station at the National Hurricane Center (NHC) in Miami, Florida, will be on the air for SKYWARN Recognition Day, Saturday, December 7, 2013, from 1400 until 2300 UTC. (Hurricane Season officially ended on November 30th.)

“This will be our 15th year of participation in the SRD, and our 33rd year of public service at NHC,” said Julio Ripoll, WD4R, the WX4NHC amateur radio assistant coordinator. “The purpose of this event is to test the amateur radio station operations and equipment between NWS offices nationwide and is sponsored by NOAA. This event is excellent practice for ham radio operators as well as NWS staff to become familiar with the unique communication skills available during times of severe weather. It is also a fun event.”

WX4NHC will take advantage of the occasion to conduct operator training. The station will make contacts on various frequencies and modes, to exchange signal reports and basic weather data, such as “sunny” or “rainy” between WX4NHC, ham stations at other NWS offices, and stations throughout the US.

WX4NHC will be on HF, VHF, UHF, APRS (2 meters and 30 meters), and Winlink (the subject field should contain //WL2K). “We will try to stay on the recognized Hurricane Watch Net (HWN) frequency 14.325 MHz most of the time and announce when we QSY,” Ripoll said.

Ripoll said that due to space and equipment limitations at the NHC, plans call for having two to three operators on duty per shift. “We cannot be everywhere and on every mode at the same time,” he explained. “You may be able to find us on HF by using one of the DX spotting networks, such as the DX Summit Web site.”

WX4NHC operators will also be active on the VoIP Hurricane Net, from 2100 until 2300 UTC (IRLP node 9219/ EchoLink WX-TALK Conference node 7203). South Florida area VHF and UHF repeaters will be active as well.

QSL cards are available via WD4R, with an SASE. Do *not* send QSLs directly to the National Hurricane Center.

Nationwide, SKYWARN Recognition Day occurs from 0000 to 2400 UTC on December 7th. Locally, that’s 4 PM Friday, December 6th, until 4 PM Saturday, December 7th, Pacific Standard Time. Orange County SKYWARN Coordinator Scott O’Donnell, WX6STO (formerly KG6IJC), says, “We will have 1-hour timeslots available for those that wish to participate, or that want to learn how to log the radio contacts at the Rancho Bernardo office of the NWS. One or two person teams are OK, plus an observer (i.e., interested weather spotters) if you like. One or more properly licensed hams need to be present during operation of the ham radio equipment. Please contact Jim Campbell, WB6ZPB, Central Area (San Diego County) Coordinator for SW California SKYWARN, at wb6zpb@yahoo.com for scheduling your preferred timeslots (no promises) or for any questions related to this event. We need to provide your names to the NWS before you arrive. I may refer you to Laura, Jerry, or Eric during all this, depending on circumstances. Hope to see you there!”



KK6CUS Covers Apps at November Meeting

Bob McFadden, KK6CUS, was the featured speaker at the OCRACES meeting on November 4, 2013, covering fascinating apps available for smartphones, especially the iPhone. In addition to the “Foxhunt” app for T-hunters and the OpenAPRS app, some of the other apps covered by Bob included:

- ◆ “PocketPacket,” an APRS client to encode and transmit 1200-baud packets using a VHF transceiver or over the Internet by selecting an available Tier 2 server.
- ◆ “Morster,” a tool that interprets Morse code from a key, light from the camera, or sounds from the microphone. It translates text to and from Morse code.
- ◆ “PSKer,” an application to send and receive PSK31 signals.
- ◆ “EchoLink,” which connects to the EchoLink system from almost anywhere.
- ◆ “SSTV” from Black Cat Systems, which decodes and displays, as well as sends, all popular SSTV modes.
- ◆ “Packet” from Black Cat Systems, which decodes 1200-baud packet when set next to a speaker, or when connected to a radio’s audio output via a cable.



Bob McFadden, KK6CUS (left), discusses smartphone apps at November 4th OCRACES meeting

Hams Respond to Tornadoes in Central Illinois

A late-season, multistate outbreak of tornadoes and high winds on November 17, 2013, killed seven people in Illinois and injured hundreds of others, some seriously. The storms destroyed or badly damaged upward of 400 homes in Washington, Illinois. Two dozen tornadoes hit the state, and more than 2,400 homes were destroyed or damaged. The tornado that hit Washington stayed on the ground for more than 46 miles. The storms also affected Michigan, Indiana, Missouri, and Wisconsin. Seven Illinois counties, including Peoria and Tazewell, were declared disaster areas. Many residents were without power.

Peoria County ARES Emergency Coordinator Fritz Bock, WD9FMB, responded with a team of volunteers to a Central Illinois Division Red Cross request for emergency communications support between sites in Washington—a town of approximately 11,000 residents and hardest hit by the storm activity—and the Red Cross office in Peoria. Most of the injuries occurred in Washington.

Bock reported that VHF and UHF systems were intact and operating, which covered the communications paths. Communications support was provided between the Washington Methodist Church, the Tazewell County EOC, and the American Red Cross office in Peoria. (Tazewell County borders Peoria County.)

ARRL Files “Symbol Rate” Petition with FCC

The ARRL has asked the FCC to delete the symbol rate limit in §97.307(f) of its Amateur Service rules, replacing it with a maximum bandwidth for data emissions of 2.8 kHz on amateur frequencies below 29.7 MHz. The ARRL Board of Directors adopted the policy underlying the petition initiative at its July 2013 meeting. The petition was filed November 15, 2013.

“The changes proposed would, in the aggregate, relieve the Amateur Service of outdated, 1980s-era restrictions that presently hamper or preclude Amateur Radio experimentation with modern high frequency (HF) and other data transmission protocols,” the League’s petition asserted. “The proposed rule changes would also permit greater flexibility in the choice of data emissions.” Symbol rate represents the number of times per second that a change of state occurs, not to be confused with data (or bit) rate.

Current FCC rules limit digital data emissions below 28 MHz to 300 baud, and between 28.0 and 28.3 MHz to 1200 baud. “Transmission protocols are available and in active use in other radio services in which the symbol rate exceeds the present limitations set forth in §97.307(f) of the Commission’s Rules, but the necessary bandwidths of those protocols are within the bandwidth of a typical HF single sideband channel (3 kHz),” the ARRL’s petition pointed out.

The League said that while bandwidth limitations are reasonable, the symbol rate “speed limit” reflective of 1980s technology prohibits radio amateurs today from utilizing state-of-the-art technology. Present symbol rate limits on HF “actually encourage spectrum inefficiency,” the League argues, “in that they allow data transmissions of unlimited bandwidth as long as the symbol rate is sufficiently slow.” The League said eliminating symbol rate limits on data emissions and substituting a “reasonable maximum authorized bandwidth” would permit hams to use all HF data-transmission protocols now legal in the Amateur Service as well as other currently available protocols that fall within the authorized bandwidth but are off limits to amateurs.

The League said it’s been more than three decades—when the Commission okayed the use of ASCII on HF—since the FCC has evaluated symbol rate restrictions on radio amateurs as a regulatory matter. “The symbol rate restrictions were created to suit digital modes that are no longer in favor,” the ARRL noted in its petition. Modern digital emissions “are capable of much more accurate and reliable transmissions at greater speeds with much less bandwidth than in 1980.”

As an example, the League pointed to PACTOR 3, which is permitted under current rules, and PACTOR 4, which is not. Despite PACTOR 4’s greater throughput, both protocols can operate within the bandwidth of a typical SSB transmission.

“If the symbol rate is allowed to increase as technology develops and the Amateur Service utilizes new data emission types, the efficiency of amateur data communications will increase,” the ARRL concluded.

ARRL General Counsel Chris Imlay, W3KD, has emphasized that there is no broader plan on the League’s part to seek regulation by bandwidth.

The FCC has assigned RM number 11708 and put the League’s petition on public notice for comments.

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 in Orange County.

Please send your news to NetControl Editor Ken Bourne, W6HK, at: w6hk@ocraces.org

Placentia RACES

Placentia had its Heritage Day Parade on Saturday, October 12, 2013. One of the Placentia RACES members usually performs as a relay, as the distance covered is just over 2 miles, "and the small rubber-duddy antennas just do not perform that well," says Radio Officer Mark Garrett, KG6CAV. That member moved in August, which left Placentia RACES without a relay. "In trying to figure out how we would be able to have everyone hear me at parade start, I looked for a suitable solution. I thought about getting a radio that could handle Bluetooth, but the distance from the car to where I would be located precluded this



Placentia RACES Radio Officer Mark Garrett, KG6CAV, demonstrates his back-mounted antenna strap at the November 4th OCRACES meeting.

approach. What I finally came up with was an antenna mount on a strap that I could place the antenna on my back. I was able to use a 2-meter/440-MHz antenna and mount it to my portable radio. I use a Vertex VX-150. Amazingly with this setup I was able to have everyone on the parade route be able to hear me as clearly as they could with the base station in the mobile command vehicle." Mark brought his system to the November 4th OCRACES meeting and listed the following criteria for his configuration:

- ◆ Needed solution to be heard for up to 3 miles.
- ◆ No repeater available.
- ◆ Bluetooth distance was too great, limited to 100 meters without special equipment.
- ◆ Needed something portable and

easy to set up.

- ◆ Needed an antenna system that did not need a ground plane.
- ◆ Selected a Diamond Antenna NR770HA, which is an NGP (no ground plane) for 2 m/70 cm.
- ◆ Used a Diamond Antenna C101 UHF base connector.
- ◆ Cost of setup with antenna and connector was under \$100.
- ◆ Used a carrying strap from a travel bag. Purchased two 3-inch shelf brackets and bolts from Home Depot. Used a strip of cardboard from a furniture packing crate.
- ◆ Angle mounting brackets are available for purchase at HRO, but Mark wanted some additional distance from his back and the antenna. Since he is only transmitting at 5 watts, he is not worried about the radiation for the short duration of the transmissions.
- ◆ The secret is finding the appropriate shoulder strap.

Orange County SKYWARN

For over 15 years, Mike McLaughlin, KJ6EQ, has led Orange County SKYWARN from infancy as the founding coordinator. Mike felt it was time to take a break from the leadership role and has transitioned to an assistant coordinator role with the approval of Alex Tardy, Warning Coordination Meteorologist, National Weather Service, San Diego. Tardy is the SKYWARN Spotter Manager and Trainer with NWS/NOAA.

In Mike's place, Scott O'Donnell, WX6STO (formerly KG6IJC), has accepted the position of lead coordinator for the Orange County SKYWARN unit. Scott has over 23 years of experience as a spotter and has been a SKYWARN member since it was introduced in this area over 15 years ago. Manny Vizinho, KG6IQL, will continue in his position as an assistant coordinator alongside Mike McLaughlin.

December 2013

Upcoming Events:

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 OCRACES Holiday Dinner (no net)	3	4	5	6	7
8	9 Weekly ACS Net & Cooperative T-hunt	10	11	12	13	14
15	16 Weekly ACS Net	17	18	19	20	21
22	23 Weekly ACS Nets & SWACS Radio Test	24	25 Merry Christmas	26	27	28
29	30 Weekly ACS Net	31				

- **Dec 2:** OCRACES Holiday Dinner, 1830, Katella Grill, Orange
- **Dec 9:** OCRACES Cooperative T-hunt, 1920, input of 2-m repeater (146.295 MHz), bearings compared on 449.100 MHz repeater
- **Dec 23:** OCRACES 2-m, 70-cm, 6-m, 1¼-m nets, 1900, 1920, 1930, 1940; Cal OES 75-m net, 2000; SWACS Frequency/Radio Test, 2015
- **Jan 6:** OCRACES Meeting, 1930, 840 N. Eckhoff Street, Suite 104, Orange; 2014 activities and training
- **Jan 13:** OCRACES Cooperative T-hunt, 1920, input of 2-m repeater (146.295 MHz), bearings compared on 449.100 MHz repeater
- **Jan 27:** City/County RACES & MOU Meeting, 1915, 840 N. Eckhoff Street, Suite 104, Orange



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

- 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: 147.480 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: 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)
 - 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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**“W6ACS ...
Serving
Orange County”**

Meet your County of Orange RACES Members!



Ken Bourne
W6HK



Scott Byington
KC6MMF



Harvey Packard
KM6BV



Ralph Sbragia
W6CSP



Delia Kraft
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Marten Miller
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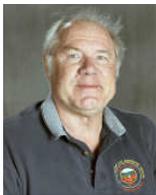
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