September 2018

Newsletter of the County of Orange Radio Amateur Civil Emergency Service

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Next OCRACES Meeting:

Monday, September 10, 2018, at 1930 Hours

840 N. Eckhoff Street, Suite 104, Orange

Severe Fire Weather Patrol Training

Orange County Sheriff's Department
Communications & Technology Division

Captain's Corner

by RACES Captain Ken Bourne, W6HK, Chief Radio Officer

WWV to Shut Down?

As I began to explore the exciting "mysteries" of HF shortwave radio back in the middle 1950s as a teenager, I discovered WWV time- and frequency-standard transmissions with my "new-used" Hallicrafters S-53A receiver. The continuous signals were transmitted by the National Bureau of Standards (NBS) in Greenbelt, Maryland, on 2.5, 5, 10, 15, 20, and 25 MHz (called Mc/s back in those days). NBS also transmitted from Kauai, Hawaii, as WWVH. NBS maintained WWV as part of the Department of Agriculture. NBS was the predecessor of the National Institute of Standards and Technology (NIST), part of the Department of Commerce, which moved the WWV transmitters to near Fort Collins, Colorado, in 1966. Also at the Colorado site is WWVB, which transmits carrier and time code (no voice) on 60 kHz. WWV no longer transmits on 25 kHz, due to poor propagation on higher HF frequencies as a result of the current sunspot cycle. WWV and WWVH announce the Coordinated Universal Time each minute, and make other recorded announcements of general interest on an hourly schedule, including ionospheric reports, the Global Positioning System (GPS) satellite constellation status, and severe oceanic weather warnings. Hams have been using WWV to set their clocks, check propagation from band to band, and calibrate their receivers' displayed frequency.

Radio amateurs, including those of us in RACES, are highly concerned over the inclusion of WWV and WWVH on a list of proposed cuts in the White House's NIST Fiscal Year 2019 budget request. The proposed cuts would also include the 60-kHz atomic-clock signal from WWVB, which is used to synchronize specially equipped clocks and wristwatches. At this point, the budget item is only a proposal. The final decision would be made by Congress.

ARRL suggests that radio amateurs who value the stations for their precise time and frequency signals and other information sign a petition established by Tom Kelly II, W7NSS, of Portland, Oregon, who would like to see funding for the stations maintained. To sign the petition, go to https://petitions.whitehouse.gov/petition/maintain-funding-nist-stations-wwv-wwvh. ARRL also urges us to contact our members of Congress promptly, explaining how the stations are important to us, beyond government and military use.

Kelly's petition notes that WWV is among the oldest radio stations in the US, having been established in 1920. "The station has transmitted the official US time for nearly 100 years, and is an instrumental part in the telecommunications field, ranging from broadcasting to scientific research and education," his petition says. "Additionally, these stations transmit marine storm warnings from the National Weather Service, GPS-satellite-health reports, and specific information concerning current solar activity and radio propagation conditions. These broadcasts are an essential resource to the worldwide communications industry."

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Captain's Corner *Continued from page 1*

NIST's full Fiscal Year (FY) 2019 budget request to Congress may be seen at http://www.osec.doc.gov/bmi/budget/FY19CBJ/NIST_and_NTIS_FY2019_President's_Budget_for_508_comp.pdf. It calls for the agency to "discontinue the dissemination of the US time and frequency via the NIST radio stations in Hawaii and Fort Collins, Colorado." The agency noted, "These radio stations transmit signals that are used to synchronize consumer electronic products like wall clocks, clock radios, and wristwatches, and may be used in other applications like appliances, cameras, and irrigation controllers." The specific cut, which would come from the NIST Fundamental Measurement, Quantum Science, and Measurement Dissemination budget, would amount to $6.3 million.

NIST's budget request said it plans to consolidate and focus work on its efforts in quantum science while maintaining essential core capabilities in measurement science research and measurement dissemination, as well as eliminate "efforts that have been replaced by newer technologies, measurement science research that lies outside NIST's core mission space, and programs that can no longer be supported due to facility deterioration."

The main purpose of WWV and WWVH is to broadcast the "official US time" (provided by government entities such as NIST and the United State Naval Observatory) to ensure that uniform time is maintained throughout the US and around the world. The time signals allow time-keeping devices such as "atomic clocks" to automatically maintain accurate time without the need for manual adjustment. These accurate time signals are essential in broadcasting, shipping, transport, technology, research, education, military, public safety, and telecommunications, including amateur radio.

In 2011, NIST estimated the number of radio clocks and wristwatches equipped with a WWVB receiver at over 50 million. WWVB's 60-kHz carrier frequency can be used as a frequency reference. The broadcast time is accurate to with 100 ns of UTC and 20 ns of the national time standard. The 70-kW ERP signal from WWVB is derived from a set of atomic clocks at the transmitter site, yielding a frequency uncertainty of less than 1 part in 10^{12}. A 1-b/s time code, which is based on the IRIG (Inter-Range Instrumentation Group) "H" time-code format and derived from the same set of atomic clocks, is then modulated onto the carrier wave using pulse-width modulation and amplitude-shift keying. A single complete frame of time code begins at the start of each minute, lasts one minute, and conveys the year, day of year, hour, minute, and other information.

Time and frequency information is provided 24/7, including time announcements, standard time intervals, standard frequencies, UT1 time corrections, a binary-coded decimal (BCD) time code, geophysical alerts, and marine storm warnings. Transmissions are broadcast from separate transmitters on 5, 10, 15, and 20 MHz. An experimental 25-MHz signal was back on the air on April 4, 2014, but has since been dropped again.

The BCD time code's broadcast is on a 100-Hz subcarrier, which is inaudible when using a normal radio, but can be heard using headphones or recorded using a chart recorder.

The radio signals of WWV, WWVB, and WWVH, along with the four atomic (cesium) clocks that their signals derive from, are maintained by NIST's Time and Frequency Division, which is based in nearby Boulder, Colorado. The Time and Frequency Division is part of NIST's Physics Laboratory, based in Gaithersburg, Maryland.

In a way, GPS has obsoleted WWV as a time and frequency standard. GPS-based clock kits are showing up in ham shacks (for example, see https://www.qrp-labs.com/clockn.html). But WWV is a cheap backup. Furthermore, GPS doesn't work on the enormous number of self-setting atomic wall clocks and wristwatches, and does not provide propagation information like WWV does. As we navigate to 60-meter activity, a 5-MHz WWV signal will help us check the frequency accuracy of our transceivers. GPS won't do that. WWV signals at 5, 10, 15, and 20 MHz give us a fast approximation of the MUF (maximum usable frequency), to determine which HF ham bands are open.

Saturday ACS Nets Now Only on 60 Meters

Since November 22, 2014, OCRACES has conducted an ACS net almost every Saturday at 10:00 AM on 7250 kHz on 40 meters. On April 7, 2018, we experimented with 60 and 80 meters after our 40-meter roll call, and discovered that 60 meters provided better propagation throughout Orange County and Southern California. Since then, we have conducted our nets on 40 and 60 meters, with 60 meters consistently providing better coverage. Accordingly, we have discontinued our 40-meter nets, effective September 1, 2018, and will conduct our Saturday nets only on 5346.5 kHz upper sideband (Channel 2), dial frequency, beginning at 10:00 AM. Effective radiated power (ERP) must not exceed 100 watts.

Fire Weather Patrol Training: September 10th

The next OCRACES meeting will be on Monday, September 10, 2018, at 7:30 PM, at OCSD Communications & Technology Division, 840 N. Eckhoff Street, Suite 104, in Orange. (Due to the Labor Day holiday, this meeting will be on the second Monday of the month.) Senior Emergency Management Program Coordinator Kevin McArthur, KK6JSG, OCSD Emergency Management Division, will conduct our annual training on Severe Fire Weather Patrol. Those who receive this training will be eligible to participate in our patrols of canyons and other fire-prone areas when we are activated during Red Flag warnings.

RACES on Standby for Holy Fire

OCRACES members were alerted that the Orange County EOC was activated after the Holy Fire began on August 6, 2018, in Holy Jim Canyon. The fire eventually burned 12 homes in Orange County and six in Riverside County. So far it has burned nearly 23,000 acres.

After achieving a 95 percent containment, a new flareup occurred on Monday, August 27th, near Santiago Peak. Cleveland National Forest officials indicated that the flare-up was all outside of the existing containment lines, and had grown to about 150 acres and was 10 percent contained by 4:00 PM on Monday. Hundreds of firefighters battled the flareup with 10 aircraft, including air tankers and helicopters, to protect the many communications towers on Santiago Peak. The towers are used for law-enforcement and public-safety radio systems—including sheriff, police, CHP, fire, and RACES—industrial radio systems, broadcast television, etc. As of this writing, the systems remain protected and all OCRACES repeaters remain operational.

Fire threatens communications towers on Santiago Peak on August 27, 2018.

As we head into even more dangerous months for Santa Ana winds and potential wildland fire outbreaks, it is important for RACES members to stay alert and be trained and ready to participate in Severe Fire Weather Patrols. The next training sessions will be at the September 10th OCRACES meeting (see above article).

OCARC 85th Reunion Meeting: Sept. 21st

Early in 1933, the Moore brothers, Earl, W6IGO, and Harry, W6FUU, opened a radio store in Santa Ana and supported the formation of a radio club that came to be named the Orange County Amateur Radio Club. Shortly thereafter, on March 15, 1934, that club (OCARC) was granted affiliation with the American Radio Relay League. Now in 2018, OCARC is celebrating its 85th year of service to the ham community and plans to gather at the September 21st General Meeting for an 85th Anniversary Celebration, including all current and former OCARC members and friends. There will be no business discussions at this meeting.

The meeting time is 7:00 PM, and the location is the American Red Cross (George M. Chitty Building), 600 Parkcenter Drive, Room 208, in Santa Ana. Enter at the west door. Directions and a map are available at http://www.w6ze.org/Meetinginfo.html. If you plan to attend, send an e-mail to ochamclub@w6ze.org.

FCC Cites Baofeng Importer

RACES members who own or are considering the purchase of a Baofeng UV-5R hand-held radio need to be aware that the FCC has issued a *Citation and Order* (*Citation*) to Amcrest Industries, LLC (formerly Foscam Digital Technologies, LLC), an importer and marketer of the popular and inexpensive transceiver, alleging that the company violated FCC rules and the Communications Act by illegally marketing unauthorized RF devices. The FCC asserts that Amcrest marketed Baofeng model UV-5R-series FM hand-held radios capable of transmitting on "restricted frequencies." The Baofeng models UV-5R and UV-5R V2+ were granted an FCC equipment authorization in 2012 to operate under Part 90 Private Land Mobile Radio Service (Land Mobile) rules.

"Under §2.803 of the Commission's rules, an entity may not market a device that is capable of operating outside the scope of its equipment authorization," the FCC Citation said. "RF devices that have been authorized under Part 90 rules, such as the model at issue, must operate within the technical parameters established in those rules." The FCC also maintained that the UV-5R V2+ is capable of operating at 1 W or 4 W, while the Part 90 Equipment Authorization limits the power output to 1.78 W.

Amcrest conceded that the units were capable of operating on restricted frequencies but told the FCC that, per discussions with the manufacturer, were "only capable of operating at 1 W, the FCC said. The company instructed the manufacturer to fix the problem and later confirmed with the manufacturer that all Amcrest inventory on order and in the future would operate only on 145-155 MHz and 400-520 MHz.

While the *Citation* does not mention amateur radio, the UV-5R series radios can be programmed in a channelized configuration to function on 2 meters and 70 centimeters. According to the *Citation*, Amcrest had added a warning in its user manuals and marketing and sales materials implying that the UV-5R V2+ could operate on unauthorized and restricted frequencies, including Part 87 Aviation Services frequencies, Part 80 Maritime Services frequencies, and frequencies reserved for federal government use. The FCC said Part 90 radios that permit the operator to use external controls to program and transmit on frequencies other than those programmed by the manufacturer are "generally prohibited."

Amcrest told the FCC that it had ceased marketing four models in the Baofeng UV-5R series "a few years ago," but it did not remove them from its website until last February. Numerous online retailers continue selling UV-5R series radios for less than $25, with some ads indicating that these are "ham" equipment.

Amcrest Industries, LLC, which owns and operates Baofengradio US, is an import, distribution, and marketing company based in Houston, Texas. It also sells hand-held transceivers under its own label.

"While we recognize Amcrest's efforts to date to achieve compliance with the Commission's rules, the company must nonetheless ensure the version of the UV-5R V2+ it is marketing operates only on frequencies specified in its Equipment Authorization," the FCC said in its *Citation*. The FCC directed Amcrest "to take immediate steps to come into compliance with the Commission's equipment authorization rules and cease marketing unauthorized RF devices in the United States." Amcrest could face fines of nearly $20,000 per day if it fails to comply.

Part 95 Rules Published in *Federal Register*

Reorganized and updated FCC Personal Radio Services (PRS) Part 95 rules have been published in *The Federal Register*. Among other things, the PRS covers the Family Radio Service (FRS), General Mobile Radio Service (GMRS), and the Citizens Band Radio Service (CBRS).

The revised rules allot additional FRS channels and increase the power on certain FRS channels from 0.5 W to 2 W. FRS channels are in the 462.5625 – 462.7250 MHz range.

Effective September 30, 2019, it will be illegal to manufacture or import handheld portable radio equipment capable of operating under FRS rules and under other licensed or licensed-by-rule services. The FCC no longer will certify FRS devices that incorporate capabilities of GMRS capabilities or of other services. Existing GMRS/FRS combination radios that operate at power levels of less than 2 W ERP will be reclassified as FRS devices; existing GMRS/FRS radios that operate above that power level will be reclassified as GMRS devices, requiring an individual license.

Radios that can transmit on GMRS repeater input channels will continue to be licensed individually and not by rule.

Once the new rules are effective, CBers will be allowed to contact stations outside of the FCC-imposed—but widely disregarded—155.3-mile distance limit.

KC6TWS and K6PB Hide in Irvine

Peter Gonzalez, KC6TWS, and Pete Bergstrom, K6PB, were the fox on the monthly cooperative T-Hunt on Monday, August 20, 2018. They hid at Lomas Valley Park in the Portola Springs area of Irvine, on Arrowhead north of Portola Parkway and east of the 133 toll road. It was a tricky location, with hills to the west blocking their signal from those who were driving southeast on Portola Parkway from Culver Drive or Jeffrey Road. The five hunting teams included (in order of arrival):

1. Richard Saunders, K6RBS
2. Ken Bourne, W6HK, and Don Poysa, KØVNJ
3. Ron Allerdice, WA6CYY
4. Scot Barth, KA6UDZ
5. Bob McFadden, KK6CUS

At the fox's den at Lomas Valley Park in Irvine are (left to right) Pete Bergstrom, K6PB, and Peter Gonzalez, KC6TWS (the foxes), Scot Barth, KA6UDZ, Don Poysa, KØVNJ, Richard Saunders, K6RBS, Bob McFadden, KK6CUS, and Ron Allerdice, WA6CYY.

The next hunt will be on Monday, September 17, 2018, immediately following the OCRACES 2-meter net (approximately 7:20 PM). We are looking for a volunteer to be the fox, and a fox box will be provided. No fees will be required to drive directly to the fox. He will transmit 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 throughout the hunt.

The cooperative T-hunts are usually held on the third Monday of each month. 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!

Fox-hunt loops and beams are available from Arrow Antenna and HRO, including the Arrow Model FHL-VHF fox-hunt loop (covers 1 MHz to 600 MHz) and the Arrow Model 146-3 three-element portable hand-held yagi. The Arrow OFHA 4-MHz offset attenuator can be useful when close to the fox, to prevent receiver overload. For on-foot hunting, the BC-146.565 three-element, hand-held, foldup, yagi antenna is available from Bob Miller Enterprises (http://www.rdfantennas.com), along with the VK3YNG MK4 sniffer. An all-mode transceiver is quite useful, allowing hunters to switch to the SSB or CW mode for detecting extremely weak signals, or to switch in a built-in attenuator, reduce RF gain, or tune slightly off frequency when dealing with extremely strong signals. Some hunters use the DF2020T radio direction finder kit, which is a Doppler system available from Global TSCM Group, Inc. (http://www.kn2c.us). A very similar system is the MFJ-5005 Doppler direction finder. Useful apps are available for iPhones and Android phones. For some excellent information on T-hunting, see http://www.homingin.com.

City/County RACES & MOU Drill: October 6th

The next City/County RACES & MOU ACS Exercise will be on Saturday, October 6, 2018, from 0900 to 1100 hours. Instead of the usual high level of message handling, this will be a "deployment drill," with the objective of finding alternative means of communications to and from areas that have poor radio coverage. For example, it is difficult to impossible to access the OCRACES 2-meter and 70-centimeter repeaters from the eastern end of Carbon Canyon Road, the end of Silverado Canyon Road, some points along Modjeska Canyon Road, Live Oak Canyon Road, and Trabuco Canyon Road. There are also some dead spots along Ortega Highway and in some beach areas southeast of Newport Beach.

We encourage county and city RACES members to set up portable HF stations to test NVIS (near vertical incidence skywave) propagation, especially where repeater coverage is not possible. As we have discovered on our Saturday morning ACS nets, 40 meters is not reliable for intracounty communications, but 60 meters has proven fairly consistent throughout the county. We plan to use 5346.5 kHz upper sideband (dial frequency) during the drill. We will test simplex coverage on 146.595 MHz and 446.000 MHz, especially in areas with little or no repeater coverage, but also in other areas, as we simulate repeater failure.

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

Fountain Valley RACES

Fountain Valley RACES lent its support again to the city by setting up radio stations at two recent city events. The annual "Campout at the Park" saw over 60 families set up camping equipment in the Fountain Valley Recreational Park's Pony Base ball fields on the weekend of August 4th. There were hiking excursions for the participants and demonstrations from Prehistoric Critters displaying geckos, snakes, parrots, and other creepy things, wowing the kids and adults alike. FVRACES was there with their HTs and GoBox stations, demonstrating the capabilities of emergency communication and handing out literature about ham radio and the connection with Orange County RACES communications and the Orange County Sheriff's Department. Several participants inquired about joining the radio fun (after they got their fill of s'mores at the campfire and In-N-Out burgers) and there were inquiries from the Boy Scouts about the radio merit badge and the ARRL.

Following the campout that weekend, FVRACES set up another station at the annual National Night Out outside the Recreational Center at the park on Tuesday, September 7th. The event had many Fountain Valley City services set up information booths. Included were the Fire Department with their gigantic ladder truck, Police with their K-9 buddies giving demos, along with the SWAT team, emergency supplies information, hot dogs, popcorn, and even a movie to cap the night. There were many inquires about ham radio and the function of RACES in the coming "Big One." Fountain Valley RACES continues to support the city in their many annual events, promoting ham radio and its connection to the county emergency system through RACES.

Orange RACES (COAR)

Effective July 22, 2018, Sgt. Clara Ramirez is now responsible for Homeland Security, Emergency Management, Crime Prevention, and OPD Volunteers, including COAR. On August 7th, COAR participated in the City of Orange National Night Out event. Net Control operated from the Mobile Command Post (MCP) with eight COAR roamers, providing additional security. COAR conducted an EOC activation drill, team review, and orientation on August 13th. COAR will work multiple shifts to support the OPD during the International Street Fair, Labor Day weekend. Net Control will be operated from the MCP. Activities include: 1) Attending OPD briefings and coordinating activities with OPD supervision; 2) Roamer Teams acting as extra eyes and ears for OPD, increasing department visibility; 3) Roamers reporting incidents and, if necessary, Net Control contacting OPD Dispatch; and 4) Net Control monitoring OPD Dispatch and relaying pertinent information to Roamer Teams. COAR will participate in the October 6th City/County RACES & MOU drill.

Amateur Radio License Exams

Sept. 8, 2018; 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

Sept. 20, 2018; 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

Sept. 20, 2018; 6:00 PM (walk-ins allowed)
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

Sept. 22, 2018; 10:00 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
Mimi's Café, 1240 N. Euclid St., Anaheim

September 2018

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1 Weekly 60 m ACS Net
2	3 Labor Day, no meeting, no net	4	5	6	7	8 Weekly 60 m ACS Net
9	10 Weekly 2 m ACS Net & OCRACES Meeting	11	12	13	14	15 Weekly 60 m ACS Net
16	17 Weekly 2 m ACS Net & Cooperative T-Hunt	18	19	20	21 Orange County Amateur Radio Club Meeting	22 Weekly 60 m ACS Net
23	24 ACS Nets on Five Bands & Cal OES Nets	25	26	27	28	29 Weekly 60 m ACS Net & County Career Expo
30						

Upcoming Events:

- **September 3:** Labor Day, no meeting, no net
- **September 10:** OCRACES Meeting (Severe Fire Weather Patrol Training), 840 N. Eckhoff Street, Suite 104, Orange, 1930-2130 hours
- **September 17:** Cooperative T-Hunt on input of 2-meter repeater, 1920 hours
- **September 21:** Orange County Amateur Radio Club Meeting, American Red Cross (George M Chitty Building), 600 Parkcenter Drive, Santa Ana, 1900 hours
- **September 29:** County of Orange Career Expo and Open House, Irvine Ranch Historic Park, 13042 Old Myford Road, Irvine, 1000-1400 hours
- **October 1:** OCRACES Meeting, 840 N. Eckhoff Street, Suite 104, Orange
- **October 6:** City/County RACES & MOU ACS Exercise, 0900-1100 hours
- **October 15:** City/County RACES & MOU Meeting, 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

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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It's Where It's @!

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"W6ACS ... Serving Orange County"

Meet Your County of Orange RACES Members!

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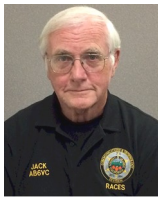

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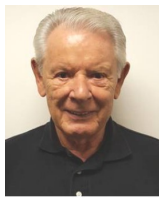

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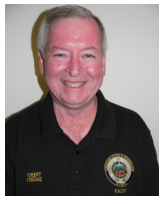

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