November 2011

Newsletter of the County of Orange Radio Amateur Civil Emergency Service

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The Next OCRACES Meeting is

November 7, 2011
1930 Hours
840 N. Eckhoff Street, Suite 104, Orange

Featured Speaker: Ray Grimes, N8RG "The Land Mobile Radio Spectrum—A Changing Landscape"

Orange County Sheriff's Department
Communications & Technology Division

Captain's Corner

by RACES Capt. Ken Bourne, W6HK, Chief Radio Officer

EAS Test: November 9th

The first nationwide test of the Emergency Alert System (EAS) will be conducted on November 9, 2011, at 11:00 AM PST. (Thanks to ARRL for the following information.) The test will be conducted by the Federal Communications Commission (FCC), in coordination with the Federal Emergency Management Agency (FEMA) and the National Oceanic and Atmospheric Administration (NOAA). FEMA says that EAS participants (broadcasters, satellite and digital radio and television providers, and cable and wireline video providers) "provide a critical public service to the nation as the resilient backbone of alert and warning when all other means of communication are unavailable."

During the test, listeners will hear a message stating, "This is a test." This will resemble the familiar periodic monthly EAS tests, but we will see and hear some differences. The audio message will be the same for all EAS participants.

FEMA advises, "Due to limitations in the EAS, the video test message scroll may not be the same or indicate that 'This is a test.' This is due to the use of the live EAN code—the same code that would be used in an actual emergency. The text at the top of the television screen may indicate that an 'Emergency Action Notification has been issued.' This notification is used to disseminate a national alert and, in this case, the test. In addition, the background image that appears on video screens during an alert may indicate that 'This is a test,' but in some instances there might not be an image at all."

The FCC and FEMA plan to reach out to organizations representing people with hearing disabilities to prepare that community for the national test. In addition, FEMA and the FCC will work with EAS participants to explore whether there are solutions to address this limitation.

The test will last for about three minutes, although the length may vary across the country. FEMA said, "While state and local EAS messages are limited to two minutes, there is no time limit for national EAS alerts. To evaluate whether the system properly interprets the national message code in the national EAS test, the message duration must be longer than two minutes."

Although local and state components of the EAS are tested on a weekly and monthly basis, an end-to-end nationwide test of the system has never been conducted. Public-safety officials need to know that the system will work as intended, should they ever need to send an alert or warning to a large region of the United States. Only a complete, top-down test of the EAS can provide an appropriate diagnosis of the system's performance.

The FCC said that the test is being conducted on November 9th to minimize disruption and confusion, "because this date is near the end of hurricane season and before the severe winter weather season begins. The 2 PM EST (11 AM PST) broadcast will minimize disruption during rush hours while ensuring the test occurs during working hours across the country."

City/County RACES & MOUs Drill on Oct. 1st

Most City and County RACES and MOU units participated in the City/County RACES & MOU drill on October 1, 2011. OCRACES members at the Loma Ridge EOC sent and received many messages via 6 meters, 2 meters, and 70 centimeters. Messages were sent from the EOC to cities and MOUs on their frequencies, and were received from the cities and MOUs on the OCRACES repeaters. Other messages were sent via simplex to selected City RACES EOCs. Those Cities then resent the messages to the pre-designated neighboring City or MOU agency. The messages were then eventually relayed back to the EOC, but, unfortunately, did not resemble the original messages! Consequently, we will conduct additional drills to improve message handling throughout the county, and to find the best paths for simplex coverage.

RACES Capt. Ken Bourne, W6HK (left), reviews drill procedures with RACES Lts. Scott Byington, KC6MMF, and Harvey Packard, KM6BV.

Most of the Cities using Winlink did not receive a message acknowledgement from the Loma Ridge EOC. The entire system will be checked. At least one RACES unit complained that its City's IT department would not open ports that are required for Winlink operation.

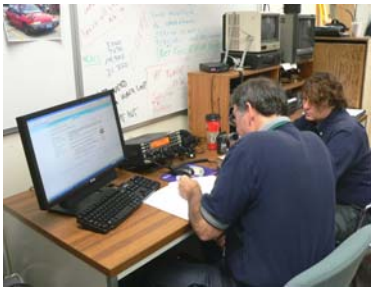
OCRACES members participating in the drill from the EOC RACES Room included Chief Radio Officer Ken Bourne, W6HK (Drill Operations Manager), Radio Officers Scott Byington, KC6MMF, Harvey Packard, KM6BV (Drill Supervisor), and Ralph Sbragia, W6CSP (Winlink operator), John Bedford, KF6PRN, Bill Borg, KG6PEX, Jim Dorris, KC6RFC, Ray Grimes, N8RG (Drill Supervisor), Martin La Rocque, N6NTH, John Roberts, W6JOR, Joe Selikov, KB6EID (on 6 meters, training Applicant Hannah Kilbourne, KJ6LDW), and Brian Turner, KI6WZS. OCSD Emergency Communications Manager Marten Miller, KF6ZLQ, Randy Benicky, N6PRL, and Assistant Radio Officer Chuck Dolan, KG6UJC, handled the simplex net from a hill above the EOC. Brian Lettieri, KI6VPF, and Kenan Reilly, KR6J, were rovers, primarily communicating via the OCRACES 6-meter repeater. Also in the EOC RACES Room was HDSCS Assistant Coordinator Tom Gaccione, WB2LRH, operating at Position 2.

Ray Grimes, N8RG, and RACES Lt. Harvey Packard, KM6BV (right), supervise drill operations in EOC RACES Room. From left are HDSCS Assistant Coordinator Tom Gaccione, WB2LRH, RACES Lt. Ralph Sbragia, W6CSP, John Roberts, W6JOR, Bill Borg, KG6PEX, and Brian Turner, KI6WZS.

Jim Dorris, KC6RFC, outgoing messages.

John Roberts, W6JOR, outgoing messages.

Brian Turner, KI6WZS, incoming messages.



Joe Selikov, KB6EID, and Hannah Kilbourne, KJ6LDW.

Next OCRACES Meeting: November 7, 2011

The next County of Orange RACES meeting is on Monday, November 7, 2011, at 840 N. Eckhoff Street, Suite 104, in Orange. Our featured speaker is Ray Grimes, N8RG, whose presentation is called, "The Land Mobile Radio Spectrum—A Changing Landscape." Ray is an RF systems engineer and an expert on land-mobile radio. This will undoubtedly be a highly informative presentation, and all interested radio amateurs are invited to attend.

KC6FIC and KG6LXT Teach CERT Radio Class

OCRACES Member Tom Tracey, KC6FIC, and RACES Sgt. Ernest Fierheller, KG6LXT, taught a basic CERT radio operations training class at the Citizen Preparedness Exercise on October 1, 2011, at Beckman High School in Irvine. This exercise was held on the same date as the City/County RACES & MOU drill. Several City RACES officers and members also participated in the exercise. This class identified a broader need across EmComm groups of training operators to become more comfortable providing field reporting. Tom reports that the class format was quite successful and numerous students said they appreciated the content and the chance to practice transmitting scenarios over the radio, while overcoming "mic fright."

Title slide of PowerPoint presentation by Tom Tracey, KC6FIC, and Ernest Fierheller, KG6LXT, at CERT exercise in Irvine.

In preparing the presentation, Tom chose some pictures of various disasters or emergencies from a Google search and put them into a PowerPoint, adding small pertinent details such as a house address or descriptions of observed injuries. Each student practiced "calling it in" on the radio on a private channel. MURS radios were used for this purpose. Tom added "This is a drill" at the end of his response. He gave small feedback where appropriate, plus positive reinforcement. Each student was given at least one scenario.

One radio operator approached Tom after the class, explaining he was organizing a volunteer responder group in a mobile home community, and saw the need to train his volunteers on how to call in radio emergencies. He wanted to put a class together, train the trainers, and then train the rest of the volunteers. Tom said he would be happy to help him.

Another amateur radio operator with a CERT team commented to Tom that he realized the need for CERT teams to develop their own team communications standards, with the forethought that in real incidents CERT radio traffic would necessitate them having their own radio net and not overwhelm other emergency communications nets, such as RACES, for example.

Similarly, another idea that came from the event was through a discussion Tom had with Mary Jo Flynn, City of Anaheim Emergency Management Assistant Director, about the need to train volunteer emergency communicators in scene-assessment/resource-requesting radio transmission protocols. Tom says, "Similar to how firefighters learn how to radio-in pertinent first-response assessments and resource requests to their dispatch in a professional, detailed, yet brief manner, if we can take a subset of those same observable and reportable points (like location, problem, scope, resources needed, escalation/de-escalation factors), and simplify it for the communications volunteer, then it can be a highly valuable benefit to city and county agencies. Perhaps a training 'module' could be drafted, teaching such a set of assessment points, and it could be 'put on the road' to train the community radio operators to one standard that is precise enough yet flexible! I guess you could call it, 'How to radio-in on-scene emergencies and disaster assessments to PSAP personnel.' This reminds me of how Wayne Barringer, KB6UJW, drove around during the San Diego Blackout and gave similar disaster assessment reports from South County. If that service can be standardized and trained and advertised, many agencies would benefit, and it would be another resource tool that RACES could provide to city and county agencies."

Tom Tracey, KC6FIC, trains CERT radio operators at Citizen Preparedness Exercise in Irvine.

According to Tom, this exercise generated some great discussions, networking opportunities, and training ideas that are worthy of development. Readers may contact Tom for more information at traceytom@yahoo.com. He will be updating the PowerPoint and redistributing it to RACES and ham groups for training use.

John Bedford, KF6PRN, Attends Traffic School

OCRACES Member John Bedford, KF6PRN, attended "Traffic School" (radio traffic, not vehicular traffic!) on Saturday, October 29, 2011, at Care Ambulance in Orange. This was a three-hour class hosted by the Hospital Disaster Support Communications System on the National Traffic System (NTS). Dr. Kate Hutton, K6HTN (Caltech earthquake scientist and HDSCS special advisor member), was the instructor. She is also the ARRL LA Section Traffic Manager. She explained how the NTS is set up, and taught how to write and handle formal messages.

John Bedford, KF6PRN, with Dr. Kate Hutton, K6HTN, at HDSCS "Traffic School."

OCRACES Exhibits Van at OCFA Open House

OCRACES exhibited its emergency communications response vehicle at the Orange County Fire Authority 6th Annual Open House at OCFA's Regional Fire Operations & Training Center in Irvine, on Saturday, October 8, 2011. Many families attended, and their children enjoyed walking through our van and learning about amateur radio.

Jim Dorris, KF6PRN, received training on driving the van just prior to the event, and drove it to and from Eckhoff that Saturday. Also attending from OCRACES were John Bedford, KF6PRN, Chief Radio Officer Ken Bourne, W6HK, John Roberts, W6JOR, Tom Tracey, KC6FIC, and Applicant Hannah Kilbourne, KJ6LDW.

Newport Beach Cable TV interviewed RACES Capt. Ken Bourne, W6HK, at OCFA Open House.

Jim Dorris, KF6RFC (left), and John Bedford, KF6PRN at OCFA Open House.

Tom Tracey, KC6FIC, with van at OCFA Open House.

John Roberts, W6JOR, participated in the OCFA Open House.

OCRACES Activates for Fire Patrol

Late Wednesday night, October 26, 2011, OCSD Emergency Communications Manager Marten Miller, KF6ZLQ, informed OCRACES Chief Radio Officer Ken Bourne, W6HK, that OCFA was notified of a Red Flag Warning issued by the National Weather Service from 11:00 PM that evening until 2:00 PM the following afternoon. OCFA recommended activation of all patrols. OCRACES members were paged to the 2-meter repeater to check availability for Severe Fire Weather Patrol. On Thursday, Bourne and RACES Sgt. Chuck Dolan patrolled Area 1 from 9:00 AM until 1:00 PM, and Area 2 until 2:30 PM. Kenan Reilly, KR6J, was Net Control. OC Parks Fire Watch hams checked in on the OCRACES repeater. Laguna Beach RACES Chief Radio Officer John Kountz, WO1S, patrolled his City.

Watching the Web

Web Sites of Interest to RACES Personnel

Power Density Calculator
http://hintlink.com/power_density.htm

Amateur Radio RF Safety Calculator

This Web site enables you to calculate RF power density by entering the average power at the antenna, the antenna gain in dBi, the distance to the area of interest, and the frequency of operation. In most cases, the ground reflection factor is needed to provide a truly worst-case estimate of the compliance distance in the main beam of the antenna. Including the ground reflection effects may yield more accurate results especially with very low antennas, non-directional antennas, and calculations below the main lobe of directional antennas.

This is a main beam power density estimation program intended for use as part of a routine evaluation of RF safety compliance with FCC regulations. Amateur Radio operators licensed by the FCC are required to do a "routine evaluation" of the strength of the RF fields around their stations, subject to certain exemptions. These rules can be found in the FCC's ET Docket No. 93-62. Note specifically §97.13(c) of the FCC Rules. More information can be found at the ARRL Web's RF Safety page.

This program uses the formulas given in FCC OET Bulletin No. 65 to estimate power density in the main lobe of an antenna, with use of the EPA-recommended ground reflection factor as an option. This program is intended for approximate far-field calculations. It may overestimate the actual field strength of high-gain antennas in the near field (within several wavelengths of the antenna). However, it may also underestimate the strength of fields that may be encountered in hot spots in the near field. No computer program can predict where wiring or reflective objects may create hot spots in your particular installation.

This is a Web front end for a public-domain program written by Paul Evans, W4/VP9KF, using PHP. This program was derived from a public-domain BASIC program written by Wayne Overbeck, N6NB, and published in the January 1997 issue of *CQ VHF*, page 33.

On 1997-08-27, in the Second Memorandum and Order, the FCC adopted a sliding scale for categorical exemption to routine RF radiation compliance testing based on peak envelope power (PEP) at various Amateur Radio operating frequencies. While the RF radiation exposure compliance levels are based on average power, the categorical exemptions from the requirement for periodic station compliance testing are based upon PEP. Stations operating at or below these respective PEP levels are categorically excluded from having to perform a routine RF radiation evaluation. However, all stations, regardless of power level, still must comply with the RF exposure limits.

Amateurs are required to perform a routine evaluation of the strength of the RF fields around their stations, subject to certain exemptions based on PEP levels at the various amateur bands. However, the FCC regulations on permissible RF exposure are not based on PEP, but on average power over a 30-minute time period for uncontrolled environments, or a 6-minute time period for controlled environments. The part of the regulations that determine whether a station operator must perform a periodic evaluation, however, is based on PEP.

To estimate your average power, first start with your PEP. Multiply that by the duty factor for the mode you are using, then by the maximum percentage of time you expect to operate within the averaging period.

For example, if you operate a 1500-watt PEP SSB phone station that is on for 10 minutes, off for 10 minutes, and on for 10 minutes, you are operating with 200 watts average power (1500 watts PEP × 20% × 67% = 200 watts average power) over a 30-minute period. If you operate a 1500-watt CW station over the same time period, you have 1500 watts PEP × 40% × 67%, or 400 watts average power.

In most cases for the 6-minute controlled environment exposure estimate, you should probably assume that it is possible to operate over the entire 6-minute period, so the 1500 watt PEP SSB phone station would be 300 watts average power for controlled-exposure calculations. An RTTY or digital bulletin station, or FM repeater transmitter, would probably be on for the full 30-minute time period, so the RTTY bulletin station or FM repeater would be 1500 watts average power. If it operated 10 minutes on, 10 minutes off, and 10 minutes on, it would have 1000 watts average power over 30 minutes.

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

Huntington Beach RACES

Huntington Beach RACES will support the Surf City Beach Derby 10 Mile run and a new 10K run/walk along Pacific Coast Highway on Sunday, November 6, 2011, beginning at 7:00 AM.

A previous event, held in February, was covered in the October 2011 issue of *CQ Magazine*, thanks to Wayne Yoshida, KH6WZ, Huntington Beach RACES Public Information Officer. He writes, "A team of 33 volunteer emergency radio communicators quietly deployed into position at various locations along the California Surf City Marathon race course," preparing to "silently watch over the runners, race officials, and other marathon participants in case an emergency of any kind were to happen." He said the group was ready and trained to "assist city public-safety and law-enforcement officials by providing instant information during a medical emergency or other crisis during the marathon. From locating missing children to notifying a paramedic squad of a heart attack victim, RACES communicators constantly watched the marathon activities from pre-race to the conclusion." The Surf City Marathon—known for its oceanfront course, which includes scenic locations such as the Huntington Beach pier, Huntington Central Park, and Bolsa Chica State Beach—is the final race in the California Dreamin' Racing Series.

Seal Beach

We are sad to report that the mass murder that took place at a hair salon in Seal Beach on October 12, 2011, which took the lives of eight of the nine that were shot, claimed the life of Dave Caouette, N6DAC. Dave, 64, was sitting in his off-road-ready Land Rover Discovery, ready to go to his favorite restaurant, when he was shot.

Dave, along with five others, was an off-road driving instructor for Land Rover Mission Viejo. They took customers on free off-road trips since 2003. They often found that CB did not provide adequate communications with all vehicles, and subsequently many of their core group obtained their amateur radio licenses.

Dave was a member of the Long Beach Police Officers Association.

Orange

Deborah Klein, Volunteer Coordinator with the Orange Police Department, has submitted her letter of retirement, effective December 15, 2011. As RACES Coordinator for City of Orange Amateur Radio (COAR), she has encouraged her members in the pursuit of new technologies in Winlink, digital ATV, and other areas of amateur radio for emergency communications. We extend our best wishes to Debbie and appreciation for her support of her city's RACES program.

Hospital Disaster Support Communications System (HDSCS)

HDSCS Member Dave West, KI6EPI, of College Hospital in Costa Mesa, presented a "best practice" poster about HDSCS and amateur radio support for hospitals at the "Disaster Planning for California Hospitals," a conference sponsored by the California Hospital Association, September 19-21, 2011, in Sacramento. Dave also assembled an excellent handout packet about HDSCS to give to attendees of the conference.

Dave West, KI6EPI, and HDSCS District Emergency Coordinator April Moell, WA6OPS (right), present an HDSCS challenge coin to Marianne Goodrich of Orange County Health Care Agency in thanks for her assistance in preparing the "best practice" poster.

November 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7 OCRACES Meeting & Weekly ACS Net	8	9	10	11	12 EmComm Breakfast
13	14 Weekly ACS Net	15	16	17	18	19
20	21 Weekly ACS Net	22	23	24 Happy Thanksgiving	25	26
27	28 Weekly ACS Net & SWACS Freq. Test	29	30			

Upcoming Events:

- Nov 7: OCRACES Meeting, 1930, 840 N. Eckhoff Street, Suite 104, Orange
- Nov 12: EmComm Breakfast, 0900, Katella Grill, 1325 W. Katella Avenue, Orange
- Nov 18: Orange County Amateur Radio Club Meeting, 1900, American Red Cross, 600 Parkcenter Drive, Santa Ana
- Nov 24: Happy Thanksgiving!
- Nov 26: Southwest ACS Frequency/Radio Test, 2015
- Dec 5: OCRACES Holiday Dinner, 1830

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

10 m: 29.640 MHz output, 29.540 MHz input, 107.2 Hz PL (off the air)
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: 1282.025 MHz output, 1270.025 MHz input, 88.5 Hz PL

*Primary Net—Mondays, 1900 hours

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Radio Officers (Lieutenants)
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Harvey Packard, KM6BV
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Assistant Radio Officers (Sergeants)
Jack Barth, AB6VC
Chuck Dolan, KG6UJC
Jim Carter, WB6HAG
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Questions or Comments?
Contact *NetControl* Editor Ken Bourne, W6HK
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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 | Marten Miller KF6ZLQ | Robert Stoffel KD6DAQ

Jack Barth AB6VC | Jim Carter WB6HAG | Chuck Dolan KG6UJC | Ernest Fierheller KG6LXT | John Bedford KF6PRN | Randy Benicky N6PRL | Bill Borg KG6PEX | Jim Dorris KC6RFC | Nancee Graff N6ZRB

Ray Grimes N8RG | Walter Kroy KC6HAM | Martin La Rocque N6NTH | Brian Lettieri KI6VPF | Kenan Reilly KR6J | John Roberts W6JOR | Joe Selikov KB6EID | Tom Tracey KC6FIC | Brian Turner KI6WZS