

August 2011



Newsletter of the County of Orange Radio Amateur Civil Emergency Service

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## Captain's Corner

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

### Ham Radio: Hobby or Service?

Is amateur radio a hobby or a service? Pardon me while I get philosophical in the next couple of pages, but I consider ham radio to be both. We could even discuss whether RACES is a hobby or a service. It's certainly a service (as defined by the "S" in RACES), but, being part of amateur radio, it's also a hobby.

Part 97 of the FCC Rules is titled, "Amateur Radio *Service*." **§97.1 Basis and purpose** says it all (sort of):

The rules and regulations in this part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:

(a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.

(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.

(c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art.

(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.

(e) Continuation and extension of the amateur's unique ability to enhance international goodwill.

Furthermore, the FCC, in **§97.3 Definitions (4)**, says the Amateur Service is:

**A radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.**

OK, now that I'm armed with the above FCC statements, I'll launch into my tirade.

As you will note in the FCC statements, amateur radio is a service. However, as John Johnston, W3BE, former Chief of the FCC's Amateur and Citizens Division, says on page 54 of the August 2011 issue of *WorldRadio Online*, amateur radio is "intended as a communication service for radio hobbyists." He explicitly refers to the §97.3 definition of amateurs as "duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest."

This means that those who are *employed* as first responders or in emergency management should not seek an amateur radio license solely for the purpose of enhancing their capabilities for which they were hired (which is "pecuniary interest"). On the other hand, if they live and breathe radio communications, not only for their professional activities but also for their way of life (including hobby activities) when off-duty, then having and using an amateur radio license is acceptable. In that case, amateur radio, including RACES or

*Continued on page 2*

**The Next  
OCRACES  
Meeting is**

**August 1, 2011  
1930 Hours  
840 N. Eckhoff Street,  
Suite 104, Orange**

**Severe Fire Weather Patrol  
Training**

**by OCFA Battalion Chief  
Bryan Brice**



Orange County Sheriff's Department  
Communications & Technology Division

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

other emergency communications, is a hobby as well as a service.

Those of us who volunteer our time to a government agency as RACES members are indulging in a hobby (which I define as an enjoyable pastime for which we are not paid) while, at the same time, we are providing a service.

Many first responders and emergency management personnel are becoming radio amateurs. This is good, although I discourage them from enrolling in “get-your-ham-license-quickly” courses simply to be better responders or EM people. That violates not only the “pecuniary interest” restrictions of the FCC rules but also the traditions of the Amateur Radio Service. I welcome these fine people into amateur radio, especially if they respect the purposes of amateur radio, such as providing emergency communications on a *voluntary* basis, contributing to the advancement of the radio art, and advancing their communications and radio-technology skills. RACES members need to offer help and encouragement to first responders and emergency managers in obtaining their amateur radio licenses.

If you are looking for OCSD employees who adhere to the true spirit of amateur radio and show a fascination for radio technology, look to the Department's Communications & Technology Division, including especially the hams in management and engineering. They encourage and support OCRACES and obviously enjoy being hams themselves, as well as expert public-safety communicators and engineers. Many of them became engineers and technicians as a result of first obtaining an amateur radio license at an early age, leading toward a degree in electronics engineering or engineering technology and eventually a great career in radio-electronics.

In view of the traditions of amateur radio, I believe that an amateur radio license should be obtained primarily for the purpose of engaging in radio technique as a hobby (that is, as an enjoyable non-paid pastime), while adhering to the purposes of the hobby as a service, as defined by the FCC. Therefore, not only should an amateur license not be obtained for professional career advancement, but also it should not be obtained *solely* for enhancing other non-paid activities such as yacht races, bicycle races, marathons, church and other non-profit events, and family communications (which belong on GMRS, FRS, or cell phones). I am not opposed to amateur radio being used for these activities, but they should not be the sole reason for obtaining an amateur radio license or the only reason for getting on the air. They do not fulfill any of the purposes of the Amateur Radio Service as defined by the FCC.

Speaking of family communications, we have good and bad examples on the OCRACES 2-meter open repeater. I enjoy listening to a father up in Los Angeles talk with his son in Laguna Hills. Their conversations are almost always about improving their communications capabilities with better radios or better antennas, in the true spirit of amateur radio. They also take care not to monopolize our repeater, and keep their conversations short. On the other hand, there are other families who use our repeater entirely for personal communications that have nothing to do with amateur radio, and which would be much more suitable for a cell phone.

I now step into a gray area, and I welcome opposing viewpoints (which I will consider posting in a “Letters to the Editor” column in future issues of *NetControl*). Should members of a volunteer fire department or of a search-and-rescue or other law-enforcement reserve unit obtain an amateur radio license strictly to enhance their unit's communications capabilities? Would this be contrary to the FCC's definition of amateur radio, which is a “service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, duly authorized persons interested in radio technique with a personal aim...”? Keep in mind that §97.3 (a) defines amateur radio as “a voluntary noncommercial communication service, particularly with respect to providing emergency communications.” So providing emergency communications appears to be a legitimate reason for getting a ham license, as long as it's done with a personal aim and without pecuniary interest. We hams in OCSD's RACES Unit are doing just that, and I applaud the hams in OCSD's Search & Rescue Reserve Unit for doing likewise. Most of SRRU's communications during training and activations are accomplished on OCSD's commercial UHF Blue Channel, but, when needed, the SRRU hams employ APRS and ATV on amateur frequencies. When deployed deep into canyons, some SRRU hams have found 160 meters to provide successful communications when other systems do not. (OCRACES plans to install a 160-meter antenna at Loma Ridge for communicating with SRRU under those conditions, and also into beach areas and down to San Diego County RACES.) Using amateur radio for routine law-enforcement or fire-fighting communications, though, is not in the spirit of amateur radio, nor in adherence with the FCC's Rules and Regulations, unless members of a RACES or reserve unit are deployed to assist when commercial frequencies are saturated or unable to provide the types of communications needed (such as ATV or Winlink) during an emergency or disaster.

## Severe Fire Weather Patrol Training: Aug. 1st

Members will receive their annual Severe Fire Weather Patrol training at the August 1, 2011, OCRACES meeting at 7:30 PM, at 840 N. Eckhoff Street, Suite 104, in Orange. The training will be given by Orange County Fire Authority Battalion Chief Bryan Brice. All members who wish to participate in the Fire Patrols must receive this training. City RACES and MOU members who plan to participate in the patrols on a mutual-aid ride-along basis also need to attend this training meeting.

## Two Drills on October 1st!

The next City/County RACES/ACS & MOU drill is scheduled for Saturday, October 1, 2011, from 9:00 AM to 11:00 AM. The scenario is exploding natural-gas pipelines throughout Orange County. On this same date is a Citizen Preparedness Exercise at Beckman High School in Irvine, involving Citizen Corps, VIPS, CERT, RACES, Neighborhood Watch, and other units from cities throughout Orange County. OCSD Emergency Management advises that we should continue with our City/County drill, although most cities will deploy a couple of RACES representatives to the Citizen Preparedness Exercise simultaneously. Additional details will be in the September 2011 issue of *NetControl*.

## More Spectrum for Wireless Backhaul?

As part of its Broadband Acceleration Initiative, the Federal Communications Commission will consider a Report and Order, Further Notice of Proposed Rulemaking, and Memorandum Opinion and Order addressing several proposals to remove regulatory barriers to the full and effective use of certain spectrum bands for wireless backhaul to promote broadband deployment. This matter will be an item on the tentative agenda for the FCC's next open meeting scheduled for August 9, 2011. The item also addresses other ways to make additional spectrum available for wireless backhaul. This will bear watching, especially if it addresses spectrum currently allocated to the Amateur Radio Service.

## EmComm Breakfast Moved to 0900, Aug. 13th

The next Orange County EmComm Breakfast will be on Saturday, August 13, 2011. The time has been moved to 9:00 AM, to give breakfast-goers an extra hour of sleep. As usual, the EmComm Breakfast will be held at the Katella Grill, 1325 W. Katella Avenue, in Orange (northeast corner of Katella Avenue and Main Street). This is not an official meeting, but is an enjoyable gathering of all radio amateurs in Orange County who are involved with emergency communications, including City and County RACES and MOU members and their families.

## OCRACES to Exhibit Van at HAMCON

OCRACES will exhibit its emergency communications response vehicle at HAMCON (2011 ARRL Southwestern Division Amateur Radio Convention) on Saturday, September 10, 2011. The convention will be held at the Marriott Torrance South Bay, 3635 Fashion Way, in Torrance. Our van will be parked outside the exhibit hall, which is open from 8:00 AM until 5:00 PM.

Go to <http://www.hamconinc.org> for ticket registration, a list of vendors/exhibitors, a run-down of technical presentations, and other information about the convention. Some of the presentations include N6MI's contest and emergency communications van, collecting and restoring amateur radios of the past, integrating civilian volunteers and sworn agency personnel, personal emergency preparedness, hydration for the emergency responder, NVIS for reliable regional communications, and much more.



## New EmComm Training Courses from ARRL

ARRL's *ARES E-Letter* for July 20, 2011, mentions two new emergency communications training courses.

**Introduction to Emergency Communications—Course # EC-001** is a revision of the ARRL's former Emergency Communications Basic/Level 1 course. The course is designed to provide basic knowledge and tools for any emergency communications volunteer. The course has six sections with 29 lesson topics. It includes required student activities and a 35-question final assessment, and is expected to take approximately 45 hours to complete over a 9-week period. Students will have access to the course platform at any time of day during this 9-week period, and may work according to their own schedule. Students must pace themselves to be sure they complete all the required material in the allotted time. Prerequisites include the free mini-courses that can be taken online at <http://training.fema.gov/IS/NIMS.asp>. They include ICS-100 (IS-100.b) (Introduction to the Incident Command System) and IS -700 (National Incident Management System). Also recommended, but not required, are: IS-250, Emergency Support Function 15 (ESF15) External Affairs, and IS-288, The Role of Voluntary Agencies in Emergency Management.

This is a mentored course. Students will be assigned to correspond with an experienced radio amateur who will be their resource for any questions they have about the course content. Student and Mentor Expectations are included in the "Policies for Online Courses" at <http://www.arrl.org/policies-for-online-courses>. To register for the course, go to the registration page at <http://www.arrl.org/online-course-registration>. The cost is \$50 for members, and \$85 for non-members.

**Public Service and Emergency Communications Management for Radio Amateurs—Course # EC-016** is designed to train licensed amateur radio operators who will be in leadership and managerial roles organizing other volunteers to support public-service activities and communications emergencies. In this course, students will learn how radio amateurs prepare and organize to support local community events, work in coordination with governmental and other emergency response organizations, and deploy their services to provide communications when needed in an emergency.

This course is made available on the ARRL Web site for all ARRL members. It is a self-study course that students may complete at their own pace. Prerequisites include several FEMA courses. To enter the course, go to <http://www.arrl.org/ec-016-course>. For information on enrolling for the final assessment and certificate, go to <http://www.arrl.org/ec-016-application-for-final-assessment>.

## FEMA Promotes National Preparedness Month

The Federal Emergency Management Agency's (FEMA) Ready Campaign, in partnership with Citizen Corps and the Ad Council, announced on July 21, 2011, the launch of new Web tools that will make it easier for individuals and organizations throughout the nation to join the 2011 National Preparedness Month (NPM) coalition and pledge their support to help prepare their families, businesses, and communities for emergencies of all kinds.

The eighth annual NPM will kick off this September, using the slogan, "A Time to Remember, A Time to Prepare." The campaign seeks to transform awareness into action by encouraging all Americans to take the necessary steps to ensure that their homes, workplaces, and communities are prepared for disasters and emergencies of all kinds.

"As we move forward with planning for this year's events and activities, we also recognize that this September marks the ten-year anniversary of the 9/11 terrorist attacks," said FEMA Administrator Craig Fugate. "By doing what we can to ensure that our communities, and our nation, are prepared to respond and recover from all types of disasters and hazards, we honor the memory of those who were lost that day."

Individuals and groups can now register to become NPM coalition members by visiting <http://community.fema.gov>. Once registered, members have access to a toolkit that includes suggestions for activities and events, templates, articles, banners, and customizable materials. Coalition members also have access to an events calendar allowing them to post and promote preparedness events, share success stories, and participate in national and regional discussion forums to engage with fellow coalition members and FEMA representatives. By hosting events, promoting volunteer programs, and sharing emergency preparedness information, coalition members can help ensure that their communities are prepared for emergencies. Becoming a coalition member is easy and free, so register now to get started.

While NPM is held each September, FEMA's Ready Campaign promotes individual emergency preparedness at home, in the workplace, and throughout America's communities throughout the year. Ready is a national campaign, produced in partnership with The Ad Council, designed to educate and empower Americans to prepare for and respond to all types of emergencies, including natural disasters and potential terrorist attacks.

## Watching the Web

### Web Sites of Interest to RACES Personnel

Top Band—160 Meters

<http://wadsworthsales.com/topband.aspx>

## TOP BAND—160 METERS

As OCRACES contemplates adding 160 meters to its capabilities at Loma Ridge, to reach into canyons and down to beach areas, it's fascinating to see what others are doing on this lowest RF band allocation to the Amateur Radio Service. This Web site discusses the history of operating on 160 meters, including coping with interference from LORAN stations until 1980. Technical characteristics of this band are also discussed, including the challenges of erecting effective antennas and trying to understand the aspects of ionospheric propagation. A propagation prediction table is provided for middle and high latitude northern hemisphere circuits. Amazing photos are posted of the K9NS "four square" 160-meter array, the K9DX nine-element array, and curtain antennas at Radio New Zealand International. Be sure to look at the mind-blowing video link to the JO1DZA yagi installation (yes...a 160-meter yagi!).

## ARRL Looking for Emergency Liaison Stations

During the 2008 hurricane season, ARRL Headquarters instituted a Command-Control-Coordination (C3) operation to support operations taking place in the affected ARRL Sections. One requirement was the need for Headquarters to establish radio links into the affected areas. In the summer—the height of hurricane season—75 meters is noisy and doesn't propagate well during the day and hindered W1AW's reach into these areas. As such, the nets on 40, 75, and 80 meters—while providing excellent coverage of several hundred miles in the impacted areas—did not allow W1AW to monitor these frequencies, nor did it permit monitoring of developing conditions that would allow Headquarters staff to maintain a higher level of situational awareness and disaster intelligence necessary for support operations.

ARRL West Gulf Division Director David Woolweaver, K5RAV, offered his EchoLink system to ARRL during the 2008 hurricane season. Woolweaver—who had good propagation into the impacted areas during the tropical events in the Gulf of Mexico area—established a connection between his home HF equipment and EchoLink. By connecting in to this, W1AW was able to use a direct EchoLink connection to Woolweaver's home station, enabling W1AW to come up on these HF frequencies. With EchoLink, the ARRL was to maintain contact between the affected areas and with the National Hurricane Center and VoIP Hurricane Net operations.

The need to build out the capability to link HF stations to EchoLink was clear and Woolweaver began to enlist other stations in Texas to develop it. But according to ARRL Emergency Preparedness Manager Mike Corey, W5MPC, it has been an ad hoc effort with known stations with no official standing for emergency communications with the ARRL. Additionally, while a regional capability was developed in a part of Texas, the ARRL needed to have this capability throughout the rest of the country.

The concept of the Emergency Radio Internet Linking System (ERILS) was crafted to meet this need, with ERILS stations operating under the ARRL Emergency Preparedness Program. Stations would be designated Official ERILS Stations after meeting specific criteria that would enable them to blend the capabilities of radio and the Internet, permitting emergency communications and a W1AW presence to occur. Stations would be geographically diverse, providing redundant pathways into multiple areas of the United States. While EchoLink was used successfully in 2008, other current and future software platforms could be used with traditional RF capabilities to meet the mission needs.

"Individual stations are the key component of ERILS," Corey explained. "These stations require a particular designation for planning and response purposes, and as recognition of the station owner's resources and commitment. These stations are designated as an Emergency Liaison Station. An ELS is not an Official Emergency Station (OES) that is part of the ARES program, but is a separate resource available to the Emergency Preparedness Manager, or designees, and the ARRL Leadership." To find out more, including information on whether your station can be part of the ELS program, go to <http://www.arrl.org/news/arrl-soliciting-stations-to-become-emergency-liaison-stations>.

# 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**

## Laguna Niguel ACS

Laguna Niguel ACS Chief Radio Officer Ray Nienburg, KJ6AOX, reports that the city's ACS unit is making a serious effort to update their handbook to reflect who they are and what they want to do. David Bryden, WA6PXO, is coordinating this effort. At their last meeting, they discussed the desirability of having their mission statement reflect a cooperative relationship with OCRACES. This relationship with Laguna Niguel ACS, as well as with all other City RACES and ACS units throughout Orange County, is welcomed by OCRACES, since we are always ready to assist each other when disasters strike or when we need to coordinate our training and technology.

## Tri-Cities RACES

On August 6, 2011, Tri-Cities RACES will run a radio coverage exercise to help support the San Juan Capistrano CERT LART exercise. LART (Large Animal Rescue Team) is responsible for evacuating horses during the wildfire season. They transport the animals to the Mission Viejo Riding Park at Antonio and La Pata. During the exercise, Tri-Cities RACES intends to deploy operators to Santiago Canyon and surrounding areas to verify radio coverage by testing various repeaters (including OCRACES) between 0900 and 1100 hours.

## Hospital Disaster Support Communications System (HDSCS)

The annual Golden Guardian 2011 Full Scale Exercise in Orange County involved the National Disaster Medical System (NDMS). The drill scenario was severe flooding in northern California that necessitated the evacuation of hospitals there. Transport of those patients by military airlift and ambulance to hospitals here was simulated, with over 300 volunteer "victims" arriving at Orange County medical facilities on the morning of Wednesday, May 18, 2011. Under NDMS procedures, participating Orange County hospitals received notice

of the impending arrivals on Tuesday, so they were able to plan ahead for resources, including Amateur Radio communicators, in advance. HDSCS call-up responders began receiving requests for communicators that day. At 8 AM on Wednesday morning, HDSCS members went to 17 requesting hospitals, set up their equipment, and networked to handle many messages including resource requests to the county's Emergency Medical Services Agency (OC-EMS) and resolution of victims transport issues. OC-EMS introduced several surprises into the drill to test response of the hospitals, including a simulated half-hour area-wide telephone outage and numerous misdirected victims. HDSCS members operating from hospitals were Louie DeArman, K6SM, Richard Deen, KI6HWY, Bob Duer, N6YKX, Tom Gaccione, WB2LRH, Tom Hall, N6DGK, Bill Hegardt, K6WIL, Rebecca Katzen, KI6OEM, Pete Martinez, K2PTM, Jim McLaughlin, AB6UF, Justin Miller, KI6AFZ, Robert Moore, KW6B, Dale Petes, KI6ANS, Dave Popko, AF6TN, Bill Preston, KZ3G, Ken Simpson, W6KOS, Fred Wagner, KQ6Q, and Woody Woodward, W6PA. Communicating from OC-EMS Department Operations Center was Joe Moell, K0OV. Net Controls were April Moell, WA6OPS, and Ralph Swanson, WB6JBI.

## Orange County RACES

Congratulations to John Bedford, KF6PRN, who is now a member of County of Orange RACES. John holds a Technician Class amateur radio license and resides in Lake Forest, CA. He has participated in training classes and exercises, and has given his support to OCRACES while waiting for clearance on his background check. He is an active radio amateur and attends Orange County Amateur Radio Club and other amateur radio club meetings. We appreciate John's enthusiasm and we welcome him to OCRACES.



# August 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 <i>OCRACES Meeting &amp; Weekly ACS Net</i>	2	3	4	5	6
7	8 <i>Weekly ACS Net</i>	9	10	11	12	13 <i>EmComm Breakfast</i>
14	15 <i>Weekly ACS Net</i>	16	17	18	19	20
21	22 <i>Weekly ACS Net &amp; SWACS Radio Test</i>	23	24	25	26	27
28	29 <i>Weekly ACS Net</i>	30	31			

## Upcoming Events:

- **Aug 1:** OCRACES Meeting (Severe Fire Weather Patrol Training), 840 N. Eckhoff St., Suite 104, Orange
- **Aug 13:** EmComm Breakfast, Katella Grill, 0900, 1325 W. Katella Ave., Orange
- **Aug 22:** Southwest ACS Frequency/Radio Test, 2015
- **Sep 9-11:** HAMCON 2011, Marriott Torrance South Bay
- **Oct 1:** City/County RACES/ACS & MOU Drill, 0900-1100, and Citizen Preparedness Exercise
- **Oct 24:** City/County RACES/ACS & MOU Meeting, 1900, 840 N. Eckhoff Street, Suite 104, Orange



[www.ocraces.org](http://www.ocraces.org)



## Mission Statement

County of Orange RACES has made a commitment to provide all Public Safety departments in Orange County with the most efficient response possible to supplement emergency/disaster and routine Public Safety communications events and activities. We will provide the highest level of service using Amateur and Public Safety radio resources coupled with technology, teamwork, safety, and excellence. We will do so in an efficient, professional, and courteous manner, accepting accountability for all actions. We dedicate ourselves to working in partnership with the Public Safety community to professionally excel in the ability to provide emergency communications resources and services.

## County of Orange RACES Frequencies

- 10 m: 29.640 MHz output, 29.540 MHz input, 107.2 Hz PL (disabled)
  - 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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Questions or Comments?  
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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  
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Chuck Dolan  
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Ray Grimes  
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Brian Lettieri  
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Kenan Reilly  
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Joe Selikov  
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