

April 2005



Newsletter of the County of Orange Radio Amateur Civil Emergency Service



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Captain's Corner

by Ray Grimes N8RG, Chief Radio Officer

I am pleased to say that I will be standing down as the OCRACES Chief Radio Officer on April 4. That may seem like an odd thing to say, but I can report that I am pleased to have served this fine organization as your CRO for over 7 years and as an OCRACES member for almost 12 years, and am equally pleased that I am passing the baton to my good friend Ken Bourne, W6HK who as you may recall, was our CRO before me. I can't think of anyone who is better qualified for the task, as Ken enjoys a long history as the former Orange County RACES Chief Radio Officer, also being the former Chief Radio Officer for DuPage County in Illinois and the California State OES Deputy Chief ACS Officer beginning in February, 1998.

We have made great strides during my term as your Chief Radio Officer, introducing ATV, SSTV, PSK-31, COR and APCOR portable repeaters, APRS, and WinLink to our tool kit. We have developed the capability to distribute live ATV or SSTV images throughout the EOC to be viewed on large TV monitors, providing on-scene real-time disaster photos that can be used to assess the magnitude of an incident and to help in deployment of personnel and resources. You as OCRACES members have also received expert training on the operation of 800 MHz CCCS radios and control consoles which have been used for sev-

eral special events. On several occasions, OCRACES responded to complaints of RF interference, quickly identifying the source. Without exception, our greatest accomplishment was the design, construction, and implementation of the OCRACES emergency response vehicle.

All of these projects were by virtue of the membership, contributing unique talents and capabilities, and selfless time and monetary donations. Under my command, you have responded to numerous actual emergencies such as wildfires, floods, and missing persons. You have supported the Orange County Sheriff's Department, Orange County Fire Authority, and numerous county agencies on countless activities such as SONGS, FireWatch, the Elections, Baker to Vegas, and Y2K. You don't hesitate to respond when needed, regardless of the time of day or night.

In case you are wondering, my decision to step down as CRO was a condition of my recent employment as the Orange County Sheriff's Department Communications Division Engineering Manager. I will remain as an active OCRACES member, supporting activities and attending meetings as time allows. Please continue to support the new CRO with the same respect, total support, and friendship you have always afforded me.

The Next
OCRACES
Meeting is

April 4th
1930 Hours

840 N. Eckhoff St.
Orange, CA



Orange County Sheriff's Department
Michael S. Carona, Sheriff-Coroner

County of Orange RACES Participates in John Wayne Airport Disaster Exercise

On March 2, 2005, many public safety and volunteer organizations participated in a full-scale exercise, in which airport and emergency service organizations responded to victims of a major aircraft disaster. This drill provided an opportunity for those organizations to interface under a unified command structure during an airport emergency setting, and also satisfied FAA requirements of conducting a triennial emergency exercise. After a normal departure from JWA, the pilot of a Boeing 737-800 is



A Unified Command Post is established between the Sheriff's Department, Fire Authority, and John Wayne Airport

alerted to a fire in the forward fuselage via a cockpit warning light that causes him to make an immediate return to the airfield. On approach the condition worsens and makes flying the aircraft quite difficult. This condition causes the pilot to land hard and veer off the runway skidding across the runway and several taxiways, striking two aircraft, and then coming to rest. The aircraft remains generally intact, however, the fire is rapidly spreading and is impeding exiting of the aircraft from the rear exits. Heavy smoke and intense heat fills the cabin causing numerous victims to pass out and require resuscitation. Some victims are unable to escape.



OCRACES provided SSTV images from the drill site. "We identified



issues with equipment, OCRACES van preparedness, and procedure protocol," said RACES

Visual Communications Coordinator Jim Carter, WB 6 H A G. "Our mission was to provide SSTV pictures from the event to



the OCRACES van and Loma Ridge EOC, and we

RACES members Tom Stroud (left) and Scott Byington send SSTV images from JWA to the County Emergency Operations Center.

successfully met the objectives by providing excellent pictures," concludes Jim.

OCRACES members who participated were Ernest Fierheller, Jack Barth, Martin La Rocque, Tom Stroud, Joe Selikov, Jim Carter, Scott Byington, Tony Sanchez, Harvey Packard and Carol Matthews.



OCRACES Participates in SONGS Exercise

The County Emergency Operations Center was busy with activity during the SONGS dress rehearsal exercise conducted March 9th. This annual exercise allowed participants to prepare for the upcoming FEMA-graded San Onofre Nuclear Generating Station exercise.



Assistant Sheriff Jo Ann Galisky (left) and Sheriff Mike Carona listen carefully to a briefing in the EOC command center.



Radio Officer Harvey Packard, KM6BV, staffed the RACES radio room.

Over 100 personnel responded to the EOC for this SONGS exercise.



Photos by Steve Sobodos, KN6UX

More Images from the JWA Exercise



Images of the JWA disaster exercise were captured by OCRACES members Jack Barth and Tom Stroud. Four busses were parked back-to-back as simulated "aircraft" and the drill involved hundreds of emergency first responders.



“Incoming” Captain’s Corner

By Ken Bourne, W6HK, Chief Radio Officer



What an honor and privilege it is once again to serve as OCRACES Chief Radio Officer, the position I held from 1988 to 1998, when I “flew the coop” and served as an ACS Officer in State OES for almost five years. When I returned to OCRACES a couple of years ago, I found a few familiar faces and some new ones, all of whom are valuable members led by a great Chief Radio Officer, Ray Grimes, N8RG. Ray became an OCRACES member in 1993 and was appointed CRO in February 1998, when I went to State OES. During his over seven years of service as CRO and almost 12 years as a member, Ray packed a million years of value into OCRACES, by sharing his vast knowledge, leadership, dedication, and friendship with all members.

We congratulate Ray on his new position as the Orange County Sheriff’s Department Communications Division Engineering Manager, and we congratulate the County for having such a knowledgeable and experienced RF systems engineer step into that role. We are very fortunate that Ray will continue serving as an OCRACES member.

Congratulations also to Robert Stoffel, KD6DAQ, our RACES Program Coordinator, who has been promoted to OCSD/Communications Assistant Director. Robert and the Division give the utmost support to RACES operations. In return, OCRACES members are the most enthusiastic RACES personnel I have ever seen, providing countless hours of service during emergencies, training drills, events, and projects (especially the impressive OCRACES emergency response vehicle).

Our activities will continue at a high level. Our theme will be “sharing,” just as Ray shared his knowledge with us. We will share what we learn as we explore better ways to communicate with ATV, SSTV, PSK-31 and other digital communications technology, APRS, Winlink, HSMM (High Speed Multimedia radio using WiFi components on 2.4 GHz), portable repeaters, and direction-finding techniques (for locating interference). We will share our experience in handling high volumes of traffic during emergency situations.

We will share our procedures for deploying under a wide variety of conditions. We will invite guest speakers from OCSD and other agencies, as well as from high-tech industry, to share their knowledge with us. We will make ourselves available to speak to other RACES organizations and share our knowledge with them. Our members will also speak at amateur radio club meetings and exhibit at ARRL conventions, in order to recruit new members into our RACES program.

As we head into April, we have many duties before us. On April 9th we will showcase our RACES vehicle in the City of Stanton. We have the SONGS exercise on April 13th. Baker to Vegas is April 23rd and 24th. Christmas in April is on April 30th. We will continue our training programs and our projects, and continue improving our technological capabilities. We have a lot on our plate, which I expect will go smoothly as a result of our dedication and talents, as well as the friendship that we OCRACES members share with each other.

Watching The Web – By Ken Bourne, W6HK

Scott Byington, KC6MMF, and I are investigating the use of WiFi wireless computer equipment for sending live video images from an incident to the EOC or elsewhere, using laptops, digital cameras (perhaps even cellphone cameras linked to laptops via Bluetooth), and 802.11b or 802.11g WiFi network modules. Several Web sites provide some very useful information about using WiFi on Amateur Radio frequencies within the 2.4 GHz band. One particular Web site is <http://www.ceitron.com/mvus/hsmm1003.html>, consisting of an article, "What is HSMM Microwave Radio," by John Champa, K8OCL. HSMM is High Speed Multimedia radio, a digital radio network on 2.4 GHz. Champa is the chairman of the ARRL Technology Task Force on HSMM Radio Networking. His article mentions several applications for HSMM, including digital voice (DV) and digital video (DV). You can type keyboard messages (chat mode) as in PSK31, do file transfers as in RTTY (but at much higher speeds), do e-mailing (if there is a server on the radio network), and even surf the Internet (keeping in mind, of course, the FCC limitations on what may be communicated on Amateur frequencies!)—hence the term, "Multimedia." Champa encourages Amateurs during Field Days and simulated emergency tests to deploy broadband HSMM microwave radio networks in the field. One interesting application he mentioned was during the Midwest VHF-UHF

Society Picnic 2003, when an RLAN was used to link antenna test measurements to a printer. Champa talks about adapting off-the-shelf 802.11b or g WiFi gear to operate within Amateur Radio regulations. As sold by computer stores, the equipment operates at very low power in the 2.4 GHz ISM license-free ISM bands under Part 15 of the FCC Rules. Typical range is 50 to 100 feet, but Champa points out that proper setup under Amateur regulations can provide coverage far in excess of that distance. He mentions one system ("Hinternet") in Livingston County, Michigan, that covers 5 to 15 miles at speeds up to 54 Mb/s (half-duplex) using small mast-mounted dish antennas in conjunction with off-the-shelf consumer-grade hardware. The Web article provides details on what is needed to set up an HSMM system. He suggests 802.11g, rather than b, products, for higher speed and better propagation (due to higher tolerance of multipath effects) with orthogonal frequency division multiplexing. It's important to look for products with removable rubber-duck antennas or external antenna ports. Champa also says to buy devices with the highest transmit power (100 mW or 20 dBm) and best receive sensitivity (-93 dBm or lower at 11 Mb/s). Champa also talks about antennas, coax, station identification, HSMM microwave radio repeaters, software, and how to avoid accidental mixing of Part 15 and Part 97 traffic.



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:

- 6m: 52.62 MHz output, 52.12 MHz input, 103.5 PL
- 2m: 146.895 MHz output, 146.295 MHz input, 136.5 PL *
- 23cm: 1282.025 MHz output, 1270.025 MHz input, 88.5 PL
- 1.25m: 223.76 MHz output, 222.16 MHz input, 110.9 PL
- 70 cm: 449.180 MHz output, 444.180 MHz input, 107.2 PL

* Primary Net - Mondays, 1900 Hours

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RACES News from Around the County

COUNTY & CITY RACES

As we have done in past years, County of Orange RACES will once again provide logistics communications support for the annual Rebuilding Together event. Formerly known as Christmas in April, the Rebuilding Together Orange County organization partnerships with the community to rebuild owner-occupied homes, shelters and non-profit facilities for low income residents. Although Rebuilding Together provides services throughout the year, the national rebuilding day is Saturday, April 30, 2005, when communications is needed the most. As we have done in the past, OCRACES will be seeking assistance from any interested City RACES organization. The event is too large for us alone, and we are seeking communicators for this day-long activity. RACES volunteers must have a 2-Meter/440 handheld radio, and have the ability to drive their personal vehicle between several locations throughout the day. This event usually starts by 0800 and runs as late as 1700 hours, although many shifts may end earlier, depending on how quickly the work is completed. If you are interested, please have your City Coordinator or Radio Officer contact us at OCRACES@ocgov.com and we will provide you with all the details.

LAGUNA BEACH RACES

Laguna Beach RACES provided communications support for the 39th Annual Laguna Beach Patriots Day Parade, reports Chief Radio Officer John Kountz, KE6GFF. Chief of Police James E. Spreine was the 2005 Grand Marshal,

and the parade consisted of more than ninety entries. The Laguna Beach RACES team was composed of Quinn Farnes, WB6TDC, Lynn Taylor, WB6UUT, Ron Kaufman, WH6ANA, Arlene Schwartz, KE6GFI and John Kountz, KE6GFF.

LOS ALAMITOS / SEAL BEACH RACES

Tom Rothwell, K6ZT, reports that Los Alamitos/Seal Beach RACES used the Los Alamitos Communications Van on February 26th providing communications support for the annual Los Alamitos 5K / 10K Race. Net Control duties were handled from the van, and "our contingency plan worked, and the product we supplied was perfect," said Tom.

LOS ANGELES COUNTY RACES

Los Angeles County DCS (RACES) hosted their annual meeting on March 21st. At the meeting the new DCS Coordinator was announced – Sgt. Mike Williams. Former OCRACES member



Eric Christensen, KA6IHT, (above) is now a member of Burbank RACES, and was selected and recognized by District 12 as the LA County DCS district member of the year. Congratulations Eric!

"RACES News" provides an opportunity to share information from all City & County RACES organizations in Orange County. Please send your news to: OCRACES@ocgov.com

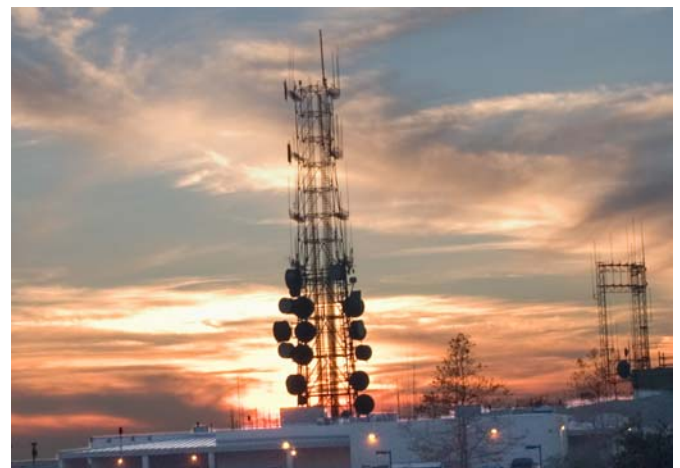
April 2005

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4 <i>Weekly Net</i> OCRACES	5	6	7	8	9 RACES Vehicle Display
10	11 <i>Weekly Net</i>	12	13 SONGS Graded Exercise	14	15	16
17	18 <i>Weekly Net</i>	19	20	21	22	23 Baker-to- Vegas
24 Baker-to- Vegas	25 <i>Weekly Net</i>	26	27	28	29	30 Christmas In April

Upcoming Events:

- **April 4:** OCRACES monthly meeting, 840 N. Eckhoff Street, Orange, 1930 hours
- **April 9:** OCRACES Vehicle Display – City of Stanton
- **April 13:** SONGS graded exercise, OCRACES Activation
- **April 23 & 24:** Baker-to-Vegas – OCRACES Activation
- **April 30:** Christmas in April – OCRACES Activation
- **May 2:** OCRACES monthly meeting, 840 N. Eckhoff Street, Orange, 1930 hours
- **May 15-21:** Emergency Medical Services Week

OCRACES member Steve Sobodos, KN6UX, recently captured these photos of Loma Ridge, home of our RACES 2-meter repeater and County Emergency Operations Center.



“Springtime at Loma Ridge” can be seen to the left, and above is *“Sunset at Loma Ridge”* which has become a part of our new County of Orange RACES NetControl newsletter masthead.

County of Orange RACES

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**"W6KRW ...
Serving
Orange County"**

Meet your County of Orange RACES Members!



Ken Bourne W6HK Scott Byington KC6MMF Jim Carter WB6HAG Harvey Packard KM6BV Joe Selikov KB6EID Robert Stoffel KD6DAQ



Jack Barth AB6VC Bill Borg KG6PEX Ernest Fierheller KG6LXT Nancee Graff N6ZRB Ray Grimes N8RG Bryan Hovde KD7CRA Walter Kroy KC6HAM



Martin LaRocque N6NTH Carol Matthews KF6ERZ John Roberts W6JOR Tony Sanchez AE6QT Ralph Sbragia W6CSP Steve Sobodos KN6UX Tom Stroud N6FDZ Tom Tracey KC6FIC