

October, 2005



Newsletter of the County of Orange Radio Amateur Civil Emergency Service

Captain's Corner

by Ken Bourne, W6HK, Chief Radio Officer

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Our next City/County RACES exercise is Saturday, October 1, 2005, from 0900 to 1100. The scenario will be a loss of public-safety communications systems—which is not all that far-fetched. We saw that problem occur in New Orleans following the devastation of Hurricane Katrina (and expected to happen as Hurricane Rita nears the Texas Gulf Coast while I am writing this article). If a major disaster hits Orange County, such as a 7-point earthquake or a nuclear terrorist attack, we would also have a potential loss of public-safety communications systems.

Unfortunately, many radio amateurs in and around New Orleans and the Mississippi Gulf Coast lost their communications capabilities as well, following the hurricane. Each of us in RACES must ask ourselves if we are prepared personally to respond. What if all power is knocked out? Do we all own (and maintain) generators? Do we have adequate fuel for those generators? Gasoline stations would be shut down, because of lack of power for gas pumps.

OCSD has a good supply of fuel to keep their generators running for many days. But what if the power outage lasts for weeks, and the fuel runs out? Besides public-safety communications systems, cellular telephone sites would also



be inoperative, with lack of utility power and depleted batteries. While still operating, cell sites would be overloaded with desperate calls. Then they would fail altogether. Furthermore, cellular telephones would also fail, because there would be no power for recharging them.

What about your amateur radio equipment? Will your house be destroyed, or at least not have utility power for several weeks? How will you charge your HTs, when power is out? How will you refuel your generator (if you have one in the first place)? How will you operate your mobile radios, if gasoline is not available? Will any repeaters be on the air, after several weeks of power outage?

These problems did occur in Louisiana and Mississippi. Radio amateurs were hit hard, and many (probably most) could not operate. We are seeing virtually no reports of local RACES opera-

Continued on page 2

The Next
OCRACES
Meeting is

October 3, 2005

1930 Hours

840 N. Eckhoff St.

Orange, CA

*EAS System
Overview pro-
vided by Marcos
O'Rourke,
KG6YWT*



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

Captain's Corner

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tions. Yet, amateur radio played an important role—primarily by amateurs who responded from other areas of the country, bringing in their own radios, batteries, generators, fuel, and other supplies. Will we have to depend on amateurs from outside of Southern California to come in and provide communications, while we are trying to put our lives back together?

These are important questions to ask ourselves, as we head into the City/County RACES exercise. Consider putting together a solar-cell power source for your home station and for recharging your HT batteries. Perhaps we can get a guest speaker for one of our meetings who can show us how to do that.



Part of our preparations for responding during major disasters is to familiarize ourselves with the National Incident Management System (NIMS). This is now a requirement of each OCRACES member. Marten Miller explained in a recent E-mail how to prepare for and take the NIMS exam on the FEMA Web site. After you receive an E-mail confirming that you took and passed the test, you must forward it to Marten.

Some OCRACES members have already passed the NIMS test. Let's all try to do that by the next OCRACES meeting on Monday, October 3, 2005, or soon thereafter. Also at that meeting, be prepared to discuss your ideas for providing communications after a complete loss of power for a least several days, with no fuel and no way to charge batteries. It should be an interesting meeting!

RACES Support Requested for Elections

As mentioned in last month's Net Control, it is election season again in Orange County with at least two elections fast approaching and a third election very likely before the year is out. As in past elections, OCSD/Communications will be managing the transportation of ballots from Collection Centers throughout the County to the Vote Tally Center (VTC) in Santa Ana. RACES support is again requested to provide communications support between Collection Centers and the VTC.

The first one will be the 48th Congressional District Election on October 4, 2005 affecting only South Orange County. There are only 10 Collection Centers for this election and we have RACES support for all but two of them. At this time, we have no RACES coverage at the Aliso Viejo and San Clemente Collection Centers. Any interested RACES personnel are encouraged to respond by email to ocraces@ocgov.com.

There will also be a Statewide Special Election on November 8, 2005. Several of the 23 Collection Centers are still without RACES support for this Countywide election. Depending on the outcome of the October 4 election, there could also be a run-off election on December 6, 2005.

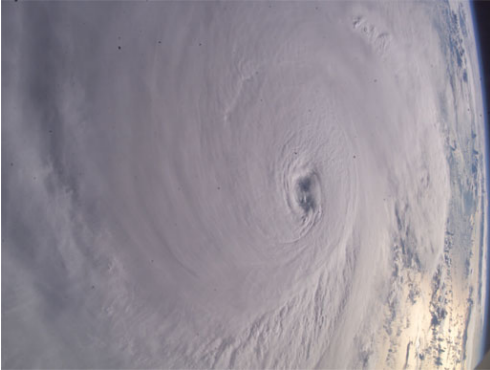
A Ballot Transportation Team briefing will be provided at the OCRACES monthly meeting at 7:30 pm on October 3, 2005.



Snapshot of the activity at the Tustin Collection Center during the November 2, 2004 General Election.

HAM RADIO AND DISASTER RECOVERY

Written by Ray Grimes, N8RG



A topic of great interest these days is Hurricane Katrina, a Category 5 storm (160 mph) that devastated Louisiana.

Another topic of equal interest is Hurricane Rita, a Category 5 storm (165 mph) that threatens to strike the same area that was recently destroyed by Hurricane Katrina. As we have learned, most all of the Southern Louisiana telecommunications infrastructure was wiped out as radio towers and buildings fell, buried phone and cables were destroyed, with anything remaining rendered useless by flooding. There is very little that could have been done to disaster-harden the telecommunications infrastructure in Southern Louisiana, as it encompasses radio facilities that were literally blown away, third-party provided telephone, data circuits, and AC commercial power that was swept away by flooding, and commercial power. Broadcast services such as AM, FM, and TV depend on these services that weren't available when needed most. This leaves backup contingency planning as the next best emergency planning program.

As we have learned many times from disaster support, the first few hours are the most critical where communications is most vital to the rescue effort and restoration of government services. There would initially identify only a few remaining options such as satellite telephones, ham radio, FRS (Family Radio Service), and simplex mode operation of business and public safety battery operated radios. FRS and simplex radios would at best, offer local coverage of up to 5 miles. In the situation of Hurricane Katrina, base station radios were destroyed, as were the vehicles that housed mobile

radio stations. That leaves portable, battery-operated radio equipment, or portable generator operated radio equipment. The problem with either of these options would be that battery changing would require AC commercial power, or vehicular DC power, of which neither was available. Portable radio dry replacement batteries were virtually unavailable, as no stores remained from which to buy batteries.

Ham radio brought many resources to support an otherwise "hopeless" scenario. The Ham's supplied trained radio operators that brought their own equipment and supplies, including spare batteries. The Ham's provided vital local communications between emergency shelters and disaster management locations. The Ham's provided inter-state and intra-state long-distance communications that the public safety community wouldn't normally support. It's been said on a number of occasions that modern public safety radio systems are robust to the point that ham radio operators are no longer needed as a backup resource.

The Louisiana disasters have demonstrated that these systems can be highly vulnerable to loss of service, particularly for multiple disasters. Ham radio resources are quite appealing in disaster mitigation and planning, as there is a level of redundancy and flexibility that is unparalleled by any other telecommunications resource.



Disaster Ready Conference

On August 25-26, 2005, the Orange County Emergency Medical Services Agency hosted the first annual Disaster Ready Conference at the Hyatt Regency Hotel in Garden Grove. This two-day information packed-conference included local, regional, national, public and private presenters, as well as trainers, educators and vendors who shared their experience and knowledge. The closing session featured a panel of experts on stage answering questions about responding to a disaster in Orange County. When one panel member finished answering a question about communications during a disaster, Sheriff Mike Carona took the opportunity to highlight RACES as a valuable source of emergency communications support available during a disaster or at any time.

In addition to the presentations and classes held inside the hotel, there were demonstrations in the parking lot as well. Outdoor demonstrations included fire personnel demonstrating on-scene decontamination techniques, vendors displaying and demonstrating their decontamination equipment and specialized trailers and tents to be used as portable or temporary hospitals.

Also on display was the OCRACES Emergency Communications Vehicle. OCRACES members who participated in this event included Harvey Packard, Martin LaRocque and Scott Byington. There were many visitors to the OCRACES van and it was a great opportunity to showcase OCRACES capabilities to the many Emergency Management and Emergency Medical Service professionals who attended the conference.



Watching The Web – By Ken Bourne, W6HK

A page on Icom’s Web site, <http://www.icomamerica.com/amateur/dstar/>, discusses the D-STAR system, a 128K open-protocol data system that combines analog and digital techniques into a 1.2 GHz or 10 GHz network. One application is to e-mail a photo or live video from your vehicle during an emergency with the 128K data system.

Icom provides their ID-1 transceiver as part of the D-STAR system. It operates with current analog 1.2 GHz repeaters or digitally on simplex with another ID-1. Its operating frequency range is 1.240 GHz to 1.300 GHz, with FM and GMSK (digital) modulation formats. The ID-1 provides 105 alphanumeric memory channels, plus PC control via a USB port. It also supports a 10BASE-T Ethernet cable for the 128K data operation.

Icom also offers the ID-RP1 and ID-RP1L repeater and 10-GHz backbone components of the D-STAR system.

Features of the D-STAR system include: open-protocol TCP/IP structure; digital voice and data capability; 128K data (130 kHz bandwidth); multiple-site capability with high-speed microwave backbone at 10 Mb/s; ATM multiplex (on the backbone); Internet interface capability; and repeaters that handle both digital and analog voice.

On this Web page is a link to a presentation (including a PowerPoint version) on the how’s, why’s, and what equipment will be required to operate a D-STAR system.



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



City/County RACES Exercise

The annual City/County RACES exercise is Saturday, October 1, 2005, from 0900 until 1100 hours. We have surveyed all City RACES organizations to determine who will be participating in this exercise. The results of the survey are in the text box to the right and will be sent out to all RACES officers via email. This annual exercise provides an opportunity to exchange messages between the various City and County EOC's using the RACES radio equipment located inside your EOC.

The focus of this exercise will be communicating by voice, primarily between your EOC and all surrounding city EOC's and secondarily, the County EOC. Those organizations that wish to test PSK31, ATV and/or SSTV may also do so.

The scenario will be a loss of public safety communications systems. The Countywide RACES Message Form should be utilized by all participants in this drill, and will help to ensure common radio traffic passing techniques. The form can be downloaded from the County of Orange RACES web page, www.ocraces.org.

City/County Exercise Participating Organizations

- Anaheim - NO
- Brea - YES (Voice, maybe SSTV)
- Buena Park - YES (Voice)
- Cal State Fullerton - YES (Voice)
- Costa Mesa - YES (Voice, SSTV, maybe ATV)
- Fountain Valley - YES (Voice)
- Fullerton - YES (Voice)
- Huntington Beach - YES (Voice, ATV)
- Irvine - NO
- La Palma - No Response
- Laguna Beach - YES (Voice, PSK31)
- Laguna Niguel - YES (Voice)
- Laguna Woods - YES (Voice)
- Los Alamitos - YES (Voice)
- Mission Viejo - YES (Voice, ATV, SSTV)
- Newport Beach - YES (Voice)
- Orange - NO
- Orange County - YES (Voice, PSK31, ATV, SSTV)
- Placentia - YES (Voice)
- Seal Beach - YES (Voice)
- Westminster - YES (Voice)
- Yorba Linda - NO
- HDSCS - YES (Voice)
- American Red Cross - NO

"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**

October 2005

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1 <i>City/County Exercise</i>
2	3 <i>Monthly Meeting & Weekly Net</i>	4 <i>Election Day</i>	5	6	7	8
9	10 <i>Weekly Net</i>	11	12	13	14	15
16	17 <i>Weekly Net</i>	18	19	20	21	22
23	24 <i>Weekly Net</i>	25	26	27	28	29
30	31 <i>Weekly Net</i>					

Upcoming Events:

- **October 1:** Annual City/County RACES Exercise, 0900-1100
- **October 3:** OCRACES monthly meeting, 840 N. Eckhoff Street, Orange, 1930 Hours
- **October 4:** 48th Congressional District Election
- **November 7:** OCRACES monthly meeting
- **November 8:** Statewide Special Election

OCRACES AT ARRL CONVENTION

by Ken Bourne, W6HK, Chief Radio Officer

Thanks to the OCRACES members who were at the ARRL Southwestern Division Convention in Riverside on Saturday, September 11, 2005, to display our RACES emergency communications response vehicle.

Those participating included:

Ken Bourne, W6HK
 Scott Byington, KC6MMF
 Chuck Dolan, KG6UJC
 Ernest Fierheller, KG6LXT
 Martin La Rocque, N6NTH
 Marten Miller, KF6ZLQ
 John Roberts, W6JOR
 Robert Stoffel, KD6DAQ
 Tom Tracey, KC6FIC

Attendance at the convention seemed a little lighter than last time in Riverside, perhaps due to the price of gas. Some of the sessions were interesting, and we drooled over the equipment on display in the exhibit hall. We had a good flow of visitors through our vehicle, but not many from Orange County. Several visitors were from other RACES units, such as cities in Los Angeles County (affiliated with LACDCS) and Riverside County, and said they wanted to use our ideas in designing

their own vehicles. Many took photographs of the exterior and interior of our vehicle.

Next year's convention will be in San Diego. If enough OCRACES members are available, we will consider having a booth as well as displaying our vehicle, and presenting a session on OCRACES activities and capabilities.



Ernest Fierheller, Scott Byington, Martin La Rocque & Chuck Dolan (above) and Marten Miller, Robert Stoffel & John Roberts (below) with the RACES van at the ARRL convention



County of Orange RACES

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It's Where It's @!

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

Meet your County of Orange RACES Members!



Ken Bourne W6HK Scott Byington KC6MMF Harvey Packard KM6BV Joe Selikov KB6EID Marten Miller KF6ZLQ Robert Stoffel KD6DAQ



Jack Barth AB6VC Bill Borg KG6PEX Chuck Dolan KG6UJC 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