

August 2008



Newsletter of the County of Orange Radio Amateur Civil Emergency Service

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Captain's Corner

by Ken Bourne, W6HK, Chief Radio Officer

Expect the Unexpected

Roger Richesson, K6YJW, of Huntington Beach, shared a humorous experience in the *June 2008 IEEE Life Members Newsletter*. "In 1956, I graduated from the University of Missouri and was recruited by North American Aviation to work at their Downey, California, facility. I was assigned to the telemetry group working on the Navaho missile. One day, we were on the mezzanine above the main floor of the environmental test lab running a vibration test on a telemetry unit. As the vibration test sweep was running, we noticed a small gathering on the main floor. This was a group of packaging engineers who, in conjunction with environmental test personnel, were testing a concept for protecting a fragile electronics unit from damage during shipment. They had suspended a mockup of an electronic unit in the center of an enclosed shipping crate about a cubic yard in size. The unit was suspended by springs from each of its corners and fastened to each diagonal corner of the square crate. The theory was that these springs would absorb any shock that the unit might encounter during shipping, regardless of the direction of the shock. The unit was instrumented with small passive shock sensors along each axis. These clever little devices employed a steel ball captured by a permanent magnet. The sensors were calibrated so that

any shock above a certain 'g' level would dislocate the ball, indicating that the 'g' level had been exceeded.

"After replacing the lid," Roger continued, "the crate was hoisted about 15 feet above the concrete floor. Then the group of engineers (who had apparently forgotten about Newton's laws of motion, conservation of momentum, and inertia) pushed the button releasing the crate. It plunged to the floor, landing neatly and squarely on its bottom. After approximately a half-second pause, the crate jumped straight up about 8 feet into the air, startling the group of observers. They began to scatter in all directions because the crate came down from the 8-foot jump and continued to hop around the lab in random directions like a giant white frog. It finally settled, still quivering from the spring-suspended weight in its center. If ever there was a scene begging to be captured by a camcorder or cell phone and placed on the Internet, this was it. Alas, none of these devices or entities existed at that time."

Surprises Can Be Good or Bad

Roger's recollection is a funny reminder that we should always expect the unexpected. Surprises can be good or bad. If you are handling emergency communications through a repeater, and the repeater or your radio fails, that's a surprise you can live without. But expect it anyway. Have a backup radio, in case

Continued on page 2

**The Next
OCRACES
Meeting is**

**August 4, 2008
1930 Hours**

**840 N. Eckhoff St.,
Suite 104, Orange**

**Guest Speaker:
Art Goddard, W6XD,
Past ARRL SW
Division Director**



Orange County Sheriff's Department
Communications Division

Captain's Corner *Continued from page 1*

yours fails. Be prepared to move to another repeater or another frequency in case of repeater failure, and know what the plan calls for if that should happen. If you need to drive to another location for better radio coverage, make sure you always have a full tank (or no less than half a tank) of gas in your car, in case the "big one" hits and there is no electricity to run your gas station's pumps.

Propagation Is Also a Surprise

Radio propagation can also be a good or bad surprise. On our 2-meter and 440 MHz repeaters, propagation remains fairly constant, and we should know our hot spots and dead spots around the county. But if you work HF or 6 meters, you know what I mean about propagation surprises. That can be fun for DX chasers or county hunters or those who try to work all states on the HF and 6-meter bands. But you never know what to expect when trying to communicate with an adjacent county on 40 meters or 75 meters for mutual-aid traffic (coordinated by State OES). For example, on the Wednesday morning 40-meter California Emergency Services Net, communications from the Orange County EOC to the State OES net control in Sacramento is usually consistent, whereas communications to the State OES station at Patton State Hospital in San Bernardino or to a relay station in Poway can vary from fully reliable to nonexistent, from one week to the next. We need to be prepared for these uncertainties, and to use different communications paths under various conditions. That is why various Southern California county RACES/ACS units are conducting frequency tests with State OES Southern Region ACS on HF, VHF, and UHF (including linked repeater systems) to put together a "collection" of communications paths to use during the November Golden Guardian exercise and during incidents where county-to-county mutual aid needs to be coordinated by State OES.

Surprise! It's an Earthquake!

Speaking of surprises, we had a good one before I finished writing this article. A 5.4 earthquake, centered near Chino Hills, shook most of Orange County at 11:42 AM on July 29th. I was just climbing out of the shower on the second floor of our house, and was hoping I would not be flung out the window in a very embarrassing condition, thus scaring the neighborhood

ladies. After a few seconds, my house stopped swaying and hopping up and down, and I quickly dressed and rushed downstairs to my ham shack. Radio Officer Scott Byington, KC6MMF, was already on the air, handling the calls that were beginning to come in from concerned amateurs and those wanting to help, such as members of the Orange County Amateur Radio Club. Scott eventually arrived at the Loma Ridge EOC, as we heard it was activated to a Level 2, and reported to the Command Center. He then activated the ACS net on our 2-meter repeater. I arrived at the EOC before 1430 hours. OCS D Communications Division Director Robert Stoffel, KD6DAQ, was on frequency, providing and receiving updates on the incident. Various EOCs, such as Anaheim and Brea, activated to a Level 1, and communicated with us. Robert sent a Level 3 page to our members, and we were quickly in contact with most of them via 2 meters or telephone. Cell phone and power systems were knocked out in much of northern Orange County. Some roads were closed for a short period, due to bridges that needed to be checked for structural damage.

A considerable amount of status information was received by OCS D/Emergency Management from city EOCs, schools, etc., on the OA-1 and OA-2 VHF low-band frequencies. This was supplemented by information we received from city EOCs on our 2-meter repeater. April Moell, WA6OPS, reported that the Hospital Disaster Support Communications System (HDSCS) checked all hospitals for communications problems, and assisted where needed. Tom Woodard, KI6GOA, reported activation and status of the Orange County Chapter of the American Red Cross. Virgil Garduque, KG6KMW, reported in from Operation OC (which is a private/non-profit organization for preparedness, response, and recovery to a major disaster). Greg Allen, K6GMA, checked in from the State OES Southern Region EOC in Los Alamitos. As Chuck Dolan, KG6UJC, was heading toward Loma Ridge, we received word that the EOC was going to a Level 1 (monitoring status only) at 1555 hours, and RACES was standing down.

Thanks to all OCRACES and city RACES members, HDSCS, American Red Cross, Operation OC, and State OES ACS members who participated in this surprise activation, once again showing that we are good at expecting the unexpected.

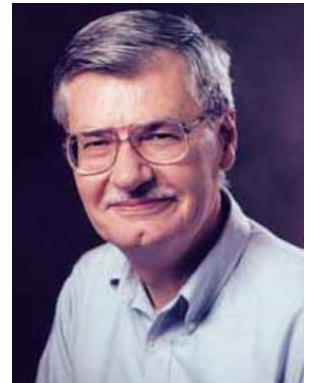
Art Goddard at Next OCRACES Meeting

Neither our Constitution nor Bill of Rights creates any entitlement in the Amateur Radio Service. Rather, we are expected to earn our keep, per paragraph 97.1 of the FCC Rules. So how are we doing? Ask a ham and you'll probably hear that we're doing OK. Ask an elected official or a member of the general public, and you'll likely get a blank stare. In this case, ignorance is not bliss. Government and public perceptions will continue to influence how amateur radio fares into the 21st century.

How could we determine the public benefit of the entire Amateur Radio Service? How would we get our story out to decision-makers and the public? Who should do it?

The guest speaker at the August 4th OCRACES meeting is Art Goddard, W6XD, who will address these questions. Art is well known for his involvement and promotion of amateur radio. Licensed for 52 years, Art is a past Director of the ARRL Southwestern Division.

The meeting will be at 7:30 PM, at 840 N. Eckhoff Street, Suite 104, in Orange.



**Art Goddard, W6XD,
past Director, ARRL
Southwestern Division**

Planning for 2009 B2V and Field Day

OCRACES members have been asked to help us plan early for our participation in the 2009 25th Baker to Las Vegas Challenge Cup Relay on March 14-15 (about a month earlier than usual), and on 2009 ARRL Field Day, June 27-28. We need ideas on how to improve these events and make them more meaningful and interesting for our current and future members. We will discuss these ideas and form committees at the August 4th OCRACES meeting, 7:30 PM, at 840 N. Eckhoff Street, Suite 104, in Orange. By starting early, we hope to give everyone an opportunity to get involved and benefit from their efforts.

An idea for Field Day is to shorten the operation to one day, since we are really participating to practice setting up emergency communications in the field, and not necessarily to earn contest points. Setup would begin at 0900, but tear down would be at about 1700, with the barbecue after tear down. We want to enhance our training plan to interest emergency responders, with a specific exercise in the park during Field Day, perhaps involving direction finding, constructing and deploying emergency antennas, etc. Potential new members would be invited to participate (with the understanding that they are not covered as Disaster Service Workers).

OCRACES Mans Ham Radio Booth at OC Fair

Randy Benicky, N6PRL, Capt. Ken Bourne, W6HK, Chuck Dolan, KG6UJC, and Lt. Harvey Packard, KM6BV, from County of Orange RACES explained the emergency communications capabilities of amateur radio to the public at the ham radio booth at the Orange County Fair Sunday evening, July 27, 2008. Brochures and RACES applications were handed out to several radio amateurs who visited the booth. Also dropping by were OCSD Reserve Lt. Ray Grimes, N8RG, and Reserve Sgt. Jim Carter, WB6HAG, who are OCRACES members.

OCRACES Lt. Harvey Packard, KM6BV, Chuck Dolan, KG6UJC, and Randy Benicky, N6PRL (left to right), at ham radio booth at Orange County Fair



Ham Radio's Summer Solstice Festival

by Ralph Sbragia, W6CSP, OCRACES Radio Officer

The Summer Solstice was when the ancient Europeans and others took to the fields for a day and a night to celebrate the magic of life. Ham Radio today mimics this ancient tradition via the ARRL's Field Day event, which celebrates the magic of radio for a day and a night. Of course, the ancient Europeans seemed to celebrate with a little bit more enthusiasm than our OCRACES membership has in recent years. To increase enthusiasm for next year's event, consider why Field Day is important to us and how little time is really necessary for effective participation..

Before we begin, let's all agree that, as volunteer emergency communicators, it is important for us to maintain our basic skills. Understanding HF operations, including band conditions, emergency antenna design, and SSB (and/or CW) tuning and communications are just one set of our basic skills that each of us must be prepared to utilize. After all, would we expect a volunteer fire fighter not to know CPR? Or a volunteer reserve Deputy not to be practiced in the use of their weapon? Even though these individuals may never need to use these skills during their service, they still maintain their skill level. In the same way, each of us must maintain our skill levels in the various means of communications available to us.

So, what is unique and special about Field Day that makes it an event we must not miss, but also participate in fully? There are four reasons that come to my mind: (1) a unique opportunity to communicate with operators in all parts of the northwestern hemisphere, from Alaska to Florida, Hawaii to Quebec; (2) a discreet 24-hour period when the population of on-the-air operators allows for the following of band conditions and openings as they vary; (3) an event with built-in public relations and potential press coverage that can be used for recruiting; and, lastly, (4) an event that by its normal schedule allows us to field test the OCRACES van for 24 consecutive hours. Let's look at each of these items separately:

Other than the various pure contests that are sponsored by the various ham radio organizations during the year, no other event brings together on the bands the large numbers of stations, operating on all but the WARC bands, during a 24-hour period. This provides us with a unique chance to practice HF and VHF multimode communications during less than optimum circumstances. During an emergency event, we cannot be guaranteed that band conditions will support easy communications. Practicing communicating when the bands are weak or full of noise or both is an opportunity to practice that none of us should miss.

Both HF and VHF have unique properties, depending upon the time of day. How many of us could easily explain what bands work best to where and when? More than likely, very few. And, even then, there are so many variables both in the atmosphere and in our solar system that there really are no hard and fast rules. Instead, good operators practice the skills needed to figure out which band and or mode will get the job done at any given time of day. Field Day gives us an opportunity to practice just that. Whether it's making contacts with other stations or just listening to the many stations calling CQ, we learn to appreciate, find, and use band openings.

And while we are searching for open bands to communicate, we also need to communicate with the public that supports us with their tax dollars. Without a doubt, this is an area we can make better use of due to the already ample public exposure that Field Day brings to amateur radio. While it has been a few years since we were visited by accredited press personnel, Field Day still provides us with an opportunity to expose the public to what we are able to do for them in a time of local, regional, or national emergency. This is again a unique aspect of Field Day and an opportunity not afforded us by other drills or exercises. Perhaps in the future we should investigate county and department publications that would be willing to host articles about our operations so as to peak the interest of other county staff and their families and be able to show off all the hard work that has gone into the OCRACES van.

And speaking of the OCRACES van, are there really other times when we could truly operate the van for 24 consecutive hours? Other than just having the generator running and the radios on, what would be the reason? Who would we be communicating with? What would we practice? To where would we deploy? Once again we see that Field Day provides an opportunity to do something that is key to measuring our readiness in a multifaceted way that is not provided by any other exercise or drill.

If we agree that the case can be made for fully participating in Field Day for reasons that go far beyond playing in a contest, then how do we do it? The simple answer is for each member to set aside adequate time and to be prepared to participate fully. Right now there are 20 OCRACES members. If each member participates in the event for eight hours, that would result in a total of 160 hours. If we reduce that by 25% to account for illnesses, unexpected work assignments, and the like, we get 120 hours. Divide into that the 30 hours it takes to participate in Field Day (4 setup, 24 operations, 2 tear down) and we get 4.0. Four members on station at all times is more than enough to fulfill our most recent mission goals. It's even enough to expand to a third full-time transmitter (three operators and one relief).

That is just four members at a time, eight hours each. That's all we need to fully participate in Field Day. That is approximately 1/1100 of each member's year. What will it take to get each one of us to recognize the value we receive by practicing our skills during this unique event that takes so little of our total time? What will it take to motivate you to come out and play at next year's Ham Radio Summer Solstice Festival?

Watching The Web

*Web Sites of Interest to RACES Personnel
by Ken Bourne, W6HK, OCRACES Chief Radio Officer*

Tactical Radio Carriers
<http://www.tac-comm.com>

TAC-COMM

The TAC-COMM Web site at <http://www.tac-comm.com> features the TRC-1 Tactical Radio Carrier, which is a universally adjustable aluminum carrier designed to hold, organize, protect, and adapt a mobile radio and accessories to portable use in tactical operations. A radio may be mounted in the carrier with the supplied machine screws and nuts or with optional web strapping. The radio, microphone, and power cable may be kept packed, ready for deployment. The TRC-1 provides table-top or car-hood operation with tilt bail and stacking of multiple radios and/or power supplies. Adjustable sides of the TRC-1 accommodate radios of different heights, and can be extended to accept a radio and a TNC or other device in a single carrier. A radio and tuner or radio and power supply or radio and TNC may be strapped and stacked in one TRC-1, provided the combination does not exceed a height of 4.8 inches when the sides of the TRC-1 are fully extended. When the sides are fully collapsed, the height is 2.6 inches. The inside of the carrier is 10.5 inches long and 7.5 inches wide.



TRC-1 carriers are designed to stack one on top of another

Two methods are commonly employed for fastening a radio to the carrier. The radio's mounting bracket fastens to the carrier with the supplied 10-32 machine screws and nuts with non-slip nylon inserts. The optional web strap may be used to compression-strap the radio to the carrier. The four supplied rubber feet are mounted on the bottom of the device at its four corners. The straps are passed over the radio and through the universal slots and across the outside bottom of the carrier. The strap is tightened, compressing the four rubber feet and securing the radio in position.

Rubber feet allow stacking and locking of one carrier on top of another, if multiple radios are needed, such as for interoperability with various agencies. Power and microphone cables may be permanently attached to the TRC-1. Frequency lists, channel plans, operating instructions, etc. may be tucked between the bottom of each radio and the TRC-1. The tilt bail places the front of the radio at a good viewing and operating angle.

The TRC-1 allows multiple radios and power supplies to be set up quickly at just about any location. TRC-1s can be placed close together or stacked, or spread apart to accommodate multiple operators. Four TRC-1s fit into a Rubbermaid Roughneck container, along with mag-mount antennas, 25-foot lengths of coax, and a couple of ground-plane antennas, for example.

ACS/RACES News from Around the County

"ACS/RACES News" provides an opportunity to share information from all City & County ACS/RACES units and MOU organizations in Orange County.

Please send your news to:

w6hk@ocraces.org

Fullerton

Fullerton RACES Radio Officer Gene Thorpe, KB6CMO, asks us to save Saturday, September 13, 2008, for the City of Fullerton Airport Day. They will need about 18 or more amateur radio operators for this event, from 0900 to 1400 or so.

Laguna Beach

Laguna Beach Emergency Communications Team (LBECT) will support the Crystal Cove Triathlon on Sunday, September 28, 2008, from 0600 to about 1300 hours. The race itself starts at about 0700 from Reef Point parking lot on Pacific Coast Highway. Radio Officer John Kountz, KE6GFF, reports that the Orange County Triathlon, which is held on the same day, is also looking for communicators. This race starts at 0700 at Lake Mission Viejo. Anyone who can participate should contact Bill Leach at billleach@sbcglobal.net.

Hospital Disaster Support Communications System

A lunchtime earthquake of Richter magnitude 5.4, centered in the Chino Hills, caused an immediate activation of HDSCS on July 29, 2008. Several members established an on-air net within seconds and began to check the status of supported facilities by telephone and personal visit. Fourteen of 35 Orange County hospitals were within 15 miles of the epicenter, making them the highest priority for HDSCS. Communications disruptions at these hospitals were brief except at Kindred hospital in Westminster, where phone calls to the outside went down for approximately 30 minutes. Fred Lochner, WA6FRA, discovered this when he went to check on the

hospital. He remained to provide backup communications until service was restored. Minor injuries from falling ceiling tiles occurred at a therapy and wellness center in Brea that is operated by St. Jude Hospital in Fullerton. Paul Broden, K6MHD, went to the Command Center at St. Jude and was prepared to communicate with the Brea site, but that building was quickly evacuated and a response there was not needed. Within 90 minutes, the HDSCS net had determined the status of all Orange County hospitals and had passed this information to OC Emergency Medical Services Agency. HDSCS also established communications with the amateur radio nets of Orange County RACES, Los Angeles County ARES, and Orange County Red Cross. HDSCS Net Control stations were Paul Broden, K6MHD, and April Moell, WA6OPS.

County of Orange

Members of all County and City RACES/ACS units and MOUs are reminded that, beginning August 23, 2008, the new overlay 657 area code takes effect and all 714 calls placed from within the existing 714 area code that are currently dialed with seven digits will need to be dialed using 1 + area code + telephone number. (The initial 1 may be eliminated when dialing from a cell phone.) Be sure to update the numbers in your dial memories, including the EOC RACES Room and the pager access.

To prepare for the next City/County RACES/ACS & MOU drill on October 4, 2008, we will hold our next City/County meeting on Monday, September 15th, at 7:00 PM, at 840 N. Eckhoff Street, Suite 104, in Orange. RACES participation in the November Golden Guardian may be less than originally expected, so we will enhance our October 4th exercise.

August 2008

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

Upcoming Events:

- **Aug 4:** OCRACES Meeting, 1930, 840 N. Eckhoff Street, Suite 104, Orange (Featuring Art Goddard, W6XD)
- **Aug 9:** RACES/MOU Breakfast, 0800, Katella Grill
- **Aug 20:** Orange County California Citizen Corps Council Meeting, Mission Viejo
- **Aug 25:** Southwest ACS Net
- **Sep 13:** Fullerton Airport Day
- **Sep 15:** City/County RACES/ ACS & MOU Meeting
- **Oct. 4:** City/County RACES/ACS & MOU Drill
- **Oct. 11:** OCFA Open House
- **Nov. 4:** Presidential Election
- **Nov. 13:** Golden Guardian



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
 - 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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**“W6ACS ...
Serving
Orange County”**

Meet your County of Orange RACES Members!



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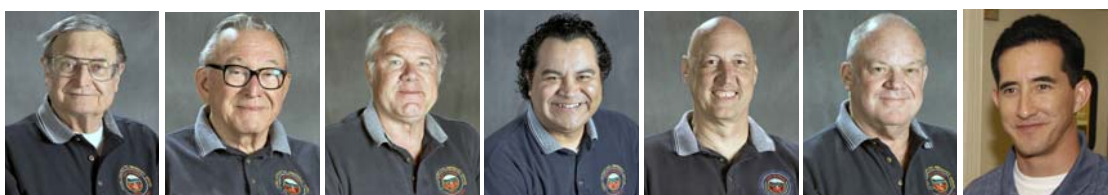
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