

August 2013



Newsletter of the County of Orange Radio Amateur Civil Emergency Service

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Captain's Corner

by RACES Captain Ken Bourne, W6HK, Chief Radio Officer

Let's Try WINMOR

An article in the "Public Safety" column of the June 2013 issue of *QST* talked about the use of WINMOR (WINlink Message Over Radio) during a major exercise conducted by the Tennessee Emergency Management Agency (TEMA) last February. The exercise was conducted in conjunction with the Central United States Earthquake Consortium's (CUSEC, <http://www.cuseg.org>) Earthquake Awareness Month. This exercise tested TEMA's ability to communicate with other CUSEC member states and other agencies in the aftermath of a major earthquake in the New Madrid Seismic Zone (NMSZ).

The exercise featured both HF voice and the Winlink 2000 radio e-mail system. HF is important when a huge disaster wipes out the local communications infrastructure, including cell-phone systems, public-safety and amateur radio repeaters, wire-line telephone systems, etc. HF can provide NVIS (Near Vertical Incident Skywave) communications throughout Orange County and up to a few hundred miles away, if we need to call for resources from other counties through California OES. To test this capability, OCRACES communicates with Cal OES twice a week on HF SSB—Monday nights at 8:00 PM on 3960 kHz and Wednesday mornings at 10:00 AM on 7230 kHz. We will soon be communicating with Cal OES via Winlink 2000 on 40 meters, using SCS modems in the PACTOR III mode. Unfortunately, these are very expensive modems, and we cannot expect very many city and county RACES members to purchase these units. Instead, as an adjunct to PACTOR III, members might

wish to run HF Winlink on WINMOR, which is available as a free download.

In the TEMA/CUSEC exercise, WINMOR on amateur and MARS HF frequencies enabled reliable Winlink 2000 radio e-mail with local and state government agencies in eight states, homeland security districts, National Guard, non-governmental organizations (NGOs) such as AT&T, FedEx, Southern Baptist Disaster Relief, the Red Cross, hospitals, and the Bridgestone Emergency Response Team, the Center for Earthquake Research and Information, and individual hams with personal Winlink drop kits using WINMOR.

EOCs, NGOs, the National Guard, MARS, and individual hams communicated with complete interoperability via Winlink. PACTOR, WINMOR, and packet radio modes were integrated seamlessly over HF, VHF, and UHF.

Although California OES relies exclusively on PACTOR III for HF Winlink, and we will have the capability to communicate with Cal OES via PACTOR III Winlink, I suggest that city and county RACES members get some practice with HF Winlink using the much less expensive (free!) WINMOR software. Unlike PACTOR, only a simple computer soundcard-to-radio interface is required. It runs as a "virtual TNC" together with host software. It's not as fast as PACTOR III or IV, but is more robust and faster than PACTOR I, and faster than PACTOR II in favorable conditions.

**The Next
OCRACES
Meeting Is**

**August 5, 2013
1930 Hours**

**Orange County EOC
Loma Ridge**

**Severe Fire Weather
Patrol Training**



Orange County Sheriff's Department
Communications & Technology Division

National APCO Conference Needs Volunteers

“APCO 2013,” the largest national public-safety communications conference, will be held at the Anaheim Convention Center and Anaheim Marriott Hotel on August 18-21, 2013. Be sure to visit the exhibit hall on Monday, August 19th, or Tuesday, August 20th, to see an impressive display of the latest public-safety communications equipment.

A free day pass (and a Volunteer Shirt) is available for each four hours of service, if you volunteer to help at this conference. Adriana Spirescu from the Sheriff's Communications & Technology Division is serving as the volunteer coordinator. Certain meals will be provided for volunteers, consisting of breakfast and lunch on the day of service. Volunteers will serve in a variety of ways, including classroom monitors, staffing the registration desk, serving as ushers, and operating as a dispatcher in the command center.

A volunteer application is available at <http://www.apco2013.org/registration/volunteer>. If you have any specific questions about volunteering for this event, please contact Adriana at 714-628-7150.

Army Reserve Comm Exercise: August 3rd

OCRACES will display its emergency communications response vehicle on Saturday, August 3, 2013, from 0900 to 1100, at a Communication Exercise sponsored by the Army Reserve at the Costa Mesa Army Reserve Center. We are encouraged to expose people at this event to amateur radio and emergency communications capabilities. Young Marines, State Military Reserve, VFW, and MARS have been invited, and a large attendance is expected. They will have at least two HF stations and two VHF stations set up and running. The event will be at 2651 Newport Boulevard in Costa Mesa.

This is a great opportunity to interface with the Army Reserve, as well as with the other agencies and organizations attending.

Jim Dorris, KC6RFC, Appointed Sergeant

Jim Dorris, KC6RFC, has been appointed RACES Sergeant/Assistant Radio Officer of the OCRACES South Squad. He fills the position recently vacated by Jim Carter, WB6HAG. Jim Dorris has been increasing his leadership role within OCRACES, and has given many hours of participation at our meetings and events. Our RACES unit is fortunate to have such a dedicated and capable member as Jim, and we congratulate him on this promotion to Sergeant.

Frank Columbus, WA2KWR, Talks about RPi

Frank Columbus, WA2KWR, shared some of his knowledge of the Raspberry Pi microcomputer at the July 1, 2013, OCRACES meeting. He covered some “best practices,” such as checking MD5 checksums and some cautions.

Frank advises of a great set of 10 lessons on how to program using Scratch. The following link is the first of the 10 lessons: <http://www.youtube.com/watch?v=Qi9ooZcBBWg>. Frank also points us to Jessica Chiang's programming video collection at <http://www.youtube.com/user/kookoodoll>, which works best if you view full screen.

Frank says a great hardware series by a different author starts at http://www.youtube.com/watch?v=Jj4pjfU_-jo.

A video on using the Raspberry Pi to build and deploy XBMC and the OpenELEC Linux distribution may be found at <http://www.youtube.com/watch?v=OHDddt4LhEk>, according to Frank.

Although not addressing amateur radio applications, the information that Frank provided will help us get started with this fascinating and inexpensive microcomputer. We will quickly find uses for this device and its accessories in amateur radio and emergency communications. A Google search pops up some ham radio projects utilizing the Raspberry Pi. Discussions of amateur radio applications may be found on the Raspberry_Pi_4_Ham_RADIO Yahoo! Group.



Frank Columbus, WA2KWR, talks about Raspberry Pi microcomputers at the July 1st OCRACES meeting.

Next OCRACES Meeting: August 5, 2013

The next County of Orange RACES meeting is on Monday, August 5, 2013, at 7:30 PM, at the Orange County EOC on Loma Ridge. Orange County Fire Authority Education Specialist Angela Garbiso will give us our annual Severe Fire Weather Patrol training. All OCRACES members as well as City RACES and MOU members who wish to participate with OCRACES on Severe Weather Fire Patrols must receive this training each year. OCRACES applicants may also attend and may participate on patrols after becoming members.

More Field Day Photos

OCSD Emergency Communications Manager Delia Kraft, KF6UYW, traveled from the OCRACES Field Day site to visit the sites of Seal Beach RACES, Huntington Beach RACES, Hospital Disaster Support Communications System (HSDCS), and Newport Beach RACES. Here Delia shares some of the photographs she took during her travels.

Some of the OCRACES members and families sampling picnic goodies at the Craig Park Field Day site.



Don Kovell, WA6GVI (left), and Dick Crowe, KG6XJ, at the Seal Beach RACES Field Day site.



Huntington Beach RACES operated with the special event call sign W6O during Field Day.



Louie DeArman, K6SM (left), and Ken Simpson, W6KOS, operate HSDCS Station #2 while Judi Hansen, KK6DNA, observes.



Newport Beach RACES and CERT members operating from their Field Day station.

Interoperability Proves Invaluable in Rescue

by Tom Woodard, KI6GOA, Planning & Information Specialist, Emergency Services Department, American Red Cross, Serving Orange, Riverside & San Bernardino Counties

A volunteer and I had a very interesting experience on the afternoon of July 3, 2013. I think it demonstrates the value of interoperability in Orange County. My volunteer and I had a meeting scheduled in the mid-morning with the property owner at our new radio site up on Pleasants Peak to finally get the keys and do a final walk-through before our installation planned for July 23rd. We figured we would make it a “two birds, one stone” trip and head down Main Divide Road afterward to Santiago Peak where our “OPS 1” repeater is located. I had some new backup batteries to swap in and also needed to do my semi-annual knock the cobwebs off the repeater check.

As we approached Santiago Peak, just below the peak on the northwestern face, we encountered a young man who was certainly ill-prepared for a hike up the mountain. He was only in shorts and a pair of flip-flops and had a very small backpack. But, he appeared fine and waived in a friendly gesture as we passed by. Given some of the stupid people we find up there sometimes, we did not think much of it. We were up on Santiago for about two hours and started down at about 3:30. On the way down we passed the same young man in the same spot but now sitting in the shade of a tree. Given the time elapsed we both thought this was odd. But again, he seemed to be in no distress and waived in a friendly manner, so we pressed on.

Usually when I go up the mountain, and during the business day in general, I listen to OC Access on the scanner. It’s a good way for someone in my line of work to stay in the loop on the major stuff, like wildfires this time of year. This day was no different. After about a mile from seeing this young man, we suddenly heard 5N patched to OC Access and a flurry of traffic. We spent the first minute or so trying to figure out what was going on, when we heard a reference made to Main Divide Road. At this point we figured we had better stop where we were, at the turnout for Modjeska Peak, and figure out what was going on—if, for no other reason, just so we did not have a head-on with an Orange County Fire Authority (OCFA) patrol engine on our way down the mountain. After about another minute we put together that there was some type of search and rescue in the area. Having overheard the lengthy ETA of several units up to Main Divide, we figured we would call Control One on the cell phone (we had an okay signal at this point) and already being in the area offer any assistance we could give. The supervisor at Control One stated that OCFA was running the call and they would relay our offer to the Incident Command Post (ICP). We stated we would wait in place 20 minutes and, if we did not hear back, we would head down the mountain.

As we waited, we continued to listen to the traffic for a few minutes. As the description of the missing individual and the circumstances were being given, my volunteer and I quickly realized that this very well could have been the young man we encountered about a mile back. We turned our truck around and returned to the spot where we last spotted him, and he was still there. At this point, OCFA Copter Two was on station making orbits above Santiago Peak. But, given the tree this kid was just sitting under and the thick canopy, I seriously doubt that Copter Two would have seen him without using their FLIR. We got out and asked this young man if he was okay and if there was any reason that anyone may be looking for him. He stated that he had hiked up on foot, “got a little turned around,” and he had text-messaged his parents and “someone was coming.” At this point we put two and two together and determined this must be who OCFA is looking for.

At this location we were well out of cell-phone service, so I called Control One on my work portable on Blue RP. I stated what we had found and that we suspected it was the missing hiker that OCFA was searching for. In very short order, Control One contacted the ICP and patched us in to 5N to go direct with OCFA Copter Two. I advised Copter Two of the hiker’s name and the info we put together, and they confirmed it was their missing hiker. They started looking for a potential landing zone, but we assessed the victim and found, other than perhaps some mild dehydration, there were no emergent medical needs. We wound up going direct with Trabuco IC (I believe this was OCFA Battalion 7), and we all agreed that since Copter Two was going to have some issues getting to us and there were no urgent medical needs, we would transport the hiker in our vehicle to OCFA Station 15 on our way down the mountain.

We proceeded and actually met up with a Cleveland National Forest engine at Maple Springs and Main Divide, where they took the victim. We radioed the transfer of care to Trabuco IC. We still stopped at Station 15 on the way down just to make sure all was well and no one needed a statement or anything. Then we went on our merry way.

Luckily, this was a good outcome for the patient and we just happened to be in the right place at the right time. But, in hindsight, I saw it as an excellent example of how interoperable communications benefits all of us here in Orange county. After all, how many man hours and how much aviation fuel did we save OCFA with this simple catch?

Broadband-Hamnet™ Wins IAEM Award

Broadband-Hamnet™ (formerly HSMM-Mesh™) firmware, developed by amateur radio operators to provide hams with a high-speed digital wireless communications mesh network, has won both US and global awards from the International Association of Emergency Managers (IAEM). The USA Council of the IAEM designated Broadband-Hamnet as a Division 2 (state/regional national government, international, or nonprofit organization) Technology and Innovation Award winner. It went on to win the IAEM-Global Technology and Innovation Award in the same division. The awards will be presented in October at IAEM's annual conference in Reno, Nevada. The firmware was the subject of a cover story article in the July 2013 issue of *QST*, "A Broadband Ham Network Crosses the Finish Line," by Lynn Jelinski, AG4IU. The firmware is available at no charge via the project Web site at <http://www.hsmm-mesh.org/>, which describes Broadband-Hamnet as a "high-speed, self-discovering, self-configuring, fault-tolerant, wireless computer network" with very low power consumption and a focus on emergency communication. The current form uses Linksys WRT54G/GL/GS wireless routers and operates on channels 1-6 of the 2.4 GHz ISM band, which overlaps with the upper portion of the 13-centimeter amateur radio band. Glenn Currie, KD5MFW, David Rivenburg, AD5OO, Bob Morgan, WB5AOH, and Rick Kirchhof, NG5V, spearheaded the effort, and there is a distributed development community with users in the US and abroad. *Thanks to the ARRL and Broadband-Hamnet webmaster Jim Kinter, K5KTF.*

1.2 GHz OCRACES Repeaters Back on the Air

All OCRACES 1.2-GHz repeaters were taken off the air several months ago, due to changes in government radar frequencies. SCRBBBA has coordinated new frequencies for our repeaters, and they are becoming operational again. The operational repeater output frequencies are 1287.675 MHz, 1287.700 MHz, 1287.725 MHz, 1287.750 MHz, and 1287.775 MHz, all with inputs 12 MHz down and 88.5 Hz PL. The 1287.650 MHz repeater will soon be operational.

Sheriff's Museum Offers Hats

The Orange County Sheriff's Museum & Education Center is a non-profit 501(c)(3) organization that receives no funding from county government. The Museum is chartered to protect the history and artifacts of the Sheriff's Department and to foster youth safety and anti-drug abuse programs. You are encouraged to help with Museum operating expenses by purchasing a collectable ball cap with the Museum's 1962 Chrysler Newport Sheriff's car logo printed on the front of the cap. The price is \$20.00, including tax, and is federal tax deductible as a donation to the non-profit Museum. You may purchase your cap from Museum Founder/Co-Director Ray Grimes, N8RG, or Museum Executive Staff Member Ken Bourne, W6HK.

The Museum also needs substantial donations in order to develop a permanent facility to display its vast collection of artifacts, where individuals and groups will be welcome. A modest display may currently be seen in the lobby of the Orange County Sheriff's Regional Training Academy, 15991 Armstrong Avenue, in Tustin.

Please visit the Museum's Web site at <http://www.ocsheriffmuseum.com>.



Cal EMA Becomes Cal OES

Effective July 1, 2013, the California Emergency Management Agency (Cal EMA) ceased to exist and the new Governor's Office of Emergency Services (Cal OES) began another chapter in the long history of and tradition of emergency management in California. Although the agency's duties mostly stay the same, it is, once again, an integral part of the Governor's Office.



Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

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

Orange County SKYWARN

Alexander Tardy, Warning Coordination Meteorologist, Manager, at NOAA/National Weather Service in San Diego, and also the SKYWARN weather spotter program manager, notes that we have rapidly heated up this summer (such as the 122° high recently recorded at Palm Springs). We have also had signs of moisture increases in the monsoon flow and dust storm on June 29th in Ocotillo Wells.

Tardy wants to make sure that SKYWARN weather spotters (we have five in OCRACES) and others who wish to submit storm reports are aware of the new spotter reporting form at <http://www.srh.noaa.gov/StormReport/SubmitReport.php?site=sgx> or go to <http://weather.gov/sandiego> and click on "Spotter Report." You can also call into the San Diego NWS office at 1-800-240-3022 on a 24/7/365 basis or e-mail Tardy at Alexander.tardy@noaa.gov. You can also send weather-spotter photos to that e-mail address or to nwssgxphotos@gmail.com.

The event types currently selectable on the form include flood, hail, high wind speed, rip currents, tornado/funnel cloud, wind damage, snow, freezing rain/icing, and heavy rain. Appropriate sub-descriptors may be selected in pull-down menus to describe the event. NWS is in the process of making this standard form have options, such as extreme temperature and visibility reduced by dust or fog. However, at this time, you must select one of the elements lists, and clearly indicate in the "Additional Details" what you are reporting. Included in "Additional Details" might be information such as:

- ◆ Flooding
 - ◆ Rainfall: How much rain in a given time (e.g., 1 inch in 20 minutes). Rainfall rates (e.g., 4 inches per hour) should not be reported
 - ◆ Flooding: Urban streets, ponding of water in low-lying areas, or poor drainage
 - ◆ Flash Flooding (swift moving and greater than 6 inches). Report flooding that is threatening life or property or disrupting traffic
- ◆ Winter Weather
 - ◆ Snowfall amount (duration, total,

new). Snow depth and total to the nearest inch

- ◆ Elevation of snow level, heavy snow, and blizzard conditions
- ◆ Icy roads, road closures, chain control, unusually low temperatures, and wind chills
- ◆ Wind: gusts of >40 mph, and all win-related damage (e.g., trees or power poles down)
- ◆ Extreme Heat: >95°F near the coast, >105°F in the inland valleys, >115°F in the deserts
- ◆ Fog: dense fog with visibility at or near zero (report in feet or miles or impacts)
- ◆ Thunderstorms: hail size (for larger hail compare to coins or measure) and accumulation, wind gusts, lightning strikes causing fire, any damage
- ◆ Tornadoes: funnel clouds, waterspouts, or any rotating cloud, in contact with ground (tornado) and confirmed injuries or damage
- ◆ Surf and Coastal Impacts
 - ◆ Surf 6 feet or higher, any flooding by combination of high tides and/or high surf
 - ◆ Strong rip currents
 - ◆ Tidal overflow and flooding or tsunami impacts such as strong currents

The new form will report and alarm immediately to the NWS San Diego weather forecaster's desk.

Orange County SKYWARN Coordinator Mike McLaughlin, KJ6EQ, says that NWS has two options for spotter training. One is online, where you do the study course and take the test. The second is an onsite class, such as at an OCRACES meeting or perhaps a meeting that would bring in members from county and city RACES units.. Both are the same information, but at a presentation you get to ask questions. NWS is willing to give us a presentation as they have in the past. Current spotters can also retake the class for refresher.

August 2013

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3 <i>Army Reserve Communication Exercise</i>
4	5 <i>OCRACES Meeting & Weekly ACS Net</i>	6	7	8	9	10
11	12 <i>Weekly ACS Net</i>		14	15	16	17 <i>APCO 2013</i>
18 <i>APCO 2013</i>	19 <i>APCO 2013 & Weekly ACS Net</i>	20 <i>APCO 2013</i>	21 <i>APCO 2013</i>	22	23	24
25	26 <i>Weekly ACS Nets & SWACS Radio Test</i>	27	28	29	30	31

Upcoming Events:

- Aug 3:** Army Reserve Communication Exercise, 0900-1100, Army Reserve Center, 2651 Newport Blvd., Costa Mesa
- Aug 5:** OCRACES Meeting, 1930, Orange County EOC, Loma Ridge; Severe Fire Weather Patrol training
- Aug 17-21:** APCO 2013, Anaheim Convention Center; call Adriana Spirescu at 714-628-7150 to volunteer
- Aug 26:** OCRACES 2-m, 70-cm, 6-m nets, 1900, 1915, 1930; Cal OES 75-m net, 2000; SWACS Frequency/Radio Test, 2015
- Sep 16:** City/County RACES & MOU Meeting, 1915, 840 N. Eckhoff Street, Suite 104, Orange
- Sep 18:** SONGS Dress Rehearsal Exercise (primary and alternate players)
- Oct 5:** City/County RACES & MOU Drill, 0900-1100
- Oct 8:** Radio Rodeo
- Oct 23:** SONGS Evaluated Exercise (primary players only)



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

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: 1287.650 MHz, 1287.675 MHz, 1287.700 MHz, 1287.725 MHz, 1287.750 MHz, and 1287.775 MHz outputs, -12 MHz inputs, 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!



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W6HK



Scott Byington
KC6MMF



Harvey Packard
KM6BV



Ralph Sbragia
W6CSP



Delia Kraft
KF6UYW



Marten Miller
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