

October 2008



Newsletter of the County of Orange Radio Amateur Civil Emergency Service

Inside this issue:

Captain's Corner	1
Nov. 4th Election	2
OCRACES Meeting	3
City/County Drill	3
OCFA Open House	3
Cal EMA	3
DHS Comm Plan	4
NIMS IS-200	4
Watching the Web	5
ACS/RACES News	6

Captain's Corner

by Ken Bourne, W6HK, Chief Radio Officer

Message Handling

An excellent article on the "Theory of Proper Message Handling," by Bob Shrader, W6BNB, appears in the October 2008 issue of *CQ Amateur Radio*. If you don't subscribe to *CQ*, I suggest that you purchase a copy of the October issue at Ham Radio Outlet and read this article, in preparation for the November 15th City/County RACES/ACS & MOU drill.

Some of the messaging-handling procedures mentioned in this article, such as using the standard ARRL Radiogram message form (we use the ICS 213 General Message Form) and sending messages by CW, do not pertain to the methods we normally use, but overall the suggestions in this article are very helpful.

Shrader says to slow speech speed. "A message sent slowly and received without error usually requires far less time than messages that are sent more rapidly but which must be corrected in a number of places. In addition, the faster a receiving operator tries to put down what is being heard, the less legible the writing or printing is likely to be and the quicker the operator will tire."

The author suggests ways to print certain letters and numbers to avoid confusion. For example, add a little top line to a J to prevent confusing a J with a rapidly printed U. With a Y, drag the vertical line down through the top "V" part to avoid confusing the Y with a V. A hyphen through a Z prevents confusing a Z with a 2. (Do NOT draw a hyphen through a 7, or

it might look like an F.) A little line at the base of a 1 will differentiate it from an I. A forward slash through a numeral 0 (Ø) shows it is not a letter O.

One of the required parts of a message, according to Shrader, is the "check" (word count). "Check" is included on the ARRL Radiogram, but is not on the ICS 213 form. We have received suggestions for amending ICS 213 with lines for names of the sending and receiving RACES operators, "check," and other additions. However, I do not recommend amending it at all, to prevent expanding it into a bureaucratic form that takes "forever" to fill out. We need to adhere to the FEMA standard, yet we could manually add lines (such as "check") during an operation. Shrader points out that a "check" determines immediately if all of the message words have been received and hopefully copied correctly. "Operators trained in good message handling will copy only five words to a line to enable them to count the check rapidly while receiving a message. If the printing is small enough...two groups of five words with an extra space between them produces ten words to a line. This makes check counting twice as easy with long messages." Actually, while sending a message, many OCRACES and City RACES members suggest sending just five words at a time, to allow the receiving operator to keep up.

Shrader has many more good suggestions in his article, and I strongly recommend that all County and City RACES and MOU members read it.

The Next
OCRACES
Meeting is

October 6, 2008

1930 Hours

840 N. Eckhoff St.,
Suite 104, Orange

Featured Speaker:
Tom Tracey, KC6FIC,
on Helping Red
Cross in Texas



Orange County Sheriff's Department
Communications Division

Support Requested for November 4th Election

by Marten Miller, KF6ZLQ, OCSD Emergency Communications Manager

OCSD/Communications will coordinate ballot transportation for the General Election scheduled for November 4, 2008, and RACES support has been requested. Our goal is to have a communicator at each of the 23 Collection Centers in Orange County for 100-percent coverage as we have been able to do for the past few elections.

We added a new component to our plan for the last few elections and the plan has worked nearly perfectly. This new component is to record the precinct numbers of the boxes being loaded into the vans, and transmit those precinct numbers to Net Control when the van departs enroute to the VTC. This allows the Registrar of Voters (ROV) staff to update their web site with this information in real time. The ROV has been very pleased with the way this has worked and the information we are able to provide them, and has requested the same service for the November 4, 2008, General Election.

This election will be conducted using electronic ballots with the addition of paper verification, so we will have multiple boxes to transport from each precinct. OCSD/Communications will be managing the transportation of the ballots, supplies, and paper verification equipment to the Vote Tally Center in Santa Ana. RACES communicators provide a communications link between Collection Centers and the Vote Tally Center. We will use two repeaters for this election, with the Collection Centers divided between the two repeaters. There will be a Net Control operator assigned to each repeater channel.

In the November 4, 2008, General Election, approximately 1175 polling places and 23 Collection Centers will be utilized. The Collection Centers that will be utilized for this election are in the following locations: Aliso Viejo; Anaheim (PD parking lot); Canyon Hills; Buena Park; Costa Mesa; Fountain Valley; Fullerton; Garden Grove; Huntington Beach; Irvine; Laguna Beach; Laguna Niguel; Laguna Woods; La Habra; Los Alamitos; Orange; Placentia; Rancho Santa Margarita; Saddleback; San Clemente; Santa Ana; Tustin; and Westminster.

We will also need OCRACES communicators to work at the Vote Tally Center, four as Traffic Control Operators, two as Net Control Operators, and one Relief Operator.

Anyone who has a work location preference should let me know, and I'll do my best to assign him or her to that location.

Collection Center activity for each election begins at 8:00 PM and most are closed around 11:00 PM, although a large turnout is expected for this election, which may mean a later night. Vote Tally Center activity begins at 7:30 PM with setup, and ends around midnight. Communicators should arrive at the Collection Center location no later than 8:00 PM on election night. They should be in some form of uniform or jacket that identifies with RACES or their organization. This will assist the Collection Center personnel and van drivers in identifying the communicators.

The responsibilities of the communicator will be to transmit information to the Vote Tally Center regarding the activities at the Collection Center, including the movement of the vans and the precinct numbers loaded into the vans. A Ballot Transportation Manual with all the necessary information will be available to each communicator prior to Election Day.

In years past, some cities have taken the opportunity to use this event as a training exercise. We welcome this, but the training exercise must not interfere with any of the Collection Center activities, including the delivery, logging, and transporting of ballot boxes.

A briefing will be provided at the November 3, 2008, 7:30 PM OCRACES Meeting, 840 N. Eckhoff Street, Suite 104, in Orange.

Any County or City RACES/ACS or MOU member interested in participating should contact me via email at Marten.Miller@comm.ocgov.com, and let me know if you or others in your group are available to support this event. If you can advise the name, address, phone number, and e-mail address of those that will work the event, it would be appreciated. This will allow direct communication with the latest information.

Next OCRACES Meeting: October 6th

Tom Tracey, KC6FIC, will give us a presentation at the next OCRACES meeting on his adventures in Texas on August 31, 2008, when he helped the Red Cross following Hurricane Gustav. Tom's presentation will expand on the article he wrote for the September 2008 issue of NetControl. He will review some pictures and information from the Ft. Worth networking headquarters setup. Tom is an expert on computer networking, and we are bound to receive some valuable information from his presentation. Tom recently sat in on a Red Cross/Orange County Chapter class on "Disaster Communications for Hams." In his presentation, he also plans to share some of the information he picked up from that class, such as their communications plan organization, to expand our familiarity with this valued partner MOU organization. This meeting will be on Monday, October 6, 2008, at 7:30 PM, at 840 N. Eckhoff Street, Suite 104, in Orange. All radio amateurs interested in emergency communications are invited to attend.

City/County Drill Moved to November 15th

.As a result of a vote taken at the last City/County RACES/ACS & MOU meeting on September 15h, the next City/County RACES/MOU Drill, originally scheduled for October 4th, has been moved to Saturday, November 15, 2008, to coincide with the Golden Guardian Exercise. OCRACES will provide at least two communicators at the EOC RACES Room on Thursday, November 13th, from 1000 to 1400 hours, the main day of the exercise. Some City RACES units will also be active that day. Because, overall, RACES involvement is less than originally expected during Golden Guardian, which is an extensive exercise otherwise, we thought it best that RACES play a more prominent role in the exercise by holding the City/County drill on the Saturday following the initiation of Golden Guardian, and before GG wraps up the following week. We will use the same scenario for our drill, a 7.8 earthquake along the San Andreas Fault in Southern California, which would drastically affect our area.

OCRACES to Exhibit Van at OCFA Open House

County of Orange RACES will exhibit its emergency communications response vehicle at the 3rd Annual Orange County Fire Authority Open House on Saturday, October 11, 2008, from 9:00 AM to 2:00 PM, at the OCFA Regional Fire Operations and Training Center (RFOTC), 1 Fire Authority Road (Jamboree and Tustin Ranch Roads), in Irvine. This event is popular with families, and is an excellent opportunity to introduce children to amateur radio. Families will enjoy touring our van and learning about how we work with the Orange County Sheriff's Department and other agencies such as OCFA during an emergency.

State OES and OHS to Merge into Cal EMA

On September 27, 2008, Governor Arnold Schwarzenegger signed a package of legislation that will strengthen the state's ability to respond to emergencies and natural disasters. The package includes a bill that merges the Governor's Office of Emergency Services (OES) and Office of Homeland Security (OHS) into a single, streamlined, cabinet-level California Emergency Management Agency (Cal EMA). The bill gives the merged agency the responsibility of overseeing and coordinating emergency preparedness, response, recovery, recovery, and homeland-security activities in the state. The legislation takes effect on January 1, 2009. The California Emergency Management Agency shall be under the supervision of a Secretary of California Emergency Management, who shall have all rights and powers of a head of an agency as provided. This position is appointed by the Governor.

DHS Releases Emergency Comm Plan

The U.S. Department of Homeland Security (DHS) recently released the National Emergency Communications Plan (NECP) to address gaps and determine solutions so that emergency responders personnel at all levels of government and across all disciplines can communicate as needed, on demand, and as authorized. The NECP is the nation's first strategic plan to improve emergency response communications, and complements overarching homeland security and emergency communications legislation, strategies, and initiatives.

"This is a comprehensive plan designed to drive measurable and sustainable improvements to operable and interoperable emergency communications nationwide over the next three years. It emphasizes the human element and cross-jurisdictional cooperation, going beyond simply buying new equipment," said Homeland Security Under Secretary Robert Jamison. "We have recently approved Statewide Communication Interoperability Plans for all 56 states and territories. Aligning these plans with the NECP will move emergency communications forward and further promote a coordinated nationwide strategy."

The NECP defines three goals that establish a minimum level of interoperable communications and a deadline for federal, state, local, and tribal authorities:

1. By 2010, 90 percent of all high-risk urban areas designated within the Urban Areas Security Initiative (UASI) can demonstrate response-level emergency communications within one hour for routine events involving multiple jurisdictions and agencies.
2. By 2011, 75 percent of non-UASI jurisdictions can demonstrate response-level emergency communications within one hour for routine events involving multiple jurisdictions and agencies.
3. By 2013, 75 percent of all jurisdictions can demonstrate response-level emergency communications within three hours of a significant event, as outlined in the department's national planning scenarios.

The NECP enhances governance, planning, technology, training and exercises, and disaster communications capabilities with recommendations and milestones for emergency responders and relevant government officials. It is designed to drive measurable and sustainable improvements over the next five years consistent with the: National Response Framework; National Incident Management System; National Preparedness Guidelines; and Target Capabilities List. NECP goals, along with these other department strategies, will improve nationwide response efforts and bolster situational awareness, information sharing, and command and control operations.

The department's Office of Emergency Communications developed the NECP in cooperation with more than 150 public and private sector emergency communications officials. The department's new Interoperable Emergency Communications Grant Program will further enable states to align their plans with the NECP.

Please Take your NIMS IS-200 Test

After publishing a reminder in the September 2008 issue of NetControl, and bringing it up at the last OCRACES meeting, it appears that some OCRACES members have still not taken the NIMS IS-200 test. This is getting urgent. If you have not yet taken the test, please log on to the FEMA Web site, review the material, and take the test. The test is multiple choice and open book, and should only take a few minutes to complete. Then send the notice of acceptance and a copy of the NIMS IS-200 certificate (which you will receive by e-mail from FEMA) to OCSD Emergency Communications Manager Marten Miller, KF6ZLQ. Do it now!

Watching The Web

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

Narrow Band Emergency Messaging System

<http://www.w1hkj.com/NBEMS>

NBEMS

Thanks to Los Alamitos RACES Radio Officer John Unrath, K6JHU, for mentioning NBEMS, a method that allows digital communications over SSB on HF or VHF. There are two major components to the suite; one is for keyboard-to-keyboard and the other is for file transfer (including pictures). John used the keyboard-to-keyboard version during Field Day in PSK31 mode. The system supports many different modes, depending on the robustness of the signal path. The minimum requirements are a radio with VOX (to avoid a PTT connection, although John says a Rigblaster works well), a computer with a sound card, and an interface cable (sound card to microphone/speaker). John says there is a user group for NBEMS, and he referred us to their Web site at <http://www.w1hkj.com/NBEMS>, from which the following information was gathered, and free software may be downloaded.

The Narrow Band Emergency Message System (NBEMS) for Windows is a suite of software programs designed for point-to-point, fast, error-free, emergency messaging up to or over 100 miles distant, and takes up to a very minimum of frequency space on the ham bands. The system is designed primarily for use on the 2-meter band (SSB, not FM), or on HF with NVIS antennas, where there is a minimum of fading to slow down message transfers. This point-to-point system does not utilize repeaters, or e-mail robots, for message forwarding. All forwarding is done by stations manned by live operators on both ends, who can confirm that a frequency is clear locally, negotiate a frequency change if necessary, and confirm delivery of a message by the intended recipient.

NBEMS is not intended for net communications, because only one station at a time can be connected and controlled by the flarq software. Nets can be conducted using the fldigi software alone, and net control can suggest that two stations move to an adjacent frequency, have one beacon, the other connect, and then pass traffic using the error-free ARQ protocol provided by flarq. If already connected to a station using flarq, net control can use the software's "Plain Talk" capability to communicate with that station.

While flarq has the capability to transfer image files without errors, such files tend to be relatively large and can take an inordinate amount of time to transfer. The image files must first be converted to an ASCII text format using base-64 encoding. This usually increases the file size by a factor of 3:2. When errors in the transferred image can be tolerated, the transfer time can be drastically reduced by using the MFSK-pic mode available in fldigi. The larger the image is (the more pixels), the longer it takes to send. Images (even those originally in color) can be transmitted in one-third as much time by transferring them as a gray-scale image. A 200-by-200-pixel image can be transmitted in 40 seconds in gray scale and 120 seconds in color. That same image would take 2 hours and 58 minutes to transfer using ARQ and MFSK-16 for the modem.

Whenever possible, use 2-meter SSB with digital modulation and horizontally polarized antennas, for greatest range and dependability, according to the Web site. If drift is not a problem, start with PSK63, and switch to DominoEX16, PSK125, or PSK250, depending on the needed signal-to-noise ratio over the chosen path, but switch to DominoEX modes if drift is a problem. MFSK16 may be used for VHF unless drift is a problem. It decodes weak signals very well. It can transfer pictures with or without ARQ. If signals are well above the noise or fading, MFSK32 or MFSK64 can be used to speed up picture transfers. If drift is ever a problem, then DominoEX16 can be used instead of MFSK16, but note that DominoEX16 has no picture mode.

MFSK16 and MFSK32 are the recommended modes for use on HF. DominoEX, PSK, and Thor and MFSK can all be used in conjunction with flarq to effect error-free file transfers, but only MFSK is recommended for use on 40 and 80 meters. The MFSK modes are relatively robust and work better than many other modes where signals are buried in noise and static. If frequency stability and tuning present problems, then DominoEX and/or Thor may be used as alternatives to MFSK. Thor is a forward error-correcting mode with incremental multiple shift keyed tones. It is similar to DominoEX, but adds the robustness of FEC as found in MFSK.

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

Newport Beach

Newport Beach RACES Chief Radio Officer Gary Standard, K6GSX, received a request from the city's Police Department to provide APRS tracking of seven to nine boats in this year's Christmas Boat Parade, held during the last two weeks of December. OCRACES will lend some APRS beacon boxes to NBRACES for this event.

San Juan Capistrano

San Juan Capistrano RACES Radio Officer Joe Lopez, W6BGR, says the city is having a fundraiser event (Ridge Walk) on October 4, 2008, to build awareness to the open-space areas of the city. Joe needs at least 10 RACES members who can work short distances in the hills surrounding the city. They will be assisting the SJC CERT teams who will be walking the course and providing light medical treatment in case it is needed. Tri-Cities RACES will be providing a shadow to each of the four medical teams and one operator each to the three water stations. Joe will be at net control. Two other locations are open to guard trails that connect to the course, preventing someone from taking the wrong path. A map showing the covered locations on the course and other information will be sent to anyone responding to Joe (with an offer to help) at JLopez@acsd.k12.ca.us.

Seal Beach/Los Alamitos

Congratulations to Mike Maronta, KC6YNQ, who has been appointed as Seal Beach RACES Assistant Radio Officer.

Seal Beach/Los Alamitos RACES members participated in the Emergency Preparedness Expo on September 20,

2008, at The Shops at Rossmoor, hosted by the Seal Beach and Los Alamitos Police Departments, in partnership with the Seal Beach and Los Alamitos Chambers of Commerce, in recognition of National Preparedness Month. Other agencies participating in this event included Orange County Fire Authority, United States Coast Guard, National Guard, American Red Cross, and West Cities Communications.

Hospital Disaster Support Communications System

An equipment failure caused a sudden outage of all telephones and data services at Hoag Memorial Hospital in the early evening of September 11, 2008. April Moell, WA6OPS, received a page at 6:48 PM and immediately activated HDSCS. Two members, Gale Fajardo, KB6MOH, and Scott Lolmaugh, WD8ICK, were close by and responded to the hospital immediately, arriving within 45 minutes of the activation. Close behind were Jim McLaughlin, AB6UF, Bob Evans, W9TQC, and Dave West, KI6EPI. Although the hospital's initial assessment indicated that a five-hour outage was possible, it was fortunate that some phones began to come back on line before 8 PM. As repairs were completed, the hams began to stand down and operations were secured at 10:40 PM. Ken Simpson, W6KOS, Joe Moell, KØOV, and Tom Gaccione, WB2LRH, were staged and ready to respond if the need had continued. April Moell, WA6OPS, was Net Control and base-station operator.

Orange County

We just learned of the tragic death of the nephew of OCRACES Radio Officer Ralph Sbragia, W6CSP. Our thoughts and prayers are with Ralph and his family.

October 2008

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

Upcoming Events:

- **Oct 6:** OCRACES Meeting, 1930, 840 N. Eckhoff Street, Suite 104, Orange
- **Oct. 11:** OCFA Open House, RFOTC, 0900-1400
- **Oct 27:** SWACS Frequency Test, EOC RACES Room, 2000
- **Nov 4:** Presidential Election, Communications for Ballot Transportation
- **Nov 13:** Golden Guardian Exercise, 1000-1400
- **Nov 15:** City/County RACES/ ACS & MOU Drill, 0900-1100
- **Dec 1:** OCRACES Holiday Dinner
- **Jan 26:** City/County RACES/ ACS & MOU Meeting, 840 N. Eckhoff St., Suite 104, Orange



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

Program Coordinator

Marten Müller, KF6ZLQ
(714) 704-7917

Radio Officers

Scott Byington, KC6MMF
Harvey Packard, KM6BV
Joe Selikov, KB6EID
Ralph Sbragia, W6CSP

Chief Radio Officer

Ken Bourne, W6HK
(714) 997-0073

Assistant Radio Officers

Jack Barth, AB6VC
Jim Carter, WB6HAG
Ernest Fierheller, KG6LXT

County of Orange RACES

OCSD/Communications
840 N. Eckhoff St., Suite 104
Orange, CA 92868-1021

Telephone – (714) 704-7917
Fax – (714) 704-7902
E-mail – ocraces@comm.ocgov.com

County of Orange RACES

OCSD/Communications
840 N. Eckhoff St., Suite 104
Orange, CA 92868-1021

Telephone – (714) 704-7917
Fax – (714) 704-7902
E-mail – ocraces@comm.ocgov.com

Visit Our Website
www.ocraces.org
It's Where It's @!

Questions or Comments?
Contact the *NetControl* Editor
w6hk@ocraces.org



**“W6ACS ...
Serving
Orange County”**

Meet your County of Orange RACES Members!



Ken Bourne
W6HK



Scott Byington
KC6MMF



Harvey Packard
KM6BV



Ralph Sbragia
W6CSP



Joe Selikov
KB6EID



Marten Miller
KF6ZLQ



Robert Stoffel
KD6DAQ



Jack Barth
AB6VC



Jim Carter
WB6HAG



Ernest Fierheller
KG6LXT



Randy Benicky
N6PRL



Bill Borg
KG6PEX



Chuck Dolan
KG6UJC



Nancee Graff
N6ZRB



Ray Grimes
N8RG



Walter Kroy
KC6HAM



Martin La Rocque
N6NTH



John Roberts
W6JOR



Tony Sanchez
AE6QT



Steve Sobodos
KN6UX



Tom Stroud
N6FDZ



Tom Tracey
KC6FIC