

December 2010



Newsletter of the County of Orange Radio Amateur Civil Emergency Service

Inside this issue:

- Captain's Corner 1
- Wouxun KG-UV3D 2
- OCRACES Dinner 3
- General Election 3
- SKYWARN Day 3
- ARRL SW Director 3
- RACES Stations 4
- Watching the Web 5
- Palm Springs Fest 5
- RACES/ACS News 6

Captain's Corner

by RACES Capt. Ken Bourne, W6HK, Chief Radio Officer

Let's Get Going on D-STAR

Are you hoping to find some new D-STAR equipment under your Christmas tree this year? I'll bet most OCRACES members have never used D-STAR, and don't appreciate its full capabilities, especially for emergency communications. Without that appreciation and understanding of what it can do, it's unlikely that any of us will try to convince Santa to bring us a D-STAR toy.

Even without D-STAR in our own home or mobile stations, we can still have fun using it, with the new D-STAR transceivers up at the EOC RACES Room. I encourage every OCRACES member (including myself) to go up to the EOC and sit down with the equipment and learn how to use it. Who knows, you might enjoy it so much that you will eventually want to purchase your own D-STAR equipment.

D-STAR offers digital voice and data communications. It connects repeater sites over microwave links and the Internet, and forms a wide-area ham radio network. The system provides digital voice (DV mode) and also digital data transmission (DD mode). The system uses the TCP/IP protocol. Web, e-mail, text messages, multimedia messages, and other Internet applications are available when the radio is connected to a PC.

At the EOC we have the Icom ID-880H 2-m/440-MHz dual-band D-STAR transceiver (one band at a time) and the Icom ID-1 1.2-GHz D-STAR transceiver. The ID-880H has 1,052 alphanumeric memory



Icom ID-880H VHF and UHF D-STAR digital transceiver



Control head for Icom ID-1 1.2 GHz D-STAR digital transceiver

channels with 26 memory banks. It has multiple scan functions, a built-in CTCSS/DTCS encoder and decoder, 50 W output, noise filter (for analog FM), and data and 9600/1200-b/s packet jacks on the rear panel. Digital transmission speed is 4.8 kb/s, and voice coding speed is 2.4 kb/s.

The Icom ID-1 transceiver operates from 1240 to 1300 MHz. Besides working through D-STAR digital repeaters for full system capabilities and services, it also communicates with analog FM repeaters (including the five OCRACES 1.2-GHz repeaters), and to other ID-1s via simplex digital (GMSK) operation for establishing a simple local network. Data transmission

**The Next
OCRACES
Meeting is**

December 6, 2010
1830 Hours
**Coco's Bakery
Restaurant**
14971 Holt Ave.
Tustin

Agenda:
OCRACES Holiday Dinner



Orange County Sheriff's Department
Communications & Technology Division

Continued on page 2

Captain's Corner *Continued from page 1*

speed is 128 kb/s, and digital voice is 4.8 kb/s. It includes 105 alphanumeric memory channels and full PC control via the USB port. Controller software enables most functions to be controlled from a PC. In DD mode, you can browse Web sites and send e-mail as if the ID-1 were a wireless network adapter. The ID-1 embeds your own and the called station's call sign in your transmission for display. The DSQL opens the squelch only when your call sign is received. When you share a single call sign with RACES members, the CSQL function allows you to set a CSQL code from 00 to 99 and provides quiet standby while other members are talking. When you require the attention of all stations in the area, the Enhanced Monitor Request (EMR) mode operation allows the caller to bypass the CSQL and DSQL setting of the receiver's station. During EMR mode operation, all receiving stations will hear your audio, even though they may be muted.

You can use local D-STAR repeaters without registering. However, if you want to connect to distant repeaters and users on other repeaters, you need to register as a gateway user. One registration at the nearest repeater with a gateway is good for all on the worldwide network. To register, read the instructions at http://www.dstargateway.org/D-Star_Registration.html. Then, if K6SOA (the SOARA D-STAR repeater), for example, is your nearest repeater, go to <https://k6soa.dstargateway.org/Dstar.do> to register.

Information for setting up a D-STAR radio is found on the "D-STAR Calculator" at <http://www.dstarinfo.com/Calculator/DSTAR%20Web%20Calculator.aspx>. MyCALL, UrCALL, RPT1 C, and RPT2 C are the most important parameters. A memory channel should be designated for each system and combination of cross-band options used. MyCALL identifies your radio. The call sign of each RACES member could be programmed into a different memory, so that several users could use the radio to contact desired stations. UrCALL is the station you want to talk to. Commonly this is set to "CQCQCQ" for calling "CQ" or for ragchews and

roundtables. RPT1 CALL is the call sign of the local repeater you want to use. Insert spaces after the call sign up to the eighth character, where the "switch" is inserted for routing your data to the proper port. Switch "A" designates 1.2 GHz, "B" is 70 cm, "C" is 2 meters, "G" is gateway, and "S" is server. To work crossband on a local repeater, enter the call sign of the other port you wish to use for RPT2 C. To use the gateway, enter G for the eighth character. The gateway accesses a database to find where the UrCALL was last heard and will send your data to that system.

A communications tool called D-RATS is now available for D-STAR low-speed data (DV mode). Features include multi-user chat capabilities, file transfers, structured data transport (forms), and GPS position tracking and mapping.

More and more emergency communications units are employing D-STAR. For example, ARES members in Gwinnett County, Georgia, tested sending photos from an airplane via D-STAR's high-speed data (DD mode) capability on 1.2 GHz, during the 2010 ARRL Simulated Emergency Test (SET). The test confirmed the capability of taking pictures while airborne and sending them back through the WD4STR D-STAR repeater in near real time to a Web site for storage and viewing. File sizes for the photos ranged from 75 kB to 250 kB for medium resolution images. Transmission times were 10 to 30 seconds. The signal strength confirmed link calculations that reliable transmission could occur to at least 100 miles from the air. Gwinnett ARES tested the concept to provide the capability to the Georgia Emergency Management Agency (GEMA) for quick aerial surveys of disaster areas and other immediate photo needs. The Icom ID-1 radios aboard the airplane can send the photo files via 128 kb/s IP connection to any of the D-STAR repeaters around the state. A network of D-STAR repeaters is being installed with multiband antennas on tall television towers at Georgia Public Broadcasting sites, for statewide voice and data emergency communications.

Powerwerx Importing Wouxun KG-UV3D

Powerwerx in Brea is now importing low-priced Wouxun KG-UV3D dual-band handheld radios, available in 2-m/440-MHz and 2-m/220-MHz models. They are FCC Part 90 approved for commercial use. They include a 1700 mAh Li-ion battery pack and a black textured case. Also available is the KG-833 single-band UHF handheld commercial radio. Optional accessories include dual-slot charger with second battery charging slot, 12-Vdc car charger, AA battery pack, headset microphone, antenna connector adapters, battery eliminator, 6-unit drop-in rapid charger, USB and serial programming cables, cloning cable, speaker/microphone, and leather case. For more information about these new handheld radios, go to <http://www.powerwerx.com/wouxun-radios/>.

OCRACES Holiday Dinner: December 6th

The OCRACES holiday dinner is on Monday, December 6, 2010, at 6:30 PM, at Coco's Bakery Restaurant, 14971 Holt Avenue, in Tustin. Contact OCSO Emergency Communications Coordinator Marten Miller, KF6ZLQ, if you are attending, and give him your choice from the dinner menu that he e-mailed to all members and applicants.

RACES Supports November 2nd Election

Members of City and County RACES units and HDSCS supported ballot-collection communications on the evening of the General Election on November 2, 2010. A communicator was at each of the 23 Collection Centers in Orange County. Communicators at the Collection Centers recorded the precinct numbers of the boxes being loaded into the vans, and transmitted those precinct numbers to Net Control when the vans departed enroute to the Vote Tally Center. Using three OCRACES repeaters enhanced communications efficiency.

OCRACES participants included Jack Barth, AB6VC, Randy Benicky, N6PRL, Ken Bourne, W6HK, Scott Byington, KC6MMF, Chuck Dolan, KG6UJC, Nancee Graff, N6ZRB, Ray Grimes, N8RG, Walter Kroy, KC6HAM, Kenan Reilly, KR6J, John Roberts, W6JOR, and Brian Turner, KI6WZS.

City RACES units participating included Anaheim, Brea, Buena Park, Costa Mesa, Fountain Valley, Fullerton, Huntington Beach, Irvine, Laguna Beach, Mission Viejo, Orange, Placentia, Santa Ana, Seal Beach/Los Alamitos, Tri-Cities, and Westminster. The Hospital Disaster Support Communications System (HDSCS) provided coverage in Aliso Viejo.

SKYWARN Recognition Day: December 3-4

The 12th Annual SKYWARN Recognition Day (SRD) Special Event occurs from 1600 hours on December 3, 2010, to 1600 on December 4th. Southwest California SKYWARN Interim Regional Coordinator and Central Area Coordinator (San Diego County) Eric Hutchins, K7ELH, says the National Weather Service (NWS) office in San Diego will be on the air.



SRD is cosponsored by the ARRL and NWS in recognition of the commitment made by radio amateurs to help keep their communities safe. Hutchins invites local amateurs to sign up for two-hour shifts to operate at the San Diego office. Stations are asked to include a weather report of their location in their exchange.

To receive a certificate if operating from home, submit a list of the station(s) worked, along with a self-addressed stamped envelope, to SKYWARN Recognition Day, 920 Armory Rd., Goodland, KS 67735. Even if you make just one QSO to an NWS office, you are eligible to receive a certificate. Many NWS offices also send out special QSL cards for this event.

Dick Norton, N6AA, Wins SW Division Election

Current ARRL Southwestern Division Director Dick Norton, N6AA, of Topanga, CA, faced challenger Carl Gardenias, WU6D, of Perris, CA, in a recent election for Director. Norton, who was seeking his third term as Director, was the victor with 2218 votes, while Gardenias had 1132 votes.

Chip Margelli, K7JA, Joins CQ Staff

Chip Margelli, K7JA, of Garden Grove, has been appointed Director of Advertising and Sales and Marketing for CQ Communications, Inc., responsible for advertising sales for *CQ Amateur Radio*, *CQ VHF*, and *Popular Communications* magazines, as well as marketing efforts for all CQ Communications products. Chip spent nearly 30 years with Yaesu and, more recently, four years with Heil Sound. An active ham for 45 years, Chip is a champion contester, DXer, and DXpeditioner. His wife, Janet, KL7MF, manages the Ham Radio Outlet store in Anaheim

FCC Deletes Text on RACES Station Licenses

In a Report and Order (WT Docket No. 09-209) adopted November 2, 2010, and released November 8, 2010, the FCC amended Part 97 to remove references to RACES station licenses, since it decided in 2000 not to renew RACES station licenses. The new rules will probably become effective early in 2011 (30 days after publication in the *Federal Register*). Section 97.407 was amended by removing paragraph (d) and its subparagraphs, redesignating paragraph (e) as paragraph (d), and revising paragraphs (a), (b), and (c) to read as follows:

§ 97.407 Radio amateur civil emergency service.

(a) No station may transmit in RACES unless it is an FCC-licensed primary, club, or military recreation station and it is certified by a civil defense organization as registered with that organization. No person may be the control operator of an amateur station transmitting in RACES unless that person holds a FCC-issued amateur operator license and is certified by a civil defense organization as enrolled in that organization.

(b) The frequency bands and segments and emissions authorized to the control operator are available to stations transmitting communications in RACES on a shared basis with the amateur service. In the event of an emergency which necessitates invoking the President's War Emergency Powers under the provisions of section 706 of the Communications Act of 1934, as amended, 47 U.S.C. 606, amateur stations participating in RACES may only transmit on the frequency segments authorized pursuant to part 214 of this chapter.

(c) An amateur station registered with a civil defense organization may only communicate with the following stations upon authorization of the responsible civil defense official for the organization with which the amateur station is registered:

(1) An amateur station registered with the same or another civil defense organization; and

(2) A station in a service regulated by the FCC whenever such communication is authorized by the FCC.

(d) All communications transmitted in RACES must be specifically authorized by the civil defense organization for the area served. Only civil defense communications of the following types may be transmitted:

(1) Messages concerning impending or actual conditions jeopardizing the public safety, or affecting the national defense or security during periods of local, regional, or national civil emergencies;

(2) Messages directly concerning the immediate safety of life of individuals, the immediate protection of property, maintenance of law and order, alleviation of human suffering and need, and the combating of armed attack or sabotage;

(3) Messages directly concerning the accumulation and dissemination of public information or instructions to the civilian population essential to the activities of the civil defense organization or other authorized governmental or relief agencies; and

(4) Communications for RACES training drills and tests necessary to ensure the establishment and maintenance of orderly and efficient operation of the RACES as ordered by the responsible civil defense organization served. Such drills and tests may not exceed a total time of 1 hour per week. With the approval of the chief officer for emergency planning in the applicable State, Commonwealth, District, or territory, however, such tests and drills may be conducted for a period not to exceed 72 hours no more than twice in any calendar year.

Watching The Web

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

Electrical Safety for Ham Radio Operators
<http://www.sce.com/safety/recreation/ham-radio>



Southern California Edison has established a page on their Web site at <http://www.sce.com/safety/recreation/ham-radio> to educate radio amateurs on electrical safety. The Web page covers antenna safety, Field Day safety, and portable generators.

On antenna safety, SCE advises that overhead power lines are not insulated. They can be hidden by trees and buildings. Plan carefully before putting up or taking down an antenna. Use a spotter whose only job is to keep everyone else away from power lines. Keep equipment, tools, antennas, guy wires, and tower at least 10 feet away from power lines. Do not use metal ladders or long-handled metal tools near power lines. Guys should be non-conductive. Have a solid earth ground. Call Dig-Alert at 800-226-2700 before digging a tower footing or cable trench.

On Field Day safety, first locate the power lines. Never set up an antenna in the dark. Assess antenna clearances. Never throw an antenna wire, guy wire, or rope into a tree that is near a power line. Stay away from a tree that has a power line touching it.

Notify SCE if you have a portable generator in your home or shack. The generator's backflow can seriously hurt or kill an unsuspecting SCE employee or First Responder. Never plug a generator into the house circuit. Pull the house breaker.

We have only briefly covered the information on this Web page. Be sure to read the entire page for life-saving details on electrical safety for radio amateurs, and also refer to material from ARRL and in the National Electrical Code.

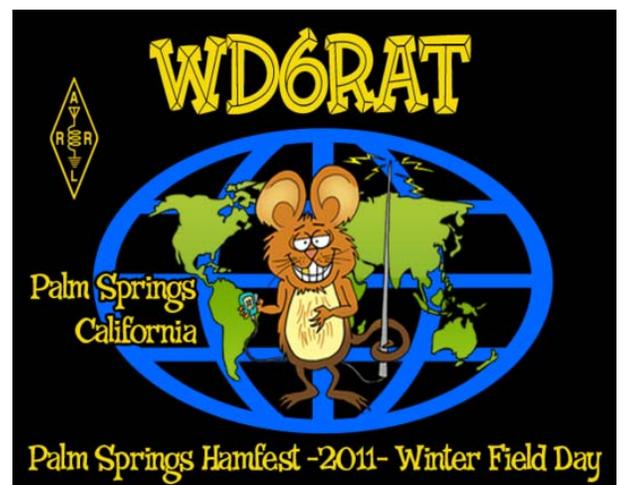
Palm Springs Hamfest: January 29th

The Desert RATS and Palm Springs DX Club invite us to attend the Palm Springs Hamfest on Saturday, January 29, 2011, from 9:30 AM to 4:30 PM. Talk-in frequency is 146.940 MHz (-), 107.2 Hz PL, on the WD6RAT Desert RATpeater. Directions: Take I-10 to the Palm Drive exit. Turn onto Gene Autry Trail, which becomes Matthew Drive as it crosses Highway 111. Continue on to 4193 Matthew Drive (on the left). Admission is \$1.00, which includes a raffle ticket. The hamfest is an official ARRL sanctioned event, including a Winter Field Day 2011 Special Event Station.

Included is a swap meet. No fee will be charged for selling your ham gear, if you bring your own table and chairs. You may also bring one or two items with a sign for the single-items table, and the club will handle the sale for a small commission.

Several vendors and exhibits will be at the hamfest, including Icom, Yaesu, Buds Engraving, Alpine Antennas, Byonics (that's our former OCRACES Sergeant Byon Garrabrant, N6BG, from Las Vegas), Old Military Radios, EDS Emergency Pack, Ham Radio Outlet, Impulse Electronics, ARRL, DX Store, W5YI, RF Stuff, AMSAT, Elecraft (user group), Ni Cad Lady, Nifty Accessories, W5YI, Gordon West, Ceton Nagi Software, San Bernardino Microwave Society (demo), Ham-City, M2 Antennas, ARES, EME demo, and more. Lunch will be provided for \$7 plus \$2 for beverages.

Up-to-date information on the hamfest is posted at <http://desertrats.17.forumer.com/viewtopic.php?t=310>.



RACES/ACS News from Around the County

"RACES/ACS 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

Laguna Niguel

Members of Laguna Niguel Auxiliary Communications Service and Tri-Cities RACES joined forces on Sunday, November 28, 2010, to conduct a disaster preparedness drill. The exercise provided field radio operators with an opportunity to report preliminary damage assessment reports back to a (simulated) emergency operations center (actually, a communications trailer in the Plaza de La Paz shopping center) based on an earthquake scenario.

The exercise began by each radio operator contacting a "resource net" (RN) to identify their availability. The RN control station assigned them a position code (P-code) and a mobilization code (M-code) and instructed them to contact Travel Net (TN) for additional instructions. The TN control station monitored their progress to assure safe passage while enroute to the "Plaza Incident" (exercise). Once they arrived, they checked out of the travel net and were cleared to change frequencies and contact the Staging Net (SN) control operator on a predesignated tactical (simplex) frequency.

Once they contacted the SN control station, they maintained contact until they arrived and conducted "check-in" processing on an ICS-211 form. An operational briefing was conducted using the incident action plan (IAP) which was comprised of ICS-201, 202, 203, 204, and 205 forms, maps of the incident location, assignments, objectives, and a safety briefing. From there, each radio went through seven different stations, with each emergency responder communications volunteer being assigned a different processing sequence by the net control station (NCS).

Each radio operator checked in to net control upon arrival at their designated station, provided a situation status (SITSTAT) report on the pre-scripted scenario, and then requested their next (unique) station assignment from the NCS. Many thanks to KJ6AOX, KB6UJW, KG6LFZ, KE6FUZ, KJ6EFG, and K6EGA for helping to provide support for this unique mobilization and field deployment exercise experience.

There were many things done right, and many lessons learned were noted for future



Operations briefing at November 28th exercise in Laguna Niguel

improvement. Comments received during the "hot wash" and debrief were very favorable and positive.

(Editor's Note: The above information was provided by Wayne Barringer, KB6UJW, who prepared this exercise for Laguna Niguel ACS, with the appreciation of Chief Radio Officer Ray Nienburg, KJ6AOX.)

Los Alamitos

Correction: In the November 2010 issue of *NetControl*, we incorrectly identified Michael Peer, WD6CDN, as the new Seal Beach RACES Chief Radio Officer. Michael is actually the new Los Alamitos RACES Chief Radio Officer. Mike Maronta, KC6YNQ, remains as the Seal Beach RACES CRO.

Orange County

Our sincere condolences to OCRACES Member Brian Turner, KI6WZS, whose mother passed away on November 2, 2010. Brian was informed of her death while he was performing net-control duties the night of the General Election.

During his hasty trip to Oregon to be with his father and take care of family matters, Brian lost his HT, which added to his stress. Later in the month, Brian had an emergency appendectomy, and has now recovered fully.

It's been a rough month for Brian, and we wish him all the best as we stand with him in support.

December 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6 <i>OCRACES Holiday Dinner & Weekly ACS Net</i>	7	8	9	10	11 <i>EmComm Breakfast</i>
12	13 <i>Weekly ACS Net</i>	14 <i>OCSD/Communications Holiday Luncheon</i>	15	16	17	18
19	20 <i>Weekly ACS Net</i>	21	22	23	24	25 <i>Christmas</i>
26	27 <i>Weekly ACS Net</i>	28	29	30	31	

Upcoming Events:

- Dec 6: OCRACES Holiday Dinner, 1830, Coco's Bakery Restaurant, 14971 Holt Ave., Tustin
- Dec 11: EmComm Breakfast, Katella Grill, 1325 W. Katella Ave., Orange, 0800
- Dec 14: OCSD/Communications Holiday Luncheon, 840 N. Eckhoff St., Orange, 1130-1330
- Dec 25: Merry Christmas!
- Jan 3: OCRACES Meeting, 1930, 840 N. Eckhoff St., Suite 104, Orange
- Jan 29: Palm Springs Ham-fest



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 (disabled)
 - 6 m: 52.620 MHz output, 52.120 MHz input, 103.5 Hz PL (disabled)
 - 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 Miller, KF6ZLQ
(714) 704-7917

Radio Officers (Lieutenants)

Scott Byington, KC6MMF
Harvey Packard, KM6BV
Ralph Sbragia, W6CSP

Chief Radio Officer (Captain)

Ken Bourne, W6HK
(714) 997-0073

Assistant Radio Officers (Sergeants)

Jack Barth, AB6VC
Chuck Dolan, KG6UJC
Jim Carter, WB6HAG
Ernest Fierheller, KG6LXT

County of Orange RACES

OCSD/Communications & Technology
840 N. Eckhoff St., Suite 104

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

County of Orange RACES

OCSD/Communications & Technology
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 Web Site
<http://www.ocraces.org>
It's Where It's @!

Questions or Comments?
Contact *NetControl* Editor Ken Bourne, W6HK
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



Marten Miller
KF6ZLQ



Robert Stoffel
KD6DAQ



Jack Barth
AB6VC



Jim Carter
WB6HAG



Chuck Dolan
KG6UJC



Ernest Fierheller
KG6LXT



Randy Benicky
N6PRL



Bill Borg
KG6PEX



Nancee Graff
N6ZRB



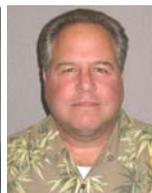
Ray Grimes
N8RG



Walter Kroy
KC6HAM



Martin La Rocque
N6NTH



Brian Lettieri
KI6VPF



Kenan Reilly
KR6J



John Roberts
W6JOR



Joe Selikov
KB6EID



Steve Sobodos
KN6UX



Tom Tracey
KC6FIC



Brian Turner
KI6WZS