

March 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

Bluetooth for RACES/ACS?

What is "Bluetooth," and does it have any applications for RACES/ACS members to enhance our emergency communications capabilities? Bluetooth is not a dental disease, but, rather, is a short-range (very low power) wireless technology for replacing cables between fixed or portable devices while maintaining high levels of security. Security is achieved by using spread-spectrum transmission in the 2.400 to 2.4835 GHz unlicensed industrial, scientific, and medical (ISM) band, with a frequency-hopping, full-duplex signal at a nominal rate of 1600 hops per second. (Amateur radio shares some of that spectrum and beyond, in the 13-centimeter ham band, from 2.300 to 2.310 GHz and from 2.390 to 2.450 GHz.)

Think of the applications, such as

wirelessly connecting headsets to your portable, mobile, or fixed transceivers, transferring images from your cell-phone camera to your laptop in an ATV or SSTV system, controlling transceiver or other equipment functions from a wireless handheld device, etc. Let's first look further at what Bluetooth is, and then investigate some available products and their applications..



Bluetooth USB adapter

Bluetooth is a global standard, and any Bluetooth-enabled device should be able to connect to any other nearby Bluetooth-enabled device. These devices communicate wirelessly through short-range, ad hoc networks called piconets. Each device can communicate simultaneously with up to seven other devices in a single piconet. Each device can also belong to several piconets simultaneously. Piconets are established dynamically and automatically as Bluetooth-enabled devices enter and leave radio proximity.

Adaptive frequency hopping (AFH) reduces interference in the 2.4-GHz spectrum. AFH takes advantage of the available frequency by detecting other devices in the spectrum and avoiding



Typical Bluetooth cell-phone headset

**The Next
OCRACES
Meeting is**

**March 3, 2008
1930 Hours**

**840 N. Eckhoff St.,
1st Floor, Orange**

**Featured Speaker:
Martin La Rocque,
N6NTH, on his
Portable ATV System**



Orange County Sheriff's Department
Communications Division

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Captain's Corner *Continued from page 1*

the frequencies they are using. The signal hops among 79 frequencies at 1-MHz intervals.

The Bluetooth radio module uses GFSK (Gaussian Frequency Shift Keying), where a binary one is represented by a positive frequency deviation, and a binary zero by a negative frequency deviation. BT (bandwidth time) is set to 0.5 and the modulation index must be between 0.28 and 0.35.

The Bluetooth operating range depends on the device class. Class 1 devices, which are primarily used in long-range industrial applications, communicate up to 100 meters or 300 feet, with a maximum output power of 20 dBm (100 mW). Class 2 devices, which are common in "ordinary range" mobile applications, communicate up to 10 meters or 30 feet, with a maximum output power of 4 dBm (2.5 mW). Class 3 short-range devices communicate up to 1 meter or 3 feet, with a maximum output power of 0 dBm (1 mW).

Bluetooth can simultaneously handle both data and voice transmissions. Bluetooth data rate is 1 Mb/s for Version 1.2, and up to 3 Mb/s for Version 2.0 + EDR (Enhanced Data Rate) Version 2.1 adds "Encryption Pause Resume" to enable an encryption key to be refreshed, enabling much stronger encryption for connections that stay up for longer than 23.3 hours (one Bluetooth day). Version 3.0, still to be introduced, is expected to adopt ultra-wideband (UWB) radio technology for very fast data transfers up to 480 Mb/s

Mobile Radio Technology (MRT) magazine recently reported that Klein Electronics has introduced a Bluetooth wireless headset dubbed Blu-Comm for use with two-way radios. The headset features a small form factor similar to Bluetooth cell-phone headsets. It is far less bulky than other walkie-talkie wireless headphones. The retail price is \$139.00. It is initially available for Motorola and Kenwood industrial handheld radios.

The Yaesu FTM-10R dual-band (2 meters and 70 centimeters) amateur transceiver has an optional internal Bluetooth adapter.

The Talksafe Bluetooth hands-free adapter is usable on amateur transceivers as well as industrial radios. It makes the button on a Bluetooth headset a

toggle transmit/receive switch, and passes audio in and out of the radio. This device is available mostly in the UK, and the price is not yet at a reasonable level in the US.

For HF P A C T O R / WinMail applications, the SCS PTC-IIusb radio modem is now available with optional Bluetooth. This eliminates the HF interference that sometimes occurs from the data stream of the USB interface, especially if the antenna is located close to the modem/PC setup. Eliminating the USB cable connection also reduces the potential for ground loops and parasitic currents.

Lynovation's CTR-BlueLync provides a Bluetooth-based platform that supports multiple radio interfaces and accessories. It is based on the BlueSMiRF Bluetooth module from SparkFun Electronics (<http://www.sparkfun.com>). The module contains the basic elements to provide a Bluetooth-based wireless serial port. Lynovation has discontinued building the units, but radio amateurs can build their own interface by purchasing the BlueSMiRF RF module and using the schematics, board layouts, and assembly manuals on Lynovation's Web site (<http://www.lynovation.com>). Far Circuits (<http://www.farcircuits.net>) carries the circuit board kits. The completed interface fits in a Hammond 1551H plastic enclosure.

Bluetooth is especially applicable when deploying equipment in the field during emergencies. Many failures occur because of cable or connector breakage. If some equipment interconnections for control or audio, video, or data transfer can be accomplished wirelessly without being tangled up in cables, Bluetooth could be the answer.



Garmin GPS 10 portable GPS receiver with Bluetooth module for transferring data to Bluetooth-enabled laptop

Next OCRACES Meeting: March 3rd

The next OCRACES meeting is on Monday, March 3, 2008, at 7:30 PM. Due to painting and carpeting, it will not be in the usual place. It will still be at 840 N. Eckhoff Street in Orange, but it will not be in the large conference room upstairs. Rather, it will be in the cafeteria, which is on the first floor, below the conference room. Our featured speaker is Martin La Rocque, N6NTH, who will talk about the configuration of his “two box” portable amateur television system, which operates on the 434.000 MHz Santiago Peak repeater and 426.250 MHz itinerant frequency. Included in his system is a 100-watt amplifier and two power supplies (35 A and 10 A). Martin will also bring a separate transmitter and receiver and camera, to demonstrate how a complete ATV system works.

RACES and HDSCS Help in Primary Election

Members of OCRACES, various city RACES units, and Hospital Disaster Support Communications System (HDSCS) provided communications from Collection Centers to the Vote Tally Center for secure ballot transportation after the Presidential Primary Election polls closed on Tuesday, February 5, 2008. OCRACES members working at the Vote Tally Center in Santa Ana included Lt. Harvey Packard, KM6BV, and Tom Tracey, KC6FIC, at net control, as well as Lt. Scott Byington, KC6MMF, Lt. Ralph Sbragia, W6CSP, Lt. Joe Selikov, KB6EID, Sgt. Jack Barth, AB6VC, Bill Borg, KG6PEX, and Chuck Dolan, KG6UJC. OCRACES members at Collection Centers included Capt. Ken Bourne, W6HK, Nancee Graff, N6ZRB, and Walter Kroy, KC6HAM. Also at Collection Centers were Anaheim RACES members Tom Baldwin, KA6ZPY, Debbie Heilman, K8CZB, Austin Miller, KF6RVK, Ken Pruzinsky, K8CZB, and Bob Templeton, KI6CWA; Buena Park Radio Officer Jim Reynolds, N6MIP; Costa Mesa RACES (MESAC) member Mike Oviatt, KE6IWM; Placentia RACES member Gary Hendrix, KG6CBC; Fountain Valley RACES; Fullerton RACES Radio Officer Gene Thorpe, KB6CMO; Huntington Beach RACES Events Officer Steve Albert, KE6OCE, Irvine RACES (IDEC); Laguna Beach Emergency Communications Team (LBECT) Radio Officer John Kountz, KE6GFF, Assistant Radio Officer Lynn Taylor, WB6UUT, and Mike Donoff, KG6GRC; Laguna Niguel ACS member Frank Columbus, WA2KWR; Los Alamitos RACES Assistant Radio Officer Tom Rothwell, K6ZT; Orange RACES (COAR) members Leon Boone, KK6AB, Steve Carmichael, KI6DDE, Mike Friese, KF6WRM, and Chief Radio Officer Rich Helmick, KE6WWK; Placentia RACES President John McCauley, KD6PGC; San Juan Capistrano RACES Radio Officer Joe Lopez, W6BGR; and Westminster RACES member Dick Ingwerson, N6PFY; and HDSCS members Paul Broden, K6MHD, Al Way, KC6LNP, and Larry Zysman, N6BNM.

No Spaces in Amateur Radio License Plates

Several radio amateurs have been receiving California amateur radio license plates with a space added to the call sign, typically after the “6.” After many complaints, the Department of Motor Vehicles has corrected the problem. On the DMV Web site at http://www.dmv.ca.gov/vr/ham_plate.htm, is a link to an application for those who would like to replace the “spaced” plates with plates without the spaces. DMV says to complete the application and a “Statement of Facts” (accessed by another link) indicating that the old plates will be retained until the new plates arrive, at which time the old plates must be destroyed. Both documents must be mailed to the address at the bottom of the application form. No fees are required. Anyone having questions or concerns regarding amateur radio license plates may call Customer Communications at (916) 657-6560.

OCRACES to Assist Vision Quest on March 1st

OCRACES members will assist Tri-Cities RACES in the Vision Quest Mountain Bike Pow Wow on Saturday, March 1, 2008. Leading the OCRACES effort is Radio Officer Scott Byington, KC6MMF. The OCRACES emergency communications response vehicle will be deployed at 4:30 AM. Tom Tracey, KC6FIC, will assist early in the morning, and Chuck Dolan, KGUJC, will begin his activities by 11:00 AM. At least two more OCRACES members are needed.

Operations will be on the 449.1890 MHz repeater. Portable repeaters on this frequency will also be utilized. Radio Officer Ralph Sbragia will supply APRS tracker boxes.

This is an opportunity for members to work with the OCRACES van, and to familiarize themselves with other groups such as Tri-Cities RACES and others who are involved in Vision Quest. HF capabilities, including NVIS propagation, will be tested from the van if time permits.

The Vision Quest bicycle race covers 57 miles through the Orange County portion of the Cleveland National Forest, with an 11,000-foot elevation gain. The event begins at 5:30 AM, from Black Star Canyon Road, and will conclude at O'Neill Regional Park.

The race communications director is San Juan Capistrano RACES Radio Officer Joe Lopez, W6BGR. (SJC RACES is part of Tri-Cities RACES.)

Next RACES/MOU Breakfast: March 8th

The next County/City RACES/ACS and MOU breakfast is Saturday, March 8, 2008, at 8:00 AM, at the Katella Grill, 1325 West Katella Avenue, in Orange. We met there for the first time the previous month, and the food and service were outstanding, with very reasonable prices. The restaurant is on the northeast corner of Katella and Main Street, east of the OCS D Training Facility and the Honda Center. This is not an official RACES meeting. All radio amateurs interested in emergency communications are invited to attend, with their families and friends.

Congratulations to Joyce Gothard, KI6OIC

Congratulations to Joyce Gothard, wife of OCRACES applicant John Gothard, K6JFG, and mother of OCRACES applicant Scott Gothard, W6SRG, who recently passed her Technician exam. Her new call sign is KI6OIZ. Joyce has attended several OCRACES meetings with John and Scott, and we hope she submits her application soon!

2008 Disaster Volunteer Summit: March 14th

California Volunteers, Governor's Office of Emergency Services, and California Office of Homeland Security are hosting seven summits across California. These summits are open to local, state, and tribal government agencies involved in emergency management, volunteer service providers, voluntary agencies, volunteer programs, and non-government organizations active in volunteer management. In partnership with the Orange County Sheriff's Department, one of the summits will be held on Friday, March 14, 2008, from 9:00 AM to 3:00 PM, at the Heritage Park Community Center, 14301 Yale Avenue, in Irvine. To register, go to the following Web site: <http://californiavolunteers.org>.

Watching The Web

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

CQoogle—The Ham Radio Search Engine
<http://www.cqoogle.com>



Thanks to Arlene Schwartz, KE6GFI, Laguna Beach Emergency Communications Team (LBECT), for calling our attention to CQoogle.com, a new Web site announced by Justin Johnson, G0KSC, on QRZ.COM. This site is a ham-only search engine designed so that whatever is entered into the search box will be filtered and only ham-radio results will be seen. Johnson says the challenge is to test it against Google. The site creators, who are also responsible for the launch of HamBid.com, say the tuning has taken some time but the results were worth it. The key benefit is that any radio amateur looking for a particular subject will not have to sift through lots of “false positives” as would be found on other search engines.

Searches may be conducted in the following categories: Web; Images; Audio; Video; News; Open Directory; Wikipedia; Blogs; Forums; and QRZ.COM.

Baker to Vegas: April 19-20, 2008

OCRACES will once again participate in the Baker to Las Vegas Challenge Cup Relay, on Saturday and Sunday, April 19-20, 2008. Leading our effort is Radio Officer Ralph Sbragia, W6CSP. We will once again support running teams from OCSD and other agencies with APRS tracker boxes, to be installed in follow vehicles at the Baker High School and possibly in Las Vegas. Alcoholic Beverage Control, Santa Ana District Office, may also need our assistance. Ralph will supply additional details about our participation at the April 7th OCRACES meeting, and also in the April issue of *NetControl*.

Field Day: June 28-29, 2008

Field Day will once again occur on the last full weekend in June, Saturday and Sunday, June 28-29, 2008. Leading our effort is Radio Officer Ralph Sbragia, W6CSP. The event will occur once again at Craig Regional Park in Fullerton, near the border with Brea. All members are requested to participate. This will be a great training exercise in setting up emergency communications in the field and becoming more familiar with our emergency communications response vehicle. Members and their families will also bring a variety of delicious food for “dinner in the park,” which adds to the enjoyment of the event. City RACES members are welcome to participate with us. Additional information will be provided in the June issue of *NetControl*.

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

Laguna Beach

The Laguna Beach Emergency Communications Team (LBECT) will hold another FCC/ARRL Volunteer Examiner Test Session on March 30, 2008, at 2:00 PM, at the Laguna Beach Resource and Relief Center.

Seal Beach

Seal Beach Police Department's Division of Emergency Services will hold a CERT class for members of the Seal Beach Volunteers in Police Service (VIPS) and RACES. Classes will be held on April 12, 19, and 26, 2008. Each day the class starts at 0800 and ends at 1700. The agenda includes disaster preparedness, fire safety, disaster medical, light search and rescue, disaster psychology, terrorism awareness, and a full-function drill.

Hospital Disaster Support Communications System (HDSCS)

At 9:35 AM on February 1, 2008, April Moell, WA6OPS, received a cell phone call from the Disaster/Safety Coordinator for Saddleback Memorial hospitals at Laguna and San Clemente. A telephone switch failure had occurred at the San Clemente facility, rendering half of the outgoing circuits inoperable and the other half subject to overload. April activated Core Team responders John and Corky Walker, AC7GK and KG6YWY, who arrived at the hospital in less than 25 minutes. John set up and operated his portable station at the hospital Command Center, while Corky became a radio "shadow" for the House Supervisor. Meanwhile, Dave West, KI6EPI, was activated to the Laguna facility to set up a backup link. April served as outside base station to make phone calls as needed. Circuits were repaired by 11:10 AM, after which the HDSCS members remained on site for a half hour to make sure that the communi-

cations systems were stable.

HDSCS has moved their Web site to <http://www.hdscs.org>, on a new server, to eliminate AOL's banner advertising that was a problem on the old server..

Huntington Beach

Brevyn Mettler, Huntington Beach Fire Department, reports that on March 3, 2008, the city hosted the annual Surf City Marathon. Although it was a rainy and windy day, approximately 15,000 runners still attended the race. HBFD deployed the city's mobile command post, an engine company, and an ambulance to support the racers if there were any medical emergencies. In addition to the deployment of tactical resources, HBFD activated its RACES members and positioned them at various points around the course and at four first-aid stations. Assisting RACES were several CERT communicators. Even with the poor weather, these volunteers maintained a constant communications network and reported several injuries to paramedics. Although only one individual was transported to the hospital, there were many cases of cold weather and other running-related injuries. Participating were Steven Albert, KE6OCE, Shelley Lothringer, KC6ZOW, Roy Lothringer, N6SLD, Peter Shores, AD6TN, Peter Barbour, N6RAS, Jim Hansen, KG6ZDP, John Caughlan, KA6OKD, Jim Barry, KE6ZZL, Jeff Turlis, KE6BNS, Chris Maddy, KF6TIU, Chris Owens, KB6MYR, William Witt, K6WGW, Darrell Sullivan, N6YDX, Vaughn Densley, KE6V, Jeff Campbell, KG6DCV, Tim Sawyer, WD6AWP, Marilyn Sawyer, Gary Stuart II, KC6ZUN, Walter Glowski, N6UCR, Manny Vizinho, KG6IQL, Joe Tom, KB6JOE, Robert McElhiney, K6RSM, Barbara Beck, KG6OIZ, Michael Binder, KI6FME, Pat Cohen, KF6VVE, Mike Cohen, KE6TVN, Kenneth Mailman, KF6YAY, Richard Powell, KI6LYR, Kevin Emery, KI6IJZ, and Ned Bailey, KC6COU.

March 2008

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

Upcoming Events:

- **Mar 1:** Vision Quest Mountain Bike Pow Wow
- **Mar 3:** OCRACES Meeting, 1930, 840 N. Eckhoff St., Orange; Portable ATV System by Martin La Rocque, N6NTH
- **Mar 8:** ACS/RACES/MOU Breakfast, 0800, Katella Grill, Orange
- **Mar 14:** 2008 Disaster Volunteer Summit, Irvine
- **Apr 19-20:** Baker to Las Vegas Challenge Cup Relay
- **Jun 28-29:** Field Day, Craig Park, Fullerton



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:

- 6m: 52.62 MHz output, 52.12 MHz input, 103.5 PL
- 2m: 146.895 MHz output, 146.295 MHz input, 136.5 PL *
- 23cm: 1282.025 MHz output, 1270.025 MHz input, 88.5 PL
- 1.25m: 223.76 MHz output, 222.16 MHz input, 110.9 PL
- 70 cm: 449.180 MHz output, 444.180 MHz input, 107.2 PL

* Primary Net - Mondays, 1900 Hours

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**“W6KRW ...
Serving
Orange County”**

Meet your County of Orange RACES Members!



Ken Bourne
W6HK



Scott Byington
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Harvey Packard
KM6BV



Ralph Sbragia
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Walter Ruy
KC6HAM



Martin La Rocque
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