July 2015



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The Next OCRACES Meeting Is

July 6, 2015 1930 Hours

840 N. Eckhoff Street, Suite 104, Orange

David Corsiglia, WA6TWF Repeater Evolution Remote Base Stations Analog vs Digital Grounding & Antennas



Orange County Sheriff's Department Communications & Technology Division



Newsletter of the County of Orange Radio Amateur Civil Emergency Service

Captain's Corner by RACES Captain Ken Bourne, W6HK, Chief Radio Officer

Communications Unit and EOC

In this article I will cover the material provided in Unit 1 of a 20-hour Auxiliary Communications (AUXCOMM) training course that I attended in San Marcos. The course was given by the U.S. Department of Homeland Security, Office of Emergency Communications.

The Communications Coordinator (COMC):

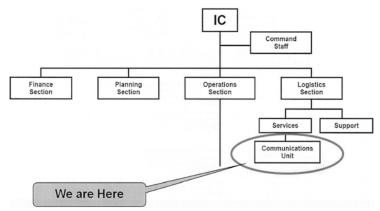
- COMC coordinates communications across multiple incidents when there are multiple requests for communications resources
- COMLs (Communications Unit Leaders) work with the COMC to coordinate communications/ notifications
- Locally, dispatch supervisors can act as the COMC
- Different at the field, local, regional, state, and federal levels

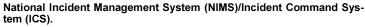
The Communications Unit Leader (COML) plans and manages the technical and operational aspects of the communications function during an incident. Duties include:

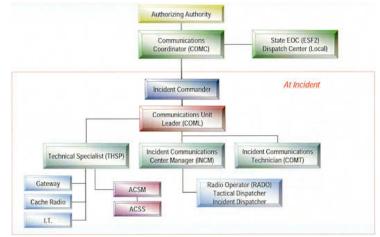
Prepares Incident

Radio Communications Plan (ICS Form 205)

- Establishes Incident Communications Center (ICC)
- Orders and manages personnel, equipment
- Establishes needed capabilities
- Participates in incident action plan-







Communications Unit personnel.

Captain's Corner Continued from page 1

ning

As with any ICS position, the COML is responsible for the duties of organizationally subordinate positions (COMT, INCM, RADO, and THSP) until delegated.

The Incident Communications Technician (COMT) assists the COML with the design, ordering, installation, operation, and ongoing maintenance of incident communications systems. The COMT also supports:

- Other incident functions to assist in accomplishing the overall goals and objectives
- Maintenance and accountability of assigned communications equipment

Incident Communications Center Manager (INCM) duties include:

- Assist the COML
- Establish and maintain the Incident Communications Center (ICC)
- Manage the operational aspects of the ICC
- Supervise Radio Operators (RADOs)/Runners

The Radio Operator (RADO) staffs a radio position at the ICC and is responsible for documenting all radio and telephone messages. The RADO may also staff a data position responsible for operating data communications equipment.

Some local agencies have trained public-safety dispatchers as Incident or Tactical Dispatchers who can bring additional training and experience to an ICC.

- "Incident Dispatcher" is generally an Emergency Medical Service (EMS)/Fire term
- "Tactical Dispatcher" is generally a lawenforcement term

THSP (Technical Specialists) is a "catch-all" position that allows for the formal incorporation of personnel who may not be "qualified" in a specific NIMS/ICS position, such as:

- Audio Gateway Specialist
- Auxiliary Communications Manager (ACM)
- Auxiliary Communicator
- Cache Radio Specialist
- Geographical Information System (GIS) Specialist
- Local Agency Radio Technicians (not qualified as a COMT)
- Mobile Communications Unit (MCU) Specialist
- Telephone/Computer Technicians

The Auxiliary Communications Manager (ACM):

- Manages the operation and technical aspects of the Auxiliary Communications Unit (ACU)
- Establishes and maintains the AUXCOMM network
- Establishes and/or staffs the Auxiliary Communications Center (ACC)

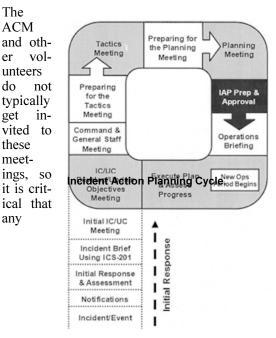
- Supervises AUXCOMM personnel
 - Auxiliary communicators serving as:
 - Radio operators
 - Technicians
 - Other support personnel
- Serves as a single point of contact and conduit for information flow between AUXCOMM personnel and the COML or other designated incident supervisor

The Auxiliary Communicator:

- Supports the operational and technical aspects of the Auxiliary Communications Unit
- Maintains and/or operates the AUXCOMM network
- Staffs the Auxiliary Communications Center
- The knowledge to perform this function applies to every AUXCOMM position
- Performs AUXCOMM duties:
 - Radio Operator
 - Technician
 - Other Technical Specialist (THSP) duties as required and/or assigned depending on their training, experience, and qualifications
- Operates on voice, digital, satellite, VoIP, RoIP, and numerous other modes if equipment is available

Planning Cycle:

- Command and General Staff Meeting
- Tactics/Planning Meeting
- Operations Briefing
- Assertive participation by the COML



Continued on page 3

Captain's Corner Continued from page 2

AUXCOMM requirements be carried to/from these meetings by the COML

Declared Emergency Coordination:

- JFO: Joint Field Offices
- ESF2: Emergency Support Function (Communications)
- EOC: Emergency Operations Center
- MERS: Mobile Emergency Response Systems

Other "Potential" Jurisdiction Communications Assets:

- CERT (Community Emergency Response Team
- CST: National Guard Civil Support Teams
- IMT: Regional, state, and National Incident Management Teams (Type 3, 2, or 1 IMTs)
- FEMA USAR/SUSAR: Federal Emergency Management Agency Urban Search and Rescue Teams/ State Urban Search and Rescue Teams
- IST: Incident Support Team
- FCC FedTech
- Other communications response groups

Emergency Operations Center (EOC):

- What is an EOC
- How is it different from ICS?
- How do they interface?

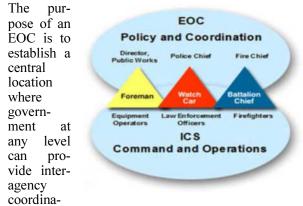
The EOC does not command or control the on-scene response. The EOC carries out the coordination and support function through:

- Information collection and evaluation
- Priority setting
- Resource management
- Decision
 - making at the EOC affects the incident response as well as the public response. The decisions



made at the EOC are not tactical decisions

- Tactical decisions are made by the Incident Commander and the Command & General Staff at the incident scene
- EOCs coordinate with on-scene incident managers and other agencies and organizations to:
 - Acquire, allocate, and track resources
 - Manage and share information
 - Establish response priorities among incidents
 - Provide legal and financial support
 - Liaison with other jurisdictions and other levels of government
- An EOC may be organized according to the ICS model, commonly organized based on Emergency Support Functions (ESFs)
- Modified as needed based on nature of emergency or local considerations
- AUXCOMM can play a significant part in supporting the communications link between the EOC and the incident



tion and execute decision making to support incident response

- The EOC operates in the strategic realm, not tactical
- Communications is the key to effective operations and interface

Next month we will discuss AUXCOMM roles and responsibilities.

Next OCRACES Meeting: July 6th

The next OCRACES Meeting is on Monday, July 6, 2015, at 7:30 PM, at 840 N. Eckhoff Street, Suite 104, in Orange. Our featured speaker, David Corsiglia, WA6TWF, will talk about putting up the original Catalina repeater, and a little bit of history about the evolution of repeaters in Southern California. He will also discuss the first remote base stations. Then he will discuss modern remote base stations. David will also cover a little bit on analog versus digital voice communications. Then he will discuss grounding and antennas.

WA6TWF Hides in Fullerton on UHF

OCSD Communications & Technology Division Senior Communications Technician David Corsiglia, WA6TWF, was the fox on the cooperative T-hunt held on Monday, June 8, 2015. This was our first hunt on UHF. David transmitted on the input of the 449.100 MHz repeater, while hunters compared bearings on the OCRACES 146.895 MHz repeater. David hid at the east end of the lower parking lot of the Fullerton Sports Complex, south of Bastanchury Road and east of Harbor Boulevard. Hiding with David was Delia Kraft, KR6AFT, who recently was promoted to the Division's Program Support Manager.



At the fox's den are (left to right) Joe Moell, KØOV, Bob McFadden, KK6CUS, Ron Allerdice, WA6CYY, David Corsiglia, WA6TWF (the fox), Tom Riley, K6TPR, Dennis Brunning, KC6NVX, Matt Curtis, KC6NVN, and Ken Bourne, W6HK.

The first team to find the fox was OCRACES Chief Radio Officer Ken Bourne, W6HK, and OCRACES Member Tom Riley, K6TPR. Just before the hunt, Ken ran the 2-meter ACS net from the upper parking lot of the Fullerton Sports Complex. By shear luck, Ken and Tom started hunting very close to the fox's den, and found the fox in about 5 minutes after the hunt began! Ken had just procured a nifty little 5-element 440-MHz Arrow Antenna yagi from HRO, but didn't even get a chance to try it out because his trusty Arrow Antenna FHL-VHF loop, which covers from 1 MHz up to 600 MHz, performed perfectly. Tom manned the loop and got excellent bearings. This was Tom's first hunting experience, although he was previously a fox.

The fox box was sitting on a picnic table just to the east of the lower parking lot, and was easy to spot. After Ken and Tom found it quickly, David decided to make things more difficult and moved the fox box and vagi antenna behind a nearby bush, next to a chain-link fence, and laid the antenna on the ground. Nevertheless, two more hunters, Ron Allerdice, WA6CYY, and OCRACES Assistant Radio Officer Bob McFadden, KK6CUS, who started much farther away, came in quickly and walked back to where the fox box was relocated. Next was HDSCS Assistant Coordinator Joe Moell, KØOV, who parked at the other end of the lower parking lot and used his on-foot direction finding equipment successfully. Next was the team of OCRACES Applicant Dennis Brunning, KC6NVX, and Matt Curtis, KC6NVN, who did very well on the first UHF cooperative T-hunt. The fox then called a few times on the 2-meter repeater for any other hunters, and got no reply. We also checked for any remaining hunters beaconing via APRS, and saw none. After several calls for remaining hunters, the fox box was turned off. Unfortunately, we learned later that Richard Saunders, K6RBS, from Mission Viejo, was still hunting. He was dismayed that the fox box had been turned off and that the received signal strength had changed noticeably. Accordingly, we will make a rule on future hunts that the fox box and antenna will not be moved after the hunt starts. The fox box will remain on until at least 8:30 PM, even if there is no indication of remaining hunters, or until 9:30 PM at the latest if the fox knows there are remaining hunters. It's also a good idea for all hunters to check in with the fox or with other hunters, either on the hunting repeater or on the signal-comparing repeater, before the fox box is turned on.

David hid in an excellent location and influenced the hunters to try UHF hunting for the first time. This gave us valuable practice for locating interference on UHF amateur and public-safety frequencies. Thanks David!

The next cooperative T-hunt will be held on Monday, July 13, 2015, immediately following the OCRACES 2-meter net (approximately 7:20 PM). Delia Kraft, KR6AFT, will be the fox. She will transmit on the input (146.295 MHz) of the 146.895 MHz repeater. Hunters will compare bearings via the 449.100 MHz repeater, and are encouraged to beacon their positions via APRS throughout the hunt. Delia will hide in a beach city north of the Laguna Beach/Newport Beach border. Her location will be on paved, publicly accessible property. No fees will be required to drive directly to the fox. The hunts are not official RACES events, so DSW (Disaster Service Worker) coverage does not apply. Please drive carefully!

OCRACES Field Day...a Resounding Success!

The weekend of June 27-28, 2015, at Craig Regional Park in Fullerton, was the best Field Day that OCRACES has ever had, thanks to the efforts of leaders Kenan Reilly, KR6J, Bob McFadden, KK6CUS, Jack Barth, AB6VC, and a total of 14 enthusiastic OCRACES members plus a hard-working applicant, as well as a feast arranged by OCSD Communications & Technology Division Program Support Manager Delia Kraft, KR6AFT, with Engineer Brad Russo, KB6GPM, as the master chef of delicious filet mignon and lobster. All operating stations were connected together by a wireless system configured by Bob. A triband beam with a 40 -meter add-on element at the van (installation directed by Kenan), plus Bob's G5RV, and Ken Bourne's 6-meter loop on a 50-foot mast provided by Applicant Dennis Brunning, KC6NVX, resulted in an impressive point total.

OCRACES members at Field Day included Jack Barth, AB6VC (and his wife Carolyn), Randy Benicky, N6PRL (and his wife Lee Anne, KI6VUH), Bill Borg, KG6PEX, Ken Bourne,

W6HK (and his wife Carol, N6YL), Walter Kroy, KC6HAM, Martin La Rocque, N6NTH, Bob McFadden, KK6CUS, Fran Needham, KJ6UJS (and his wife Sharon,



Brad Russo, KB6GPM, prepares filet mignon for the Field Day feast, which also included lobster!

daughter Mona, and grandson David), Harvey Packard, KM6BV, Kenan Reilly, KR6J, Tom Riley, K6TPR (who drove the van), Tom Tracey, KC6FIC, Ken Tucker, WF6F, and Tom Wright, KJ6SPE. Former OCRACES Members Sue Mickelson, KJ6LCJ, and John Roberts, W6JOR, also showed up. Applicant Dennis Brunning, KC6NVX, and son Garrett, had great fun with antenna installations and operating. Applicant Roger Berchtold, WB6HMW, showed up Saturday night.

Bob McFadden gave a tour to two high-level OCSD personnel—Assistant Sheriff Don Barnes and Senior Director Brian Wayt. Other full-time

OCSD personnel, from Eckhoff, Loma Ridge, and headquarters, at OCRACES Field Day included Heide Aguirre, KB6YHJ, Brenda Bartee, KG6NPC (and granddaughter Alexan-

dra), Raymond Cheung, K6RKC, Nick Condaras, KD3QY (who scheduled his engineers and technicians to work on the OC-RACES van and support Field Day), David Corsiglia, WA6TWF (and his wife Sharon, N6YNK, and who set up a low-power HF station with an Elecraft KX3), Bryan Hovde, KD7CRA, Peter Jimenez, KI6UTE (who drove the OCSD Communications Field Support trailer to the site and worked hard with antenna installations), Lee Kaser, Delia Kraft, KR6AFT (with husband Brian, brother Diego Delgado, and nephew Max, and who arranged for the food and many other details, and brought her impressive trailer), Denis Marin, K6OLU, Kenan Reilly, KR6J (a hard-working event leader and the contest high-scorer), Brad

Russo, KB6GPM (and son-in-law, and master chef at the event and van problem-solver), Division Director Robert Stoffel, KD6DAQ, Russ Turnquist, and Kirk Wilkerson.

Placentia RACES Radio Officer Mark Garrett, KG6CAV, brought three recruits—Kathy Gary, KK6RZC, Theresia Olson, KK6ZOO, and Floyd Walls, W6EIF, who enjoyed operating the stations on Sunday. James Brackett, KE6FVN, and his brother David, KE6OPK, from Los Angeles County DCS, also visited the OCRACES Field Day site.



Jack Barth, AB6VC (left), and Dennis Brunning, KC6NVX, operate Elecraft K3 on HF from OCSD Communications Field Support trailer.



Kenan Reilly, KR6J, racks up CW points on HF from OC-RACES van, using triband beam with 40-meter add-on.



Gathered after hoisting the tri-band beam (with 40-meter add-on) onto the Will-Burt mast at the OCRACES van are (left to right) Dennis Brunning, KC6NVX, Walter Kroy, KC6HAM, Ken Bourne, W6HK, Harvey Packard, KM6BV, OCSD Communications Division Director Robert Stoffel, KD6DAQ, Jack Barth, AB6VC, and Kenan Reilly, KR6J.



Bob McFadden, KK6CUS, points out antenna configuration to Assistant Sheriff Don Barnes (center) and Senior Director Brian Wayt.

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

Costa Mesa RACES (MESAC)

Mesa Emergency Services Amateur Communications (MESAC) will have a booth at Concerts in the Park on Tuesdays in July at Fairview Park. Shows start at 6:00 PM, and preshows at 5:00 PM, including community booths, kids activities, gourmet food trucks, beer & wine garden, and opportunity drawing. Main parking is at Goathill Junction train lot.

Fountain Valley RACES

Upcoming activities for Fountain Valley RACES include National Night Out on Tuesday, August 4, 2015, and Annual Campout in the Park on Saturday and Sunday, August 8-9, 2015.

Placentia RACES

Placentia RACES Radio Officer Mark Garrett, KG6CAV, advised that Placentia RACES now has a Web page at http:// www.placentia.org/races.

Irvine RACES (IDEC)

Irvine Disaster Emergency Communications (IDEC) will hold "VickiBrek," a nohost breakfast meeting on Saturday, July 11, 2015, at 8:00 AM, at Knowlwood, Sand Canyon Avenue at Burt Road. Visitors are welcome.

Tri-Cities RACES

The 2015 City of Dana Point Emergency Expo will be held on Saturday, August 22, 2015, from 10:00 AM until 2:00 PM at the Dana Hills High School, 33301 Golden Lantern, in Dana Point. Featured will be the Orange County Fire Authority, Orange County Sheriff's Department, SWAT, Bomb Squad, Coast Guard, and helicopters.

County of Orange

Congratulations to Delia Kraft, KR6AFT, who was promoted on May 29, 2015, to Program Support Manager, Orange County Sheriff's Department, Communications & Technology Division. As the former Emergency Communications Manager, her responsibilities included coordinating the Orange County RACES program. Delia began her career with Orange County in 1989 as a Communications Coordinator II for Control One. In 2002, she was promoted to Supervising Communications Coordinator,



Delia Kraft, KR6AFT.

a job that led to many opportunities including assignments as the 9-1-1 County Coordinator, and working with POST (Police Officer Standards and Training), the CLETS (California Law Enforcement Telecommunications System) Users Group, and Golden West College.

Congratulations to Bryan Hovde, KD7CRA, who recently passed the General Class amateur radio exam. Bryan is the Senior Emergency Management Program Coordinator, Orange County Sheriff's Department, Emergency Management Division.

OCRACES will exhibit its emergency communications response vehicle at 2015 HAM JAM at Ham Radio Outlet, 933 N. Euclid Street in Anaheim, from 10:00 AM until 5:30 PM, on Saturday, July 11, 2015.

40-Meter ACS Net

The 40-meter ACS net for members of County and City RACES and MOU units in Orange County and elsewhere continues to thrive on 7250 kHz almost ever Saturday at 10:00 AM. Jim Carter, WB6HAG, was net control on June 20, 2015, and had 18 checkins. The net was canceled for Field Day and the 4th of July, and might not be held on July 11th due to OCRACES exhibiting its van at HRO HAM JAM. Cypress RACES Chief Technology Officer Ed Kane, W6ONT, reported that his friend Steve Brtis, WA6FGW, from Woodland Hills and Los Angeles County DCS, heard him and checked into the net. After the net, Ed suggested to Steve that the net might be a means for coordination between LACDCS and OCRACES.

July 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4 Independ- ence Day
5	6 OCRACES Meeting & Weekly 2 m ACS Net	7	8	9	10	11 HRO Ham Jam
12	13 Weekly 2 m ACS Net & Cooperative T-Hunt	14	15	16	17	18 Weekly 40 m ACS Net
19	20 Weekly 2 m ACS Net	21	22	23	24	25 Weekly 40 m ACS Net
26	27 All-Band ACS Nets & SWACS Radio Test	28	29	30	31	

Upcoming Events:

- July 1: OCRACES Meeting, 840 N. Eckhoff Street, Suite 104, Orange, 1930
- July 13: Cooperative T-Hunt, 1920; fox will transmit on input of the 146.895 MHz repeater, and hunters will compare bearings via the 449.100 MHz repeater
- July 11: Ham Jam, HRO Anaheim, 1000-1730
- July 27: Southwest ACS Frequency/ Radio test, 2015
- September 11-13: ARRL Southwestern Division Convention (HAMCON), Torrance Marriott South Bay Hotel, 3635 Fashion Way, Torrance
- September 21: City/County RACES & MOU Meeting, 840 N. Eckhoff Street, Suite 104, Orange, 1915
- November 17: Mutual Agency Regional Radio Interoperability Training Exercise (MARRITE)

County of Orange RACES Frequencies

40 m: 7250 kHz SSB (City/County/MOU Net—Saturdays, 1000 hours) 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: 449.100 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

RACES Program Manager Delia Kraft, KR6AFT 714-704-7979

Radio Officers (Lieutenants) Scott Byington, KC6MMF Harvey Packard, KM6BV <u>Chief Radio Officer (Captain)</u> Ken Bourne, W6HK 714-997-0073

Assistant Radio Officers (Sergeants) Jack Barth, AB6VC Ernest Fierheller, KG6LXT Bob McFadden, KK6CUS Tom Tracey, KC6FIC

County of Orange RACES

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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

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"W6ACS ... Serving **Orange County**"

Meet Your County of Orange RACES Members!





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Ken Bourne W6HK



KC6MMF



Jack Barth AB6VC



Ernest Fierheller Bob McFadden KG6LXT



Tom Tracey KC6FIC



John Bedford **KF6PRN**



Bill Borg KG6PEX

Jim Dorris









Tom Riley K6TPR



WF6F

Martin La Rocque

N6NTH



Brian Turner

KI6WZS

Fran Needham

KJ6UJS



Kenan Reilly

KR6J

KJ6SPE



Jeff Yost



KE7EWG







Walter Kroy

KC6HAM

Joe Selikov

KB6EID



KC6RFC