

January 2009



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*

### DTV—A RACES Opportunity

On February 17, 2009, all full-power broadcast television stations in the United States will discontinue analog broadcasts and switch entirely to digital. Digital broadcasts will offer improved picture and sound quality and additional channels. However, we can expect a number of challenges after the change, which should be considered by RACES members.

After the changeover, communities will lose emergency bulletins from TV broadcasters during a power outage, because DTV sets need AC power. When AC power fails, so do cable-TV and satellite-TV boxes. Battery-powered portable TV sets, which are analog, will be unusable. Very few battery-powered DTV sets exist, and they are of poor quality. USB DTV tuners are available to run on laptops, but you must remember to keep your laptop batteries charged. If you are equipped for portable amateur TV, which is mostly analog (except for a group in Ohio who is experimenting with D-ATV), consider purchasing a DTV converter that runs on 12 volts (such as the Artec T3A-PRO), to run with your

portable battery-powered ATV system for receiving emergency broadcasts.

Unfortunately, the Artec T3A-PRO is not as sensitive as some other DTV converters, which could result in not being able to receive some stations. The DTVPal by Dish Network might be a better choice, if 12-volt operation is not an issue. Not only is it more sensitive than the Artec converter, but it also has analog pass through, on-screen signal strength, and more pleasing graphics. If you use a VCR to monitor an ATV repeater, for example, with analog pass through you can switch between broadcast TV and ATV without disconnecting cables or adding switches.

Besides the Artec and DTVPal converters, what other units are available? Walmart offers the RCA Model DTA800 for \$49.87 (\$9.87 with coupon). Radio Shack offers the Zenith DTT900. Also available is the Channel Master CM-7000, which has S-video, RF, and composite outputs. The DTT900 only has RF and composite video outputs. The newer Zenith DTT901 (made by LG Electronics) adds analog pass through and improved sensitivity for fringe reception. Sensi-

**The Next  
OCRACES  
Meeting is**

**January 5, 2008**  
**1930 Hours**  
**840 N. Eckhoff St.,  
Suite 104, Orange**

**2009 Goals and Plan-  
ning for Events**



Orange County Sheriff's Department  
Communications Division

**DIGITAL TV TRANSITION DEADLINE: FEBRUARY 17, 2009**

**Is Your TV Ready For Digital?**

**DTV.gov • 1-888-CALL-FCC**

Visit [DTV.gov](http://DTV.gov) **THE DIGITAL TV TRANSITION**  
What You Need To Know About DTV

## Captain's Corner *Continued from page 1*



**Channel Master CM-7000 DTV converter has RF in and out connectors, composite video, and RCA jacks for stereo audio, and also an S-video connector for improved video quality on an analog TV set**

tivity can be improved even further by adding a mast-mounted preamp such as the Winegard AP 8780 Chromstar 2000, which provides 28 dB gain on UHF and 17 dB on VHF.

The TV Converter Box Coupon Program, established by Congress, allows U.S. households wishing to keep using their analog TV sets (on an antenna, not on cable, satellite, or other pay service that does not require a converter box) to obtain up to two coupons, each worth \$40, that can be applied toward the cost of eligible converter boxes. You may apply for these coupons until March 31, 2009, at <https://www.dtv2009.gov>. These coupons expire in 90 days after mailing.



**Winegard AP 8780 Chromstar 2000 UHF/VHF preamp**

The FCC recently asked ARRL members to provide technical educational assistance to their communities regarding the February 17th DTV conversion. Members of RACES units can participate in this program. ARRL Media and Public Relations Manager Allen Pitts, WIAGP, emphasized that hams should not make "house calls," sell any equipment, or do actual installations for their neighbors. The FCC's request was simply to distribute technical information and FCC materials, which are available at <http://www.dtv.gov/outreach.html>.

In early January, Pitts said that the FCC will ask

ARRL Section Managers for the names and contact information of the volunteering groups. The FCC staff will then make contact with the groups, learn their plans, and provide them with the media, brochures, or other materials they may need.

George Dillon, FCC Deputy Bureau Chief for Field Operations, said that local amateur radio organizations might consider offering technical advice via telephone to consumers who may encounter difficulty with the installation and setting up of their converter box.

As Pitts mentioned, hams should never enter someone else's home or install equipment, and should not broker or sell conversion boxes. The same goes for installing high-pass filters to eliminate TVI. If a TV fails after such installation, even though not caused by that installation, you could get blamed for the failure, and be subjected to expensive repair bills.

Speaking of TVI, if you operate on 10 meters or 6 meters, you might have had Channel 2 TVI problems with your neighbors, due to poor selectivity characteristics and susceptibility to overload in many TV sets. Since the Channel 2 spectrum will no longer be used for broadcast TV after February 17th, your TVI problems may disappear. Therefore, if you have not experienced the exciting (to some people) propagation conditions on 6 meters (often called the "magic band" because of the unusual conditions), you might now consider operating on that band. OCRACES has a 6-meter FM repeater, which has been used mostly for City EOC to County EOC communications, but otherwise is available for normal amateur communications.



**Zenith DTT901 DTV converter has RF and composite video outputs plus analog pass through**

## Next OCRACES Meeting: January 5th

The next County of Orange RACES meeting is on Monday, January 5, 2009, at 7:30 PM, at 840 N. Eckhoff Street, Suite 104, in Orange. We will review our goals for 2009 and plan for upcoming events such as the Baker to Las Vegas Challenge Cup Relay (March 14-15) and Field Day (June 27). We will also discuss areas where we need to enhance our training and knowledge, and where we need to improve our resources, such as our EOC RACES Room, emergency communications response vehicle, and personal equipment.

## City/County RACES & MOU Meeting: Jan. 26th

The next City/County RACES/ACS & MOU meeting is on Monday, January 26, 2009, at 7:00 PM, at 840 N. Eckhoff Street, Suite 104, in Orange. We will discuss how to improve communications between cities and the county and with the MOU organizations, including implementation of Winlink and other technologies. Each city RACES/ACS unit and MOU organization is invited to give a report of recent activities and goals.

## Much Work to Do on B2V and Field Day

We still need to complete forming our committees for the Baker to Vegas Challenge Cup Relay (March 14-15, 2009) and Field Day (June 27-28, 2009). Baker to Vegas is a month earlier this year, and we are running out of time. Lt. Ralph Sbragia, W6CSP, has led our efforts in these events over the past few years, and has done an outstanding job, but we need to support his efforts to a much greater extent. Lt. Scott Byington, KC6MMF, has arranged for rooms in Pahrump during B2V, but we need OCRACES members to help with setting up the equipment and operations in Pahrump, as well as with installations at Baker and before the event at Eckhoff. We need an active liaison with the race committee. Randy Benicky, N6PRL, will be the liaison with the teams that we serve.

For Field Day, we need band captains (who will supply radios, antennas, computers, and operators for each band), van driver, responsible person for site registration, food committee, publicity person, etc. Fortunately, we now have a nice three-element tri-band beam for Field Day, recently donated to OCRACES by Sgt. Jim Carter, WB6HAG.

## OCSD/Communications 75th Anniversary

OCSD Communications Division, formerly a division of the County of Orange General Services Agency, will celebrate its 75th anniversary on Monday, March 2, 2009. In addition to its emergency communications response vehicle, OCRACES will set up a special-event amateur radio station that day as part of the celebration. We will use the W6OCC/75 call sign. OCSD/Communications Engineering Technician II Gina Pressler designed a beautiful QSL card to be sent to those who contact our station. OCSD/Communications Assistant Director Ray Grimes, N8RG, who manages the Engineering Section, is working on an anniversary display of radio equipment from the early days of the Division. He asks us to be on the lookout for old amateur radio equipment such as Gonset Communicators, Viking II transmitters, Hammarlund receivers, etc., especially with Civil Defense decals, that could be used in the display. Please contact Ray if you have any old equipment for the display. We are also looking for old OCRACES newsletters, photographs, and other material, plus assistance with mounting old photos on poster boards for display. Although March 2nd is a work day, we hope many OCRACES members will be available to participate in this celebration.

# OCRACES Celebrates at Holiday Dinner

The Orange County Sheriff's Department, Communications Division, arranged the annual OCRACES Holiday Dinner meeting on Monday, December 1, 2008. Thanks to OCSD/Communications Director Robert Stoffel, KD6DAQ, Emergency Communications Manager Marten Miller, KF6ZLQ, Secretary II Angela Berkan, and Program Support Manager Denis Marin, K6OLU, for their cordiality and awards to members at the dinner.

Lt. Scott Byington, KC6MMF, who was not able to attend this dinner, received the Officer of the Year award. Chuck Dolan, KG6UJC, received the Member of the Year Award. Attending with their spouses or other family members were Sgt. Jack Barth, AB6VC, Randy Benicky, N6PRL, Capt. Ken Bourne, W6HK, Chuck Dolan, KG6UJC, Sgt. Ernest Fierheller, KG6LXT, Nancee Graff, N6ZRB, OCSD/Communications Assistant Director (Engineering Section) Ray Grimes, N8RG, Walter Kroy, KC6HAM, Martin La Rocque, N6NTH, Lt. Harvey Packard, KM6BV, OCSD/Communications Telecommunications Engineer III Steve Sobodos, KN6UX, and Tom Tracey, KC6FIC. Also attending were American Red Cross/Orange County Disaster & Client Services Specialist Tom Woodard, KI6GOA, and his fiancée. A montage of photos taken at the dinner appears below.



**Chuck Dolan, KG6UJC (left), receives OCRACES Member of the Year award from OCSD Emergency Communications Manager Marten Miller, KF6ZLQ**



# Watching The Web

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

Electronics Engineering Resource  
<http://www.radio-electronics.com>



Radio-Electronics.Com is an electronics engineering resource providing reference, tutorials, news, magazine articles, jobs, exhibitions calendar, bookshop, and more.

Easy-to-read reference and tutorial pages provide summaries of old and new technologies, and also provide relevant and useful data on the following:

- ◆ Antennas: concepts, various types (dipole, yagi, log-periodic, verticals, discone, etc.) coaxial cables, coaxial connectors (including BNC, N-type, TNC, etc.), and other information
- ◆ Cellular telecommunications: cell-phone systems used internationally (GSM, GPRS, EDGE, UMTS, cdmaOne, cdma2000, etc.) and the underlying cellular concepts
- ◆ Circuits and design: a host of useful electronic circuits (including resistor, RC, LC filter, diode, transistor, SCR/diac/triac, operational amplifier, and digital logic) with design information and practical hints and tips
- ◆ Design principles and processes: ESD (electrostatic discharge), EMC and how to prevent interference, and printed-circuit-board guidelines.
- ◆ Electronic components
- ◆ Electronics manufacture: SMT, pick-and-place, lead-free solder, RoHS, WEEE directive, etc.
- ◆ Formulas and data
- ◆ Radio broadcast technology: FM, RDS, DAB, DRM, HD Radio, DVB, etc.
- ◆ Radio history: key technologies and pioneers
- ◆ Radio receiver technology: superheterodyne principles, PLLs, synthesizers, DSP, and specifications
- ◆ Radio signal propagation: for electromagnetic waves in free space, close to the ground, and in the ionosphere; various frequencies and applications such as broadcast, cell-phone coverage, etc.
- ◆ RF technology and design: modulation formats, phase-locked loops, frequency synthesizers, etc.
- ◆ Satellites: transponders, communications, DBS, GPS, satellite phones, etc.
- ◆ Telecommunications and networks: RS-232, Ethernet, E1, VoIP, fiber-optics, etc.
- ◆ Test and measurement: ICT, boundary scan, VXI, GPIB, etc., and equipment such as spectrum analyzers, oscilloscopes, DMMs, frequency counters, etc.
- ◆ Wireless: standards, including 802.11, WiMAX, Zigbee, Bluetooth, UWB, etc.

A magazine section is filled with articles on the latest technologies and how they will develop, general industry trends, case studies, useful application information, and much more.

A "book shop" provides deals and a large variety of books in association with Amazon.com. Suggestions are provided to save searching time.

Latest electronics and radio news and comment with backgrounders cover leading technology advances.

A calendar is provided of forthcoming electronics, communications, and wireless events, trade shows, seminars, and exhibitions.

A jobs section lists permanent, contract, and freelance jobs in the radio and electronics industries. Useful advice is provided on getting electronics, software, and development jobs and positions.

# RACES/MOU News from Around the County

**"RACES/MOU 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**

## Costa Mesa

Mike Oviatt, KE6IWM, is now the Chief Radio Officer of Costa Mesa RACES, or MESAC (Mesa Emergency Service Amateur Communications).

## Santa Ana

Congratulations to Santa Ana Fire Captain Steve Snyder, KI6EYQ, for a successful first meeting of the Santa Ana Radio Team (SART), held on December 10, 2008, at the Santa Ana EOC. The meeting was attended by 23 radio amateurs. SART's ACS plan is pending final approval. Capt. Snyder will be the ACS Program Coordina-



**Santa Ana Fire Captain Steve Snyder, KI6EYQ (left), with OCSA Communications Division Director Robert Stoffel, KD6DAQ, at first SART meeting**

tor for the city's Emergency Management, and will be the Chief Radio Officer until that position is filled. Gordon West, WB6NOA, is providing ARRL Emergency Communications Course training. Corky Corcoran, W5BYG, is maintaining SART's starter list.

## Hospital Disaster Support Communications System

On Saturday morning, October 25, 2008, at 1:30 AM, three HDSCS communicators were in place on a standby basis at Hoag Memorial Hospital for backup communications during a two-hour upgrade of the telephone system in the almost 500-bed facility. They were Galel Fajardo, KB6MOH, Scott Lolmaugh, WD8ICK and Ken Simpson, W6KOS. An outside HDSCS base station, operated by Paul Broden, K6MHD, was also on the air to provide message relays and to activate additional operators if problems were to develop and extend the work. That did not happen, and operations secured about 3:30 AM.

## Letters to the Editor

Dear Ken,

I enjoyed reading your editorial in the November OCRACES newsletter about doing more transmitter hunting. It would be great to have the OCRACES folks active in transmitter hunting again, and a regular OCRACES practice hunt is a good idea. If you have trouble getting "critical mass" for that, remember that there are other hunt opportunities for beginners, including the monthly Fullerton Radio Club hunt on the third Saturday, starting at 8 PM from Skyline and Acacia. Also, SOARA has been holding beginner hunts on the first Sunday of the month at 1 PM.

For those who don't feel ready for the pressure of a formal T-hunt, there is something new—the solar-powered GeoHunt by WB6JPI. It's on the air right now, somewhere in the LA basin on 146.565 MHz. People are encouraged to hunt it at their leisure and sign in when

they find it, sort of like a geocache. More information is here: <http://www.thunter.org/geohunt/>.

And finally, don't forget the all-on-foot hunts that we have every month or so somewhere in Southern California. They are ideal for persons of all ages. No driving is required, and the event is confined to a nice park so the danger of a car accident during the hunt is eliminated. We are now adding antenna and attenuator building/testing sessions just prior to most of our hunts. The next one will be Saturday February 7, 2009, at Bonelli Regional Park, just up the 57 Freeway near Raging Waters and Bracket Field. Latest information on the upcoming foot hunts, as well as photos and results from previous ones, are always at <http://www.homingin.com>.

Hope to see you at a hidden transmitter soon!

73,

Joe Moell, K0OV

# January 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 <i>New Year's Day</i>	2	3
4	5 <i>OCRACES Meeting &amp; Weekly ACS Net</i>	6	7	8	9	10 <i>RACES Breakfast</i>
11	12 <i>Weekly ACS Net</i>	13	14	15	16	17
18	19 <i>Weekly ACS Net</i>	20	21	22	23	24
25	26 <i>County/City Meeting &amp; Weekly ACS Net</i>	27	28	29	30	31

## Upcoming Events:

- **Jan 5:** OCRACES Meeting, 1930, 840 N. Eckhoff St., Suite 104, Orange
- **Jan 10:** RACES/MOU Breakfast, 0800, Katella Grill, Orange
- **Jan 26:** City/County RACES/ACS & MOU Meeting, 1900, 840 N. Eckhoff St., Suite 104, Orange
- **Feb 7:** Southwest ACS Meeting, 0900-1200, Ben Clark Training Center, Riverside
- **Mar 2:** OCSD Communications Division 75th Anniversary
- **Mar 14-15:** Baker to Las Vegas Challenge Cup Relay
- **Jun 27:** Field Day



[www.ocraces.org](http://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 Miller, KF6ZLQ  
(714) 704-7917

Chief Radio Officer (Captain)  
Ken Bourne, W6HK  
(714) 997-0073

Radio Officers (Lieutenant)  
Scott Byington, KC6MMF  
Harvey Packard, KM6BV  
Ralph Sbragia, W6CSP

Assistant Radio Officers (Sergeant)  
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](mailto:ocraces@comm.ocgov.com)

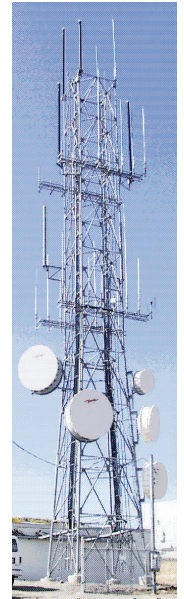
# County of Orange RACES

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

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**[www.ocraces.org](http://www.ocraces.org)**  
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Questions or Comments?  
Contact the *NetControl* Editor  
[w6hk@ocraces.org](mailto: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



Ernest Fierheller  
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Randy Benicky  
N6PRL



Bill Borg  
KG6PEX



Chuck Dolan  
KG6UJC



Nancee Graff  
N6ZRB



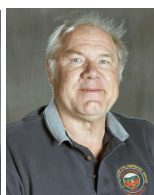
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N8RG



Walter Kroy  
KC6HAM



Martin La Rocque  
N6NTH



John Roberts  
W6JOR



Tony Sanchez  
AE6QT



Joe Selikov  
KB6EID



Steve Sobodos  
KN6UX



Tom Stroud  
N6FDZ



Tom Tracey  
KC6FIC