

March 2004



Newsletter of the County of Orange Radio Amateur Civil Emergency Service



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Captain's Corner

by Ray Grimes N8RG, Chief Radio Officer

The most exciting news for March is Sheriff Carona's visit at our March 1st general meeting to dedicate our OCRACES emergency communications vehicle. You have worked very hard to bring the OCRACES vehicle project to this state of completion, and you deserve this recognition.



The OCRACES vehicle committee will

again be recognized by the County of Orange Board of Supervisors at their April 21st Volunteer Recognition Day ceremony. I hope you will bring your families to both of these events, to share your well deserved moment in the spotlight for this sizable and important project. We truly appreciate the sacrifices

made by you and your families, in terms of hours donated and personal monetary contributions to this project.

We won't have a lot of time to reflect on the festivities of the March 1st OCRACES meeting, as March 2nd is Election Day, and we will again be called upon to support this important

event. This will be a particularly interesting election year, as Orange County will hold its first election using electronic voting machines. Needless to say, a number of procedures in handling and transporting election materials will need to change, and we will also be required to adjust to these new support requirements. Thanks for your support of this RACES activity.

This is the last RACES Vehicle Committee report, as OCRACES is now mis-



The Next
OCRACES
Meeting is

March 1st
1930 Hours

840 N. Eckhoff St.
Orange, CA



Orange County Sheriff's Department
Michael S. Carona, Sheriff-Coroner

March 1st OCRACES Meeting

Our March meeting will start at 1930 hours at 840 N. Eckhoff Street in Orange. Sheriff Michael Carona will host our RACES vehicle dedication ceremony. The meeting will conclude with election training for all County and City RACES personnel participating in the March 2nd election.

RACES Vehicle Update

By Jim Carter, WB6HAG

sion ready with a new emergency communications response vehicle!

The van will be dedicated March 1, 2004, after many months and long hours of hard work and family sacrifices.



I thank Jack Barth (AB6VC), Ken Bourne (W6HK), Scott Byington (KC6MMF), Ray Grimes (N8RG), Martin La Rocque (N6NTH), Harvey Packard (KM6BV), John Roberts (W6JOR), Joe Selikov (KB6EID), and Tom Stroud (N6FDZ)

for their many hours and support in making this van a reality. OCRACES members should feel proud by having an emergency communications response vehicle they can call their own.



RACES Vehicle committee, back row, left to right, Martin, Harvey, John, Joe, Scott. Front row Jack, Jim and Ray. Not pictured are Ken and Tom.



A job well done!
Project Manager Jim Carter congratulates Assistant Project Manager Scott Byington.



Please join us for the Dedication!

March 1st at 1930 hours.

Light refreshments will be served.

Family members welcome and encouraged to attend!

HAPPY BIRTHDAY OCSD/COMMUNICATIONS

This month marks the 70th birthday of Orange County Communications. Gary Gray and Norma Roberts take us down memory lane by providing a history of OCSD/Communications. When a 6.4 magnitude earthquake hit Long Beach on March 10, 1933, facades of buildings slipped, crushing cars and people below. The sophisticated public safety communications systems of today resulted from the tragic disasters of the past and the arduous work of technicians of years gone by.

The Orange County Board of Supervisors saw the need for a police communications system, when in 1934 it authorized the purchase, installation and operation of the first “one-way” police radio station to provide communications to patrol cars of the Sheriff’s Office, all cities in the county, the State Division of Forestry in Orange, and the California Highway Patrol. The establishment of the radio station with the call sign of KGHX took place on the fourth floor of the County Sheriff’s Office located in Santa Ana on March 2, 1934, just one year after the Long Beach earthquake. On that day, the first official all-points bulletin from KGHX was broadcast. It was reported that Charles “Pretty Boy” Floyd (pictured to the right), the notorious gangster, had been seen west of Anaheim two days earlier. The Chief Radio Operator, Wendell Jones, headed a staff of three radio operators: Ed Hefner, Myron Gemmill, and Walter Whiteman. Not only were these men pioneers in the field of police radio communications, but they also possessed the vision to see the importance newly emerging radio transmission could have on public safety.



The operators soon discovered that the “one-way” system had shortcomings. When the radio station received a telephone call about a crime, it would repeat the message over the air every two to three minutes and hope the right police car would get the call; however, there was no way for the police cars



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communicate back to the station. It was nerve-racking for the station not to know if a police car would report to the scene of the crime. The world did not move as quickly then and there were few expedient ways to apprehend criminals, particularly those coming from out of state. In 1936, the Chief Operator, Walter Whiteman, arranged for KGHX to be licensed to operate interstate Law Enforcement Communications by way of Morse code. This allowed the station to receive messages regarding criminal activity in other states and to place them on California’s statewide police Teletype network for appropriate distribution. KGHX was the only station in the state providing this service.

After the Chief Operator’s relentless testing of a homemade mobile transmitter placed in his own car, “two-way” radio transmitters were perfected and installed in all police, sheriff, and fire vehicles, enabling officers to respond to calls from the station. This occurred in 1937 with Sheriff Jesse Elliott’s support of the radio station. Because of the station’s progressive efforts, public safety communications were effective in responding to the threats presented by the 1938 flooding of the Santa Ana River throughout Orange County.

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HAPPY BIRTHDAY! Continued from page 3

In 1948, Orange County's first Mobile Command Post, designed to meet any emergency and to go to inaccessible places, was put into operation. The mobile unit relayed radio messages anywhere in the county, and it served as a stand-by auxiliary power source in the event of a power failure at the Sheriff's Office, a police department, or a fire department. The limited distance over which a police car could transmit presented another problem to be solved. Placing a receiver at a higher location would give greater range. In 1949, in plans initiated by Walter Whiteman, with operators Max Elliott, Paul Moses, and others, receivers were placed on the highest location in Orange County: Santiago Peak. A Quonset hut was constructed to house the receivers. Since the receivers were so far away, a microwave circuit was installed from Santiago Peak to the dispatch location, thereby providing transmission and reception to police radios anywhere in the county.

National attention focused on Orange County Police Communications in 1949 when officials from county, state, federal and public utility companies joined forces in approving an automatic transmitting station broadcasting rapid communications from Santiago Peak to an intercity and intercounty network between Orange County, San Diego, Riverside, Los Angeles and Ventura. The powerful relay transmitters resulted in the breakthrough necessary to provide emergency bulletin services to Southern California police agencies within seconds. Sheriff James Musick helped promote the project. This network was called the first of its kind in the country. As Orange County grew, the demands on police communications grew as well. Walter Whiteman started designing plans to build a new facility near the Orange County Hospital (now UCI Medical Center). Buildings moved from the Santa Ana Air Base after World War II became the basis for the facility. A police antenna, 135 feet high, was installed in 1947 on the hospital grounds. Equipment was activated in approximately 1949 in the Manchester complex on The City Drive, south of the Orange County Hospital and KGHX became Station 50.



Orange County brought its initiative and leadership to the forefront again in 1951, when it organized and brought into one radio network all the law enforcement agencies from Bakersfield to the Mexican border. The first microwave systems were installed to link the mountaintop remote stations and the base station in 1954. In 1959, two additional mountaintop remote operations were added at Lomas Point and Olinda. Both repeater and relay stations were unattended and fully automated. A new communications center was built in 1961 and served Orange County with efficient police communications until March 2, 1993 (when the headquarters was moved to Loma Ridge). In 1963, all seven members of the Federal Communications

Commission (FCC) visited the Orange County Communications Center. This was the first time in the history of the FCC that all seven members attended a meeting away from Washington, D.C., in a group at the same time. In 1965, the Orange County Communication Center began to participate as an online terminal in statewide teletype-computer network.



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HAPPY BIRTHDAY! Continued from Page 4

In 1967, a radio network to link all the County's private and public hospitals was established to permit coordination of their efforts during disasters and emergencies. In 1961, plans were initiated to relocate Orange County's law enforcement communications to the new UHF frequency band for the Sheriff and for the city police departments. The new system would incorporate the mobile relay of "repeater" mode of operation, extending mobile-to-mobile and even portable communications capability throughout the county. The UHF system would also include non-voice communications, including "status/message" and mobile teleprinter capabilities, to all patrol cars. In addition to expanding the "shared" wide-area communications channel capabilities, each County/City law enforcement agency would have its own dedicated local dispatch channel for the first time. This UHF system was placed into full operation in late 1973.

Long-range planning began in 1985 for the next

upgrade for Orange County law enforcement communications, under Sheriff Brad Gates. There were no compatible UHF channels available to meet the growing County/City requirements, so the plans concentrated on the then-new 800 MHz frequency band, to which the County's fire services were transitioning. Additional 800 MHz channels became available to Orange County in 1990, and a major transition to 800 MHz for all County/City public safety agencies was initiated. The current 800 MHz Countywide Coordinated Communications System was placed into full operation in late 2001, today serving all County/City law enforcement, fire, paramedic, lifeguard, public works and municipal utilities. Sheriff Michael Carona described this model 800 MHz public safety communications system as "the crown jewel for communications in America."

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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 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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RACES News from Around the County

BAKER-TO-VEGAS 2004

**By Ralph Sbragia, W6CSP
OCRACES B2V Coordinator**

I have been some what quiet about Baker to Vegas (April 24th & 25th) this year as I have been working with Phil Pacier of the Baker to Vegas Communications Committee to improve the reliability and therefore the capacity of the APRS network. I was able to get one of the most important piece of that puzzle to fall into place and have now been able to decide upon our slot timing structure for 2004.

In years past we have used a four second interval between beacons and a three minute cycle to insure that when the runners are moving at a 7 minute mile pace we get at least one data packet to the internet gateways in Las Vegas or San Bernardino per mile. I was able to get an agreement from the Communications/TV faculty at Baker School. They will allow us to set up and operate an internet APRS gateway (IGate) through the High School's internet connection. In exchange I will make a presentation on APRS, Amateur Radio and the Baker to Vegas Race on Friday afternoon before the race at the High School. In addition to the IGate in Baker, we will be setting up a low level digipeater in the Chicago Valley with a directional antenna aimed toward our portable digipeater at Ibex Pass. This improvement should eliminate the weak to dead spot in Chicago Valley. Lastly, we will also have an IGate in Pahrump. The additional two IGates and the improvement in the area of Chicago valley will

allow us to program the beacons to a "WIDE2-2" protocol. This means the digipeaters will only retransmit the data packet twice rather than four times as in years past when we used "WIDE4-4".

So what does this all mean? It means that we will use a 3 second interval between beacon boxes and a four minute cycle. That means we will be able to support **72** teams with beacon slots as well as between eight and sixteen support vehicle beacons! Needless to say, keeping a mailing list up to date for this many contacts can become a project in and of itself. Therefore the other major change this year is that I am going to ask all RACES members and B2V team contacts to please monitor the OCRACES website regularly for news and updates. Several of the Baker to Vegas pages have already been updated and will continue to be as we approach the race. Lastly, the OCS D teams have asked for volunteer communicators for their various vehicles. Although OCRACES has not made a commitment to provide a specific number of operators, any and all members who can assist the OCS D teams would be appreciated.

I would like to thank Scott Byington for once again volunteering to head up the Pahrump command post. Both Scott and I could use a member to shadow us and learn the ropes in the event we are not able to reprise our roles next spring. If you are interested, please contact me directly at w6csp@ocraces.org.

"RACES News" provides an opportunity to share information from all City & County RACES organizations in Orange County. Please send your news to: OCRACES@ocgov.com

March 2004

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

Schedule of Events:

- **March 1:** OCRACES monthly meeting, and RACES vehicle dedication ceremony, 840 N. Eckhoff Street, Orange, 1930 hours
- **March 2:** Election – RACES activation
- **April 5:** OCRACES monthly meeting, 840 N. Eckhoff Street, Orange, 1930 hours
- **April 21:** County Volunteer Recognition Ceremony, Hall of Administration, 0730 hours
- **April 24 & 25:** Baker-to-Las Vegas Challenge Cup Relay Race – RACES activation

HAPPY BIRTHDAY *continued from page 5*

The Radio Amateur Civil Emergency Service (RACES) came to Orange County on December 1, 1953, by resolution of the Orange County Board of Supervisors. For the next 30 years, the RACES organization in Orange County was a group of Amateur Radio communicators that supported not only Orange County but also cities in the County during a time of emergency. In the mid-1980s, the cities in Orange County realized the benefits of Amateur Radio and began to form their own RACES organizations. Today, County of Orange RACES is recognized as one of the leading RACES organizations in the state, and is administered by OCSD/Communications under the leadership of Emergency Communications Coordinator Robert Stoffel, KD6DAQ, and Chief Radio Officer Ray Grimes, N8RG. Our volunteers provide disaster, emergency and special event communications support to Orange County Public Safety agencies, has a dedicated radio room at the Operational Area Emergency Operations Center (EOC) and an emergency response communications vehicle that provides both Amateur Radio and Public Safety communications support at any emergency, disaster or special event location.

Today, OCSD/Communications and its 91 employees are responsible for the maintenance and operation of the 24 remote sites; installation and maintenance of approximately 40 dispatch centers throughout the County; and installation, maintenance and repair of portable and mobile radio equipment. In addition, Communications installs and maintains duress/intercom/bailiff call systems in the Courts, electronic control and video systems at the jails, and the video arraignment system. Communications also provides sound support for the Board of Supervisors' meetings and sound and video support for special events, meetings, and press conferences. We have come a long way since the 1933 Long Beach earthquake. Technology continues to change and advance. Orange County is committed to implementing innovative strategies to increase public safety and continues its tradition of excellence, reliability and professionalism. **Happy 70th Birthday OCSD/Communications!**

County of Orange RACES

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It's Where It's @!

Questions or Comments?
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County of Orange RACES History

The *Radio Amateur Civil Emergency Service (RACES)* was created in the early 1950's by the Federal government. On December 1, 1953, by resolution of the Orange County Board of Supervisors, the Orange County Communicators Club was authorized to become part of the *Orange County Civil Defense*. For the next 30 years, the *RACES* organization in Orange County was a group of Amateur Radio communicators that supported not only Orange County but also cities in the County during a time of emergency. In the mid-1980's, the cities in Orange County realized the benefits of Amateur Radio and began to form their own *RACES* organizations. Today, County of Orange *RACES* is recognized as one of the leading *RACES* organizations in the state. Our *RACES* program is administered by *OCSD/Communications* under the leadership of Emer-

gency Communications Coordinator Robert Stoffel, *KD6DAG*, and Chief Radio Officer Ray Grimes, *N8RG*. Our volunteers provide disaster, emergency and special event communications support to *Orange County Public Safety* agencies, and meet monthly for training and special activities. *RACES* supports the County by using various modes of Amateur Radio communications including voice, Morse Code, amateur satellite, amateur television, slow-scan television and various digital modes. County of Orange *RACES* has a dedicated radio room at the Operational Area Emergency Operations Center (EOC) and an emergency response communications vehicle that provides both Amateur Radio and Public Safety communications support at any emergency, disaster or special event location.



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