May 2022

County of Orange RACES

NetControl

Newsletter of the County of Orange Radio Amateur Civil Emergency Service

OCRACES Meeting In-Person at OC Sheriff's Academy

Monday, May 2nd, 2022, at 6:00 PM

Orange County Sheriff's Department Emergency Management Division

CRO's Nest
by Ken Bourne, W6HK, OCRACES Chief Radio Officer

1¼-Meter Band (Part 2)

In the April 2022 issue of *NetControl*, I discussed how the 1¼-meter band evolved and some of its characteristics. I mentioned that OCRACES has a 1¼-meter FM repeater on Sierra Peak (223.76 MHz output, 222.16 MHz input, 110.9 Hz CTCSS). In this article I'll cover typical radios for this band, including older radios that are no longer manufactured (but which may be available on the used market).

Before the mid 1970s, most activity on 1¼ meters (220-225 MHz, at that time) was AM and CW, and some single-sideband, using transverters connected to HF transmitters and receivers or transceivers. FM activity increased in the 1970s, with some hams converting Motorola or other land-mobile equipment. VHF high-band land-mobile radios were very difficult to convert, but FM activity on the band increased with the introduction of relatively compact mobile transceivers manufactured by Midland International. Their Model 13-509 had a 10-watt output and 12 crystal-controlled channels. They slightly repackaged the radio and sold it through Cobra Electronics as the Model 200. (I still have my Cobra 200, which I purchased around 1975.)

A few years later,

Midland 13-509 1¼-meter transceiver.

W6HK's Cobra 200 1¼-meter transceiver.

Japanese manufacturers saw a potential market for programmable 220-MHz transceivers with digital displays and began offering them to U.S. amateurs. One of the more popular 1¼-meter FM transceivers was the Kenwood TM-331A. It had 20 memory channels. Selectable transmitter

Kenwood TM-331A 1¼-meter transceiver.

Yaesu FT-311RM 1¼-meter transceiver.

Icom IC-38A 1¼-meter transceiver.

output power was 25, 10, or 5 watts. OCRACES currently uses that transceiver in the OC EOC RACES Room for conducting 4th-Monday ACS nets and for checking into Cal OES Southwest ACS nets on 4th Mondays. This radio has not been manufactured for many years.

Another discontinued 1¼-meter mobile FM radio was the Yaesu FT-311RM. It had 10 memory channels. Power output was selectable at 25 and 3 watts. Yet another was the Icom IC-39A, with 21 memory channels and 25 and 5 watts output.

Eventually, Kenwood offered the TM-

CRO's Nest *Continued from page 1*

Kenwood TM-642A tri-band transceiver with 1¼-meter module.

Bridgecom BCM-220 1¼-meter transceiver.

Alinco DR-235TMKIII 1¼-meter transceiver.

741A and then the TM-742A tri-band FM transceivers, originally equipped with 2-meter and 70-centimenter modules, and a third optional module for 10 meters, 6 meters, 1¼ meters, and 35 centimeters. Similar to the TM-742A was the TM-642A, originally equipped with 2 meters and 1¼ meters built-in and room for a 70-centimeter or one of the other modules. Power output on 1¼ meters was 25/10/5 watts.

After the TM-642A, virtually no 1¼-meter mobile radios were available, and just a couple of handheld radios, such as the discontinued Yaesu 4-band VX-8R and later the Kenwood tri-band TH-D74A, discontinued about a year ago. Although I cannot attest to the quality, Baofeng offers a couple of tri-band handhelds that include 1¼ meters—the BF-R3 and the UV-S9X3. Also offered is the BTECH UV-5X3 tri-band handheld.

A worldwide shortage of chips and other components has

caused a further decline in the availability of mobile single-band radios for 1¼ meters (222-225 MHz). Until recently, Bridgecom offered the BCM-220 transceiver and Alinco offered the DR-236TMKIII. We hope those radios will return eventually. Meanwhile, the TYT TH-9000D and Retevis RT9000D are offered on Amazon, with 55 W output and 200 memory channels.

Currently available tri-band mobile radios, with 1¼ meters as one of the bands, are the BTECH Mini UV-25X4 (FM only) and the AnyTone AT-D578UVIII Plus (FM/DMR) and Alinco DR-MD520T (FM/DMR).

Some radio amateurs continue to use the 1¼-meter band for weak-signal activities on SSB and CW, FT-8, and other modes. They typically use a transverter, such as available from Q5 Signal, with an HF radio as the IF. Horizontal Yagi beam antennas are used for most 1¼-meter SSB and CW operations, whereas omnidirectional vertical antennas are used for most FM activities.

TYT TH-9000D (left) and Retevis RT9000D 1¼-meter transceivers.

BTECH UV-5X3 tri-band handheld.

Anytone AT-D578UVIII Plus tri-band 2 m/1¼ m/ 70 cm FM/DMR transceiver.

Alinco DR-MD520T tri-band 2 m/1¼ m/ 70 cm FM/DMR transceiver.

BTECH 25/10-watt Mini UV-25X4 tri-band 2 m/1¼ m/ 70 cm FM transceiver.

Q5 Signal 1¼-meter 100-watt transverter.

Next OCRACES Meeting: May 2nd at Academy

Our next OCRACES meeting will be on Monday, May 2, 2022, at 6:00 p.m., at the Orange County Sheriff's Regional Training Academy, Classroom 3, 15991 Armstrong Avenue, in Tustin. Members of city, county, and state RACES and EmComm units are invited. This meeting will be 1½ hours earlier than usual, and the 7:00 p.m. 2-meter OCRACES ACS net will be canceled. At this meeting, Sgt. Kyle Sheek from the OCSD Mutual Aid / Reserve Bureau will talk about his experiences as a canine handler, with a PowerPoint Presentation and a K9 demonstration. We will also discuss final preparations for the May 7th City/County RACES & EmComm ACS Exercise. Members of OCSD and city RACES and EmComm units and of all OCSD Reserve Units are invited to attend.

800 MHz Talkgroups in Orange County (Part 3)
by Robert Stoffel, KD6DAQ

As RACES members, we are sometimes called upon to operate on public safety radio channels, either from the Orange County Emergency Operations Center (EOC) at Loma Ridge, in the field with the Control 7 communications response vehicle, or using a radio at the scene of an incident or special event. In this continuing series I am sharing information and providing our members with a better understanding about these channels and how they are used.

We continue our look at the 800 MHz Countywide Coordinated Communications System (CCCS), the trunked radio system shared between the County and it's 34 cities. Last month we focused on talkgroups unique to Law Enforcement. This article will discuss talkgroups used by the Fire Departments in Orange County. The Orange County Fire Authority and every city Fire Department uses the 800 MHz CCCS. City Fire Departments include Anaheim, Brea, Costa Mesa, Fountain Valley, Fullerton, Huntington Beach, Laguna Beach, Newport Beach, Orange, and Placentia.

800 MHz CCCS Fire programming is set up so that any Fire Department can easily communicate with any other Fire Department, as it is common for one agency to assist another agency through auto-aid and mutual-aid on a daily basis. Unlike the other CCCS users, Fire programming does not use a "color" to designate talkgroup names. Rather, they use a number and letter. The number corresponds to the radio zone that the talkgroup is in, and the letter is an alphabetical list from start to finish in a particular radio zone. For example, the fourth talkgroup in Zone 2 is shown as 2D on the radio display, and the letter is always pronounced using the Standard International Phonetic Alphabet. So, over the air, talkgroup 2D is called "Two-Delta." Each talkgroup display also has a brief description on how the talkgroup is used. For example, the primary tactical talkgroup for Fullerton Fire is "2G FUL TAC" on the radio display, but always called "Two-Golf" and never "Fullerton Tac" over the radio.

Only talkgroups in Zone 1 of any Fire radio are agency-specific. In other words, an Anaheim Fire radio selected to "One-Alpha" will not communicate with a Brea Fire radio selected to "One-Alpha." In the remaining Zones, all Fire Departments can access all talkgroups.

Each Fire Department has one talkgroup for dispatching of units: Anaheim – 2E, Brea – 2E, Costa Mesa – 3A, Fountain Valley – 3F, Fullerton – 2E, Huntington Beach – 3F, Laguna Beach – 5G, Newport Beach – 3F, Orange – 2E, Orange County Fire Authority – 4B and 5B, and Placentia – 2P. Costa Mesa, Laguna Beach, and Placentia Fire Departments provide their own dispatching, as does the Orange County Fire Authority. The remaining city Fire Departments contract dispatching with the Metro Cities Fire Authority, called "Metro Net" over the radio.

Other talkgroups in a Fire Department radio are used for incident responses. Every agency has several assigned talkgroups, and every radio zone has a number of talkgroups that are used in larger incidents. The specific talkgroup is assigned by the dispatcher on every incident. City Fire Departments usually operate in one zone for day-to-day operations. The Orange County Fire Authority operates in two zones for day-to-day operations. These zones are: Anaheim – Zone 2, Brea – Zone 2, Costa Mesa – Zone 3, Fountain Valley – Zone 3, Fullerton – Zone 2, Huntington Beach – Zone 3, Laguna Beach – Zone 5, Newport Beach – Zone 3, Orange – Zone 2, Orange County Fire Authority – Zones 4 and 5, and Placentia – Zone 2. Paramedics use Zone 6 to communicate with Base Hospitals. Other talkgroups that have a specific purpose are: 4A – John Wayne Airport tactical, 4G – North County Paramedic ALS No-Contact, 4P – Silverado tactical, 5A – Orange County Fire Air-to-Ground tactical, 5K – South County Paramedic ALS No-Contact, 5P – Travel Net, and 13O – Arson investigators. Figure 1 provides a look at what is found in a typical Fire Department radio by zone.

No private Fire Department uses the 800 MHz CCCS for their day-to-day operations, but some out-of-county agencies have 800 MHz CCCS programming for interoperability. Finally, a number of private ambulance companies have 800 MHz CCCS radios for use when responding on medical aid calls with a Fire Department.

This completes our review of the 800 MHz CCCS talkgroups that are unique to the Fire Service. Next month we continue our journey by looking at 800 MHz CCCS talkgroups used by Lifeguards in Orange County.

Zone	Fire Department Programming
1	Agency Specific – Unique for each Fire Agency
2	Anaheim, Brea, Fullerton, Orange, Placentia
3	Costa Mesa, Fountain Valley, Huntington Beach, Newport Beach
4	Orange County Fire
5	Orange County Fire, Laguna Beach
6	Paramedics
7	700 MHz Interoperability Channels
8	800 MHz Interoperability Channels
9	Tan Talkgroups
10	Tan Conventional Channels, State Parks Channels
11	Miscellaneous Talkgroups and Channels
12	800 MHz Interoperability Channels
13	Orange County Talkaround, 800 MHz Fire Interoperability Channels
14	Agency Specific – Unique for each Fire Agency
15	Agency Specific – Unique for each Fire Agency
16	Agency Specific – Unique for each Fire Agency
17	700 MHz Interoperability Channels
18	700 MHz Interoperability Channels
19	700 MHz Interoperability Channels
20	700 MHz Interoperability Channels

Figure 1. Typical radio programming of a Fire Department radio.

Medal of Valor Ceremony
by Eric Bowen, W6RTR

One of the more unique events that we as PSRs are asked to volunteer at is the 34th annual Medal of Valor ceremony. Last month, this event was held to award members of the Orange County Sheriff's Department with some of its highest honors. Law Enforcement officials and Fire Department officials from throughout the county attended, as well as politicians, elected officials, and family members.

The Medal presentations were preceded by a three-course meal. This year, it was a salad, steak with a mushroom demi-glace and carrots, and a vanilla panna cotta. I know what you are thinking. Did we get to eat that or did we get cold pizza afterwards? This is one of the only events that I have been to where we are asked to join the other attendees and sit at a table to eat and watch the ceremony.

Following the meal, there was a short video presentation about the Orange County Sheriff's Department. It was a wonderful video that highlighted the year 2021 for the Sheriff's Department. It showed the number of calls for service (482k+)(WOW), cases investigated, drugs and money seized, volunteer hours, and many more items. There were even a couple of PSRs in the video. But the one thing that caught my attention was from the commentary towards the beginning of the video. There was one line that set the stage for each of the Medal presentations that night—"There is nothing routine about a profession that requires you to carry a firearm and wear body armor to work each day." This video can be viewed on the OC Sheriff's YouTube page, titled "2022 Medal of Valor."

This year, there were 24 total recipients for the Medal of Lifesaving (15), Medal of Courage (5), Medal of Merit (2), Distinguished Deputy Award (1), and the Sheriff's Award (1). Between each presentation, there was a video of each of the recipients talking about the incident. Dashcam video or bystander video of the actual event was included when available. There was even an interview of a teenage boy and his mother who Deputies had saved after the teenager had a sudden cardiac event at home. That was really cool to see. Not sure what happened after that video clip, as I got some dirt in my eyes and had to wipe them.

After all of the Medal presentations, there was a surprise award given, the Sheriff's Award, to a woman that helped identify a boy who was kidnapped by his father and brought from Tennessee to San Clemente. She had seen them at a park but wasn't sure if it was him. After she left to drop her son off at school, she returned to the park to verify that it was the boy before calling 911. She even waited nearby until Deputies showed up. After she received the award, everybody was surprised when the boy she saved ran on stage, with his mother, and gave her a huge hug. I'm not sure what happened after that, because I didn't wipe away all of that dirt in my eyes from before and had to wipe them again.

This was the second Medal of Valor ceremony that I have attended as a PSR. I will continue to sign up for every one of these when I can. Being able to hear the stories directly from the Medal recipients themselves and to be able to see the videos of the actual events, when available, is an amazing experience. This is one of those special events where I am still thinking about it weeks after it happened. If there was one event that I would tell every PSR to experience just once, this would be it.

FCC $35 Fee Became Effective April 19th

Amateur radio application fees, including those associated with Form 605 application filings, became effective April 19, 2022. The $35 application fee applies to new, renewal, rule waiver, and modifications that request a new vanity call sign. The fee is per application. Administrative updates, such as change of name, mailing or email address, and modification applications to upgrade an amateur radio licensee's operator class or to request a sequentially issued call sign, are exempt from fees.

VECs and Volunteer Examiner (VE) teams do not have to collect the $35 fee at exam sessions. VEC and VE team licensing procedures are unchanged. New applicants will pay the exam session fee to the VE team as usual ($15 to ARRL or $14 to W5YI), and pay the $35 application fee directly to the FCC by using the CORES Payer FRN System (easier to use but will only be available temporarily) or the CORES FRN Registration System (CORES - Login). CORES payment information is available. When the FCC receives the examination information from the VEC, it will email a link with payment instructions to each qualifying candidate. The candidate will have 10 calendar days, from the date of the application file number being issued, to pay. After the fee is paid, and the FCC has processed an application, examinees will receive a second email from the FCC with a link to their official license or, in very rare instances, an explanation for why the application was dismissed or denied. The link will be valid for 30 days.

City/County RACES & EmComm Drill: May 7th

The next City/County RACES & EmComm ACS Exercise will be on Saturday, May 7, 2022, from 0900 to 1200 hours. Because of concerns that emergency communications might be degraded or fail due to poor repeater coverage in some areas of the county, or due to possible repeater failure, this exercise will be a field-deployment exercise and will focus on alternative means of communications in case of such repeater problems. These alternative means of communications will consist of simplex communications on 2 meters FM and HF NVIS (Near Vertical Incidence Skywave) on 60 meters, Winlink, and AREDN mesh. County and city RACES and EmComm members will operate portable stations, preferably at locations that need to be tested for local and countywide simplex radio coverage. We recommend that they use battery or generator power, portable antennas, and simplex only (simulating repeater failure).

The exercise will consist of three elements: a) 2 meters and 60 meters simplex; b) Winlink; and c) AREDN mesh.
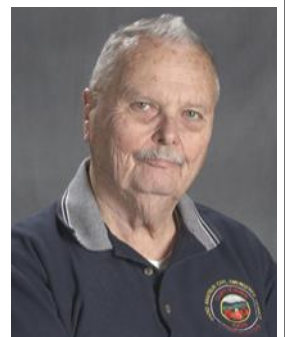
a) From 0900 to 0930 hours, county and city RACES and EmComm units will call their own members on their primary 2-meter simplex frequencies. This is a great opportunity for all city RACES units to check simplex communications from secondary locations throughout their cities to ensure that alternates to their EOC are available. Then from 0930 to 1030 hours, W6ACS net control will call each city and EmComm unit on 146.595 MHz simplex and ask for a report from a designated member of the number of their members who checked in on their simplex frequency. From 1000 to 1030 hours, on 60 meters, OCRACES net control will run a net on 60 meters channel 4 (5371.5 kHz dial frequency, upper sideband), using the same roll call of Orange County county and city RACES and EmComm stations as on the regular weekly Saturday morning OCRACES ACS net. From 1030 to 1130 hours, on 60 meters, net control will call for additional RACES and EmComm stations in Orange County that are not on the regular Saturday roll call, and then a roll call of RACES/ACS stations outside Orange County, and finally a roll call of non-EmComm stations on the regular Saturday list. Visitors may check in after the roll calls are completed.

b) Loma Ridge net control will operate Winlink from about 0900 to 1200 hours, but Winlink drill messages will be accepted over a 24-hour period from 1500 hours on Friday, May 6th, to 1500 hours on Saturday, May 7th. The exercise plan that was distributed by Scott MacGillivray, KM6RTE, to all participants has details and supporting documentation on creating and sending a message with the check-in form built into Winlink Express. All radio amateurs are welcome to participate. Communications may be via a Winlink RMS (Radio Message Server) VHF or UHF gateway or via other modes such as VARA or Pactor HF, mesh, or telnet. Messages need to be addressed to CAORCO; KM6RTE (note the OCRACES tactical address and the semicolon between addresses). Briefly describe your location and your affiliation and role in the exercise, in accordance with the exercise plan.

c) The AREDN mesh section of the exercise will run from 1030 to 1200 hours on Saturday, May 7th. All radio amateurs are welcome to participate. You will need to have an operational VoIP phone connected to your node and an FTP client (such as FileZilla) installed on your computer. The exercise will include using MeshChat, calling via a VoIP phone, and transferring files, such as a spreadsheet, document, text, screen capture, image, or pdf, simulating a request for supplies, damage report, incident photo, etc. Details are provided in the exercise plan.

Harvey Packard, KM6BV, Silent Key

We are very sad to report that our great friend Harvey Packard, KM6BV, passed away on April 23, 2022. Harvey began serving in County of Orange RACES in the fall of 1991, and was a very dedicated member and formerly one of the OCRACES Radio Officers. He had also been a PSR and logged many hours of service with the OCSD Communications Division at Eckhoff Street in Orange.

Harvey used to enjoy going up to the OC EOC at Loma Ridge and checking into the State OES California Emergency Services Net every Wednesday on 40 meters. He was an excellent radio operator.

Harvey was born in 1929. He held an Advanced Class amateur radio license. His original call sign was KC6SXZ. He was a veteran of the U.S. Air Force. A graveside military funeral will be conducted for Harvey at Riverside National Cemetery.

Harvey Packard, KM6BV.

Countywide RACES/EmComm News

"RACES/EmComm News" provides an opportunity to share information from all City & County RACES/ACS units and EmComm organizations and supportive amateur radio clubs in and near Orange County, as well as from Cal OES and federal agencies.

Please send your news to *NetControl* Editor Ken Bourne, W6HK, at:

kbourne.ocsd@earthlink.net

Costa Mesa RACES (MESAC)

The FCC has assigned a station license to MESAC, with the call sign of W6MSC.

Orange County SKYWARN

Alex Tardy of the National Weather Service San Diego advised SKYWARN weather spotters on March 25, 2022, that rain, wind, and mountain snow were expected on Monday and Monday night, March 28th. Tardy said to be ready to report snowfall totals, rainfall totals, hail, lightning, flood impacts from heavy rain, and wind damage. At about noon on March 28th, OC SKYWARN Coordinator Scott O'Donnell, WX6STO, advised that NWS requested SKYWARN activation that afternoon and evening, looking for reports of heavy rain and thunderstorms into the night, especially in and around burn scars. SKYWARN was deactivated at 8:00 a.m. on March 29th, per NWS San Diego forecasters.

OCSD Mutual Aid / Reserve Bureau

Sgt. Kyle Sheek, who is the Reserve Bureau's PSR Administrator (including RACES PSRs), reminds us to check the Reserve Tracker Calendar for upcoming events that need to be filled by PSRs. Some posted events and meetings include:

- Sunday, May 1st: OC Marathon (0300-1200 hours); meet at Academy
- Monday, May 2nd: OCRACES Meeting at the Academy (1800-2000 hours)
- Saturday, May 7th: City/County RACES & EmComm ACS Exercise
- Sunday, May 22nd: OC Triathlon, Mission Viejo (0400-1200 hours)
- Monday, May 30th: Laguna Hills Half Marathon—Memorial Day Event (0500-1400 hours); meet van at Academy

Check off *AUXC Task Book* Tasks

The *AUXC Position Task Book* (PTB) documents the performance criteria a trainee must meet to be certified for the AUXC position in the Incident command System structure. The AUXC is both the person (Auxiliary Communicator) and the Incident Command System (ICS) position used to provide auxiliary communications. Trained Auxiliary Communicators are a valuable communications resource tool that can be used by local, county, regional, tribal, or state agencies/organizations. AUXCOMM is Auxiliary Communications, an all-inclusive term used to describe the many organizations that provide various types of communications support to emergency management, public safety, and other government agencies. This includes, but is not limited to, amateur radio, military radio, citizens band radio (CB), etc. AUXCOMM covers a broad range of systems that could potentially be used by an AUXC during an incident to include: HF, VHF, UHF, satellite communications (SATCOM), microwave, Wi-Fi, digital, video, Voice over Internet Protocol (VoIP), and other modes. Trainees must demonstrate completion of required tasks, which require evaluation.

Evaluators observe and review a trainee's completion of PTB tasks, initialing and dating each successfully completed task in the PTB. Evaluators complete an Evaluation Record Form after each evaluation period, documenting the trainee's performance. A trainee's supervisor may evaluate the completion of PTB tasks. The final evaluator is an AUXC leader or an AUXC subject matter expert appointed in writing by the Statewide Interoperability Coordinator (SWIC) or authorized state certification committee, who verifies that a trainee has completed the PTB and met all requirements for the position. A final evaluator is generally qualified in the same position for which the trainee is applying. When possible, the evaluator and the final evaluator should not be the same person, but in situations with limited resources, the evaluator can also serve as the final evaluator. Once the final evaluator has completed the Final Evaluator Verification, he/she forwards it to the states version of a Qualification Review Board (QRB) along with supporting evidence that the trainee has completed all position requirements. It is recommended that states have at least one member of the QRB be an experienced Auxiliary Communicator with Public Safety experience. After the QRB review, the AHJ completes the Documentation of Agency Certification form as appropriate.

May 2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 OCRACES Meeting (no net)	3	4 PSR Orientation	5	6	7 City/Cnty RACES & EmComm ACS Drill
8	9 Weekly 2 m ACS Net	10	11	12	13	14 Weekly 60 m ACS Net & PSR Prescreen
15	16 Weekly 2 m ACS Net	17	18	19	20 Orange County Amateur Radio Club Meeting	21 Weekly 60 m ACS Net
22	23 ACS Net on 4 Bands	24	25	26	27	28 Weekly 60 m ACS Net
29	30 Memorial Day (no net)	31				

Upcoming Events:

- **May 2, 1800 hours:** OCRACES Meeting (no net), OC Sheriff's Regional Training Academy; 1½ hours earlier than usual. Sgt. Kyle Sheek to give presentation on canine handling; city RACES and EmComm members are invited to attend
- **May 4, 1830 hours:** Orientation for PSR Applicants, OC Sheriff's Regional Training Academy
- **May 7: 0900-1200 hours:** City/County RACES & EmComm ACS Exercise
- **May 20, 1900 hours:** Orange County Amateur Radio Club Meeting on Zoom
- **May 14, 0900 hours:** Prescreen for PSR Applicants, OC Sheriff's Regional Training Academy
- **May 30:** Memorial Day (no net)

https://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

60 m: 5371.5 kHz USB (dial) (Channel 4) (OC ACS Net—Saturdays, 1000 hours)
40 m: 7250 kHz LSB
10 m: 29.640 MHz output, 29.540 MHz input, 107.2 Hz PL (down for repair)
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: 146.595 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: 448.320 MHz output, 443.320 MHz input, 141.3 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)
70 cm: 449.680 MHz output, 444.680 MHz input, 131.8 Hz PL (private)
*Primary Net—Mondays, 1900 hours

OCSD RACES Coordinator
Lee Kaser, KK6VIV, (714) 628-7081

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

Radio Officer
Scott Byington, KC6MMF

Assistant Radio Officers
Jack Barth, AB6VC
Ernest Fierheller, KG6LXT (pending PSR acceptance)

County of Orange RACES

**Orange County Sheriff's Department, Emergency Management Division
2644 Santiago Canyon Road, Silverado, CA 92676
Telephone: (714) 628-7081 ● Fax: (714) 628-7154
E-mail: LKaser@OCSheriff.gov**

County of Orange RACES

OCSD Emergency Management Division
2644 Santiago Canyon Road
Silverado, CA 92676

Telephone – (714) 628-7081
Fax – (714) 628-7154
E-mail: LKaser@OCSheriff.gov

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Questions or Comments?
Contact *NetControl* Editor Ken Bourne, W6HK
kbourne.ocsd@earthlink.net

"W6ACS ...
Serving
Orange County"

Meet Your County of Orange RACES Members!

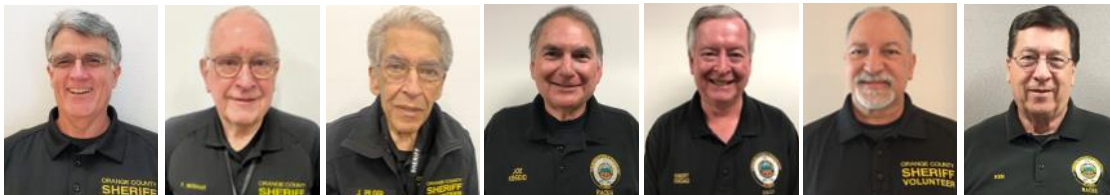**Officers ➜**

Ken Bourne
W6HK

Scott Byington
KC6MMF

Jack Barth
AB6VC

OCSD RACES Coordinator ➜

Lee Kaser
KK6VIV

Heide Aguire
K3TOG

Randy Benicky
N6PRL

Eric Bowen
W6RTR

Ray Grimes
N8RG

Peter Jimenez
KI6UTE

Walter Kroy
KC6HAM

Martin La Rocque
N6NTH

Steve Livingston
NJ6R

Scott MacGillivray
KM6RTE

Fran Needham
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John Pilger
K6PIO

Joe Selikov
KB6EID

Robert Stoffel
KD6DAQ

Chuck Streitz
KK6HFS

Ken Tucker
WF6F

PSR Applicant ➜

Ernest Fierheller
KG6LXT