## February 2019



#### Inside this issue:

1 Captain's Corner **OCRACES Meeting** 3 3 Citizen Corps Drill **AREDN at Linux** 3 **Baker to Vegas Home Fire Safety** Cooperative T-Hunt 5 City/County Meeting 5 **RACES/MOU News** Cal OES 60-m Nets **Events Calendar** OCRACES Members 8

## Next OCRACES Meeting

Monday, February 4, 2019, at 1930 Hours

840 N. Eckhoff Street, Suite 104, Orange

Presentation on AlertOC by Joe Selikov, KB6EID



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

## **Compact HF Transceivers**

Having portable HF capabilities can be extremely important during an emergency, especially if our repeaters are down or for communicating to and from deep canyons or below cliffs near the ocean where repeaters do not reach. Furthermore, HF is enjoyable, enabling communications around the state and around the country, and even worldwide. You can run mobile or portable with a very compact low-power transceiver and a dual-Hamstick dipole on a tripod mast. It won't be as effective as a 1,500-watt home station and a big antenna, but you will be amazed at what it can do.

I enjoy using my compact CS108G 20watt SSB/AM/CW HF transceiver, which I have shown at OCRACES meetings and used effectively on 60 meters during our City/County RACES & MOU deployment drill last October. However, it has some shortcomings, such as no 6 meters, no FM



Xiegu X5105 5-watt QRP transceiver covers 160-6 meters SSB, AM, CW, FM, and digital.



Xiegu C90 HF CW/SSB/AM SDR transceiver is pending availability.



Xiegu's C90 front panel includes a ±24 kHz bandwidth spectrum display with waterfall.

mode (for the top end of 10 meters), no built-in battery, no built-in antenna tuner, and a non-working noise blanker. It was made by Xiegu in China for Connect Systems in Agoura Hills. A very similar version (Xiegu X108G) was sold by Amazon and Radioddity for less than \$450.00. These radios are no longer available.

Xiegu now offers a QRP (5-watt) transceiver through MFJ Enterprises that covers 160 through 6 meters (including 60 meters) on SSB, AM, CW, FM, and digital, for \$669.95. It includes a built-in antenna tuner and 3800 mAh battery pack. It has selectable IF bandwidth (500 Hz CW, 2.4 kHz SSB, and 6 kHz AM). It also has built-in

## Captain's Corner Continued from page 1



Elecraft KX2 (left) and KX3 portable transceivers.

DSP, noise blanker, and notch filter. Its scan feature displays band activity and plots antenna SWR. A data modem and auto-keyer are built in. If 5-watt power output is too low for you, a Xiegu 125-watt amplifier is pending FCC approval.

For those of us who love the discontinued CS108G/X108G HF transceiver, Xiegu has developed the G90 20-watt HF SSB/CW/AM transceiver in a very similar format, but now with SDR architecture and a built-in antenna tuner. It still doesn't cover 6 meters and lacks FM for the high end of 10 meters, and it doesn't have a built-in battery. The attractive radio has a detachable display unit. Its SDR design provides ±24 kHz bandwidth spectrum display with waterfall. It's not available in the U.S. yet. Based on what it is selling for in Europe, I expect it will be around \$550 or somewhat more in the U.S., provided it receives FCC certification.

An interesting HF SDR transceiver is the Recent RS-918 or RS-978, covering 160-10 meters SSB/CW/FM/FreeDV. It is manufactured by Quanzhou Risen Electronics in China, and is apparently a clone of the mcHF developed by Chris Atanassov, MØNKA, in Birmingham, England, which he says is only in prototype form as he continues to tweak the design. It has a spectrum dynamic waterfall display, DSP noise reduction, and automatic notch filter. Frequency stability is  $\pm 1.5$  ppm ( $\pm 0.5$  ppm with optional TCXO). Maximum power output is 15 watts. Amazon offers the RS-918 (no battery) for \$465.00 and the RS-978 (internal 3800 mAh battery) for \$549.00.

Stepping up in quality, Elecraft offers a couple of portable low-power HF transceivers, which they manufacture here in California. The KX3 covers 160-6 meters, all modes, with a maximum power output of 15 watts. The KX2 is half the size of the KX3 and covers 80-10 meters, all modes, at up to 12 watts. Both include auto-notch, noise reduction, built-in battery, built-in auto-tuner, built-in text decode/display, and RX/TX EQ. The KX2 is \$789.95 (assembled) and the KX3 is \$999.95 (kit) and



Recent RS-918 (no battery) or RS-978 (lithium polymer battery) 15-watt HF SDR transceiver.

\$1,099.95 (assembled). Available for the KX3 is an optional 2-meter internal board for \$299.95. A home/mobile 100-watt amplifier, the KXPA100, is available for \$1,189.90.

The Yaesu FT-818 HF/VHF/UHF all-mode portable transceiver provides 6 watts output power with an external DC power source. It is also supplied with an Ni-MH battery pack (9.6 V/1900 mAh). It includes a built-in TCXO-9 oscillator for  $\pm 0.5$  ppm frequency stability. It features dual VFOs, split-frequency operation, IF shift, RIT, IF noise blanker, RF gain and squelch control, IPO (intercept point optimization), built-in electronic keyer, adjustable CW pitch, automatic repeater shift, built-in CTCSS encoder/decoders, and 208 memory channels with 10 memory groups. To keep the size small, the display is much smaller than any of the other radios, but covering all the ham bands from 160 meters to 70 centimeters is impressive at a list price of \$799.95. It does not include an automatic antenna tuner, so consider adding the LDG Z-817 for \$129.99.

I do not endorse any of the above transceivers, although the Elecraft and Yaesu models have good reputations. The Chinese models have interesting features at relatively low prices, but reliability and obtaining quality service could be a challenge.



Yaesu FT-818 HF/VHF/UHF all-mode portable transceiver.

# **Next OCRACES Meeting: Monday, February 4**

The next County of Orange RACES meeting will be on Monday, February 4, 2019, at 7:30 PM, at OCSD Communications & Technology Division, 840 N. Eckhoff Street, Suite 104, in Orange. At this meeting, Joe Selikov, KB6EID, will lead a discussion about AlertOC, which will replace the OCRACES paging system and vastly improve notification of county and city RACES members with flexible alerts and messages. Potential notification categories would include activation, de-activation, drill, standby, and net notification.

# Citizen Corps Exercise Cancelled

The Citizen Corps Exercise scheduled for January 12, 2019, at Saddleback College in Mission Viejo, was cancelled by Urban Areas Security Initiative (UASI) because the Environmental Planning and Historic Preservation (EHP) that was required for this exercise was not approved, due to the Federal Government shutdown. The exercise most likely will be rescheduled. The following RACES topics were to have been presented twice in the afternoon of the exercise:

- Ham Radio Overview, compared to other public-safety communications and FRS (presented by Ken Bourne, OCRACES)
- RACES and CERT Cooperation (presented by Phil Burtis, KF6NFA, Huntington Beach RACES)
- Winlink (presented by Peter Putnam, NI6E, Newport Beach RACES)
- Demonstration of Portable Ham Station (by Tony Scalpi, N2VAJ, OCRACES) and Locating Radio Interference (on-foot T-hunt conducted by Joe Moell, KØOV, and others (such as Jack Barth, AB6VC) with portable direction-finding equipment)

OCSD Emergency Management Division hopes to reschedule the exercise in the next few months.

## **AREDN Presentations at SCALE 17X March 10**

There will be two AREDN (Amateur Radio Emergency Data Network) presentations at the 17th Annual Southern California Linux Expo—SCALE 17X—to be held on March 7-10, 2019, at the Pasadena Convention Center. Both presentations will be on Sunday afternoon, March 10, in room 212.

The first talk by Orv Beach, W6BI, is titled "The Ham Radio Internet—a Progress Report." It will start at 1500 hours in Room 212. Orv reports that IP Networking is one of the fastest growing modes in amateur radio. The ham radio internet (lower -case "i") continues to grow in both capabilities and span. Driven by improvements in custom open-source software for wireless access points by AREDN (arednmesh.org) and with their support of more equipment from more vendors, it now covers from Santa Barbara to the Mexican border and east at least to the Inland Empire. At any given time, there are more than 300 nodes up and running.

He will detail that growth with emphasis on Southern California, with metrics, maps, and graphs. He'll also cover some of the more significant network events, including the ability to stream video of recent brush fires from networked mountaintop webcams to YouTube.

Following Orv's talk will be Joe Ayers, AE6XE, who will present "AREDN: The technology and considerations to build ad-hoc wireless networks." His talk will also be in room 212 starting at 1630 hours. Joe says that off-grid long-distance wireless networks are rapidly growing on amateur radio microwave allocations across cities and counties around the world. Ham radio operators are repurposing low-cost wireless ISP devices. Neighbors are connecting with each other across the street, cities are connecting police stations with community centers, and counties are connecting to create regional links, now common, over 40 miles.

Joe will detail the goals of the Amateur Radio Emergency Data Network—AREDN (arednmesh.org), the open-source technology, the wireless capabilities, the network architecture, and the considerations to deploy long-distance microwave links. He'll also show examples of devices commonly used for sector coverage, point-to-point links, and wide area coverage. Anyone with an entry-level amateur radio Technician class license will walk away with the knowledge to create their own offgrid internet.

Remember that Daylight Saving Time starts on that Sunday, so set your alarms correctly. Registration information for SCALE 17X can be found at this link: https://register.socallinuxexpo.org/reg6/. SCALE 17X will be held at the Pasadena Convention Center, 300 E Green Street, in Pasadena. Directions to the Pasadena Convention Center can be found here: https://www.socallinuxexpo.org/scale/17x/venue. The primary website for SCALE 17X with a schedule of speakers can be found here: https://www.socallinuxexpo.org/scale/17x.

# Hams Sought for Baker to Vegas Relay

Several years ago OCRACES supported OCSD runners and established and provided the entire APRS backbone for the Baker to Las Vegas Challenge Cup Relay, with our sites on Mt. Potosi, Ibex Pass, etc. We installed APRS and VHF/UHF FM radios in the Sheriff's vans and assigned members to those vans and to fixed locations. As system requirements changed, OCRACES currently does not provide this service.

We received an inquiry from Blair Stephens, KD6IFG, Safety 1, Baker to Vegas Challenge Cup Relay, who manages a team of about 25 hams that work the first eight stages of the race, which will be on March 23-24, 2019. His group is called "Safety Patrol." He is recruiting hams that are ready to volunteer for the race. OCRACES members who wish to serve in this event are encouraged to contact Blair at kd6ifg@gmail.com. His phone number is 619-417-0690. More information is at http://www.radiobaker2vegas.org/. Blair said he has more information to share, when the time is right.

Working for Blair does not involve the entire race, since his team works only the beginning eight stages. They work in teams of two hams per vehicle, using a dual-band 2-meter/440-MHz mobile through a temporary repeater on Ibex Pass.

# **Cal Fire Focuses on Home Fire Safety**

Cal Fire has a few tips for fire safety in your home (including your ham shack!) during the cold winter months. Indoor defensible space is just as important as the defensible space you maintain outdoors.

#### Fire Safety for Your Bedroom

Don't let an emergency catch you off guard while you sleep! Practice good Home Fire Safety by taking precautions throughout your whole house, including your bedroom. A fire hazard can often happen where you least expect it!

- Install smoke alarms in every bedroom
- Turn off electric blankets and other electrical appliances when not in use
- Do not smoke in bed
- If you have security bars on your windows or doors, be sure they have an approved quick-release mechanism so you and your family can get out in the event of a fire

### Fire Safety for Your Kitchen

- Keep a working fire extinguisher in the kitchen
- Maintain electric and gas stoves in good operating condition
- Keep baking soda on hand to extinguish stovetop grease fires
- Turn the handles of pots and pans away from the front of the stove
- Install curtains and towel holders away from stove burners
- Store matches and lighters out of reach of children
- Make sure that electrical outlets are designed to handle appliance loads

## Fire Safety for Your Hallway

Cal Fire's checklist featuring fire safety for your hallway reminds us not to neglect smoke alarms and to periodically check electrical cords for damage.

- Install smoke alarms in each hallway leading to a bedroom, on every level of your home
- Test smoke alarms monthly, and consider upgrading to long-life battery alarms
- Replace any cords that have loose connections, are frayed, or do not work properly

#### Fire Safety for Your Living Room

The simple rules for your living room can help make sure that your warm and cozy fireplace doesn't become a fire hazard!

- Install a screen in front of fireplace or wood stove
- Store the ashes from your fireplace (and barbecue) in a metal container and dispose of only when cold
- Clean fireplace chimneys and flues at least once a year



## KM6RSY Hides in Seal Beach

Seal Beach RACES Member Art Remnet, KM6RSY, was the fox on the monthly cooperative T-hunt on Monday, January 21, 2019. He hid at the end of 8th Street near the Seal Beach pier and transmitted tones on the input (146.295 MHz) of the OC-RACES 2-meter repeater.

The first hunter to find the fox was Richard Saunders, K6RBS. Meanwhile, Ken Bourne, W6HK, and Roger Kepner, W6SQQ, were getting a weak bearing to the southwest from Seal Beach Boulevard north of Westminster Boulevard. They transmitted their bearing on the 448.320 MHz repeater, but Ken did not hear the repeater on his radio, although he saw the signal on his S-meter. Ken continued to attempt communications on 448.320 MHz as he and Roger drove toward the fox. In a few minutes they pulled over as Ken tried to determine why his radio did not receive. He switched to other UHF repeaters and heard them. After turning on another radio and having the same problem, he



At the fox's den near the Seal Beach pier are (left to right) Roger Kepner, W6SQQ, Art Remnet, KM6RSY (the fox), Richard Saunders, K6RBS, Pete Bergstrom, K6PB, and Peter Gonzalez, KC6TWS.

realized that the repeater was not regenerating a CTCSS subaudible tone. Ken had programmed both radios to enable the CTCSS decoder so his squelch would not open on noise or spurious signals. He then went into the menu on one of the radios and disabled the decoder, and then could communicate with Peter Gonzalez, KC6TWS, and Pete Bergstrom, K6PB, who were also hunting. (By the way, the 448.320 MHz repeater "cured itself" after the hunt and is once again regenerating the CTCSS tone.) While Ken was diagnosing and resolving the problem, Roger was getting anxious to resume hunting! Peter and Pete had also spotted Ken and Roger and thought they must be on foot looking for the fox. Finally they all started hunting again and Ken and Roger drove directly to the fox, coming in about a half hour behind Richard. Peter and Pete came in a few minutes later. This was Art's first experience with a T-hunt, and he chose an excellent hiding spot. We hope to see him out hunting on future hunts.

Monitoring the hunt from Lake Forest was a new ham, Wayne Brown, KM6TUG. He was trying to hear the fox with his new tape-measure yagi and attenuator, but was too far away for the 5-watt fox-box signal from near the Seal Beach pier. However, he practiced getting bearings on the repeater output. He doesn't have APRS yet, but we hope he will be joining us soon on future hunts.

The next hunt will be on Monday, February 18, 2019, immediately following the OCRACES 2-meter net (approximately 7:20 PM). The fox will hide on paved, publicly accessible property in a city or sector of Orange County to be announced a few days before the hunt. He will transmit tones on the input (146.295 MHz) of the 146.895 MHz repeater. Hunters will compare bearings via the 448.320 MHz repeater and are encouraged to beacon their positions via APRS throughout the hunt. We are looking for a volunteer to be the fox, and a programmed fox box will be provided.

The cooperative T-hunts are usually held on the third Monday of each month (except in October). The hunts provide excellent practice in working together to find sources of interference quickly. The hunts are not official RACES events, so DSW (Disaster Service Worker) coverage does not apply. Please drive carefully!

# City/County RACES Meeting: February 11th

The next City/County RACES & MOU meeting will be on Monday, February 11, 2019, at 7:30 PM, at OCSD Communications & Technology Division, 840 N. Eckhoff Street, Suite 104, in Orange. At this meeting we will begin planning for the Saturday, May 4, 2019, ACS Radio Rodeo, at which county and city RACES units will gather their communications command vehicles and set up portable stations to display and to test interoperable communications. We will also communicate with Cal OES Southern Region ACS during the May 4th exercise on VHF, UHF, and 60 meters.

All RACES and MOU agencies are invited to give brief activity reports at this meeting.

# **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
and supportive
amateur radio
clubs in Orange
County.

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

w6hk@ ocraces.org

## **Orange County SKYWARN**

Orange County SKYWARN Coordinator Scott O'Donnell, WX6STO, activated OC SKYWARN at 11:44 AM on Monday, January 14, 2019, at the request of Mark Modell with the National Weather Service in San Diego, for reports of rain and snow. O'Donnell said the debris flows were possible, which could impact Canyon, Canyon 2, and Holy burn scars and surrounding neighborhoods near and below the burn scars. At 7:48 PM, O'Donnell said NWS San Diego advised that OC SKYWARN be deactivated.

Again on Thursday, January 17th, at 5:20 AM, O'Donnell activated OC SKY-WARN per NWS San Diego request until 8:00 PM, for possible debris flows in the same areas as before. He reminded that forecasters love photos to affirm what is going on and what has happened in the spotters' areas. He said to include the day/time and specific location of photos, and to send them to alexander.tardy@noaa.gov or post on Facebook at https://www.facebook.com/NWSSanDiego. OC SKYWARN was eventually deactivated at 6:12 PM.

## Orange County Amateur Radio Club (OCARC)

The next Orange County Amateur Radio Club (OCARC) meeting will be on Friday, February 15, 2019. The guest speaker will be Doug Millar, K6JEY, who will talk about "Earth-Moon-Earth (EME) Communications." Doug participates in EME contests in the fall from his garage and front yard on 1296 MHz. At this meeting he will show how he does it. The meeting will be at 7:00

PM at the American Red Cross (George M. Chitty Building), 600 Parkcenter Drive, in Santa Ana. Enter at the west door. Call on 146.55 MHz for admittance if you are late.

## **Amateur Radio License Exams**

Feb. 21, 2019; 5:30 PM (walk-ins allowed)

Sponsor: West Coast ARC Contact: Ken Simpson, W6KOS 714-651-6535; w6kos@arrl.net

VEC: ARRL/VEC

Coastal Community Fellowship Church, 10460 Slater Ave., Fountain Valley

Feb. 21, 2019; 6:00 PM (walk-ins allowed,

pre-registration preferred) Sponsor: Western ARA

Contact: George Jacob, N6VNI 562-544-7373; jac2247@gmail.com

VEC: ARRL/VEC

La Habra Community Center, 101 W. La Habra Blvd., La Habra

Feb. 23, 2019; 9:30 AM (no walk-ins, call

ahead)

Sponsor: PAPA System Repeater Group

Contact: Jack Suchocki, W6VFR

954-816-8721

VEC: Greater LA VEC

Marie Callender's Restaurant & Bakery, 540

N. Euclid St., Anaheim

Feb. 25, 2019: 6:00 PM (walk-ins allowed)

Sponsor: SOARA

Contact: Sean Reigle, AJ6B

714-261-1717 VEC: ARRL/VEC

Norman P. Murray Community & Senior Center, 24932 Veterans Way, Mission Viejo

# Cal OES "Adopts" 60-Meter Saturday Nets

OCRACES has been conducting HF nets at 10:00 AM on Saturdays since November 22, 2014. We began our nets on 7250 kHz LSB on 40 meters, but propagation around Orange County was consistently poor. On March 31, 2018, we added 5346.5 kHz USB (dial frequency) on 60 meters, and found that 60 meters covered Orange County much better than 40 meters. We also noticed that 60 meters provided excellent coverage throughout southern California, whereas 40 meters, although poor in the southern California counties, was good up to northern California and northern Nevada. On September 1, 2018, we dropped 40 meters and now run our nets exclusively on 60 meters. At a Cal OES Southern Region ACS meeting on January 26, 2019, it was decided that our nets will now be Cal OES Southern Region ACS nets, covering the 11 Southern Region counties and beyond. OCRACES will continue to run most of these Saturday 60-meter nets, and all radio amateurs are welcome to participate.

# February 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2 Weekly 60 m ACS Net
3	4 Weekly 2 m ACS Net & OCRACES Meeting	5	6	7	8	9 Weekly 60 m ACS Net
10	11 Weekly 2 m ACS Net & City/County Meeting	12	13	14	15 Orange County Ama- teur Radio Club Meeting	16 Weekly 60 m ACS Net
17	18 Weekly 2 m ACS Net & Cooperative T-Hunt	19	20	21	22	23 Weekly 60 m ACS Net
24	25 ACS Nets on Five Bands & Cal OES Nets	26	27	28		

## **Upcoming Events:**

- February 4: OCRACES Meeting, 1930 hours, OCSD Communications & Technology Division, 840 N. Eckhoff Street, Suite 104, Orange
- February 11: City/County RAC-ES & MOU Meeting, 1930 hours, OCSD Communications & Technology Division, 840 N. Eckhoff Street, Suite 104, Or-
- February 15: Orange County Amateur Radio Club Meeting, 1900 hours, American Red Cross (George M. Chitty Building), 600 Parkcenter Drive, Santa Ana
- February 18: Cooperative T-Hunt, 1920 hours
- March 23-24: Baker to Las Vegas Challenge Cup Relay
- May 4: ACS Radio Rodeo, 0900-1100 hours



## 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: 5346.5 kHz USB (dial) (Channel 2) (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 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) 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 Coordinator** (Emergency Comm's Manager) Lee Kaser, KK6VIV 714-704-8080

Radio Officer (Lieutenant) Scott Byington, KC6MMF Chief Radio Officer (Captain) 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**

OCSD/Communications & Technology 840 N. Eckhoff St., Suite 104, Orange, CA 92868-1021 Telephone: 714-704-8080 • Fax: 714-704-7902

E-mail: lkaser@ocsd.org

## **County of Orange RACES**

OCSD/Communications & Technology 840 N. Eckhoff St., Suite 104, Orange, CA 92868-1021

Telephone – 714-704-8080 Fax – 714-704-7902 E-mail – ocraces@comm.ocgov.com

Visit Our Web Site http://www.ocraces.org It's Where It's @!

Questions or Comments?
Contact NetControl Editor Ken Bourne, W6HK
w6hk@ocraces.org



"W6ACS ... Serving Orange County"

# Meet Your County of Orange RACES Members!



Ken Bourne W6HK



Scott Byington KC6MMF



Jack Barth AB6VC



Ernest Fierheller KG6LXT



Bob McFadden KK6CUS



Tom Tracey KC6FIC



Randy Benicky



Roger Berchtold WB6HMW



David Corsiglia WA6TWF



Ray Grimes N8RG



Walter Kroy KC6HAM



Martin La Rocque N6NTH



Matt Luczko KM6CAO



Fran Needham KJ6UJS



Harvey Packard KM6BV



Tom Riley K6TPR



Tony Scalpi N2VAJ



Joe Selikov KB6EID



Robert Stoffel KD6DAQ



Ken Tucker WF6F



Tom Wright KJ6SPE



Lee Kaser KK6VIV