July 2013

County of Orange RACES

NetControl

Newsletter of the County of Orange Radio Amateur Civil Emergency Service

The Next OCRACES Meeting Is

July 1, 2013
1930 Hours

840 N. Eckhoff Street, Suite 104, Orange

Frank Columbus, WA2KWR Raspberry Pi Microcomputer

Orange County Sheriff's Department
Communications & Technology Division

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

Net Activities

OCRACES ran a simplex net on the output (146.895 MHz) of the 2-meter repeater on Monday, June 24, 2013, from the Orange County EOC RACES Room on Loma Ridge. Tom Riley, K6TPR, was net control. Most of those checking in had successfully programmed their radios to transmit on the output, but a couple of participants kept trying to go through the repeater. We encourage all OCRACES members as well as city RACES and MOU members who would use our repeater during a drill or emergency to program all of their radios for transmit/receive on the output of the repeater (commonly referred to as "talk-around"), in the event of sudden repeater failure or going out of range of the repeater while in a caravan to an out-of-county mutual-aid activation.

During our simplex net, someone kept keying the repeater, which interfered with some check-ins. The next time we run a simplex net, we will probably conduct it on the primary OCRACES 2-meter simplex frequency of 147.480 MHz.

After the 2-meter simplex net, OCRACES Applicant Bob McFadden, KK6CUS, ran a 6-meter simplex net on 50.3 MHz FM. We only had four check-ins. At least a couple of our members heard net control but were not heard at Loma Ridge. One member said he could not even hear net control or any other stations. We ran the net on 50.3 MHz, since that is a popular local technical ragchew frequency, hoping that some of those who hang out on that

frequency would check in as visitors. We announced that we would not conduct a net on 50.3 MHz in the future, since that is not a declared RACES frequency. We plan to run a net on the OCRACES 6-meter repeater (52.62 MHz output, 52.12 MHz input, 103.5 Hz PL) every fourth Monday.

Following the 2-meter net every fourth Monday, we will conduct a roll-call-only (no announcements) net on the 449.100 MHz OCRACES private repeater on 70 centimeters. Occasionally, this net will be held on the 449.180 MHz OCRACES private repeater instead. Normally, only OCRACES members and OCSD ham employees may use our private repeaters, but we will accept check-ins from others during drills and activations, and will maintain the same roll call (including city RACES and MOUs) for both the 2-m and 70-cm nets

Following the 2-m and 70-cm nets on the fourth Monday, we will conduct a brief net on the 6-meter repeater on 52.12 MHz. This repeater is intended primarily for EOC-to-EOC communications, but we encourage all OCRACES and city RACES and MOU members who have 6-meter equipment to check in as well. This is an open repeater, and any radio amateur may use it at any time, with OCRACES taking priority during drills and activations.

Postal-mailed with this issue of *NetControl* to OCRACES members is a new roll-call sheet, which has four check-in columns—one for 2 meters, one for 70 centimeters, one for 6 meters, and one for 1¼ meters. Net control will use only the first column (2 meters) most of the time, but

Captain's Corner *Continued from page 2*

will also use the second and third columns (70 cm and 6 m) on fourth Mondays when conducting the three nets. The fourth column will be used occasionally when we run a net on the 1¼-meter repeater (223.76 MHz output, 222.16 MHz input, 110.9 Hz PL). This is an open repeater, and any radio amateur may use it at any time, with OCRACES taking priority during drills and activations.

OCRACES also has five repeaters on the 1.2 GHz band, which are currently off the air for reprogramming to different frequencies. The OCRACES 10-meter repeater on 29.64 MHz is also off the air for repairs.

Other net activity includes checking the Orange County EOC into the Southwest ACS Frequency/Radio Test, conducted every fourth Monday at 8:15 PM on linked repeater systems as well as single-site repeaters on 2 meters, 1¼ meters, and 70 centimeters. These nets test the capability of county EOCs in Southern California,

Caltech, Caltrans, water districts, Air Force MARS, Red Cross, and National Weather Service to communicate with Cal EMA. Just prior to that test, at 8:00 PM, we check the Orange County EOC into the California Emergency Services net, conducted by Cal EMA from Sacramento, on 3.960 MHz lower sideband.

On Wednesday mornings at 10:00 AM, we check the Orange County EOC into the California Emergency Services net, conducted by Cal EMA from Patton State Hospital in San Bernardino, on 7.230 MHz LSB.

On Thursday nights at 8:00 PM, city, county, and state RACES/ACS members have been participating in a recently established 6-meter SSB net on 50.2 MHz. This is not an official RACES net, but we discuss propagation, antennas, and other technology related to emergency communications. OCRACES Applicant Bob McFadden, KK6CUS, has been an outstanding net control.

OCRACES Operates Field Day at Craig Park

OCRACES had a successful Field Day on June 22-23, 2013, at Craig Regional Park in Fullerton. RACES Lt. Ralph Sbragia, W6CSP, coordinated our Field Day activities. Setup began before 8:00 AM Saturday morning, with the arrival of the van, driven by Jim Dorris, KC6RFC. Power was supplied by the van's generator, as well as by the generator that Ralph supplied for operating from his trailer. Besides Ralph's Kenwood TS-480S station, we operated a Kenwood TS-690S in the van and an Icom IC-7200 transceiver outside the van, provided by Applicant Bob McFadden, KK6CUS, who put in many hours at our site. Bob also provided a rotatable dipole, mounted on the van's Will-Burt push

Busy installing wire antennas at the OCRACES Field Day site are (left to right) John Roberts, W6JOR, Lt. Ralph Sbragia, W6CSP, OCSD Communications & Technology Division Director Robert Stoffel, KD6DAQ, and Jim Dorris, KC6RFC.

Sgt. Ernest Fierheller, KG6LXT, and Sue Mickelson, KJ6LCJ. Ernest introduced his dog Kensi to Field Day.

-up mast. John Roberts, W6JOR, supplied his Windom antenna. Unfortunately, parts were missing from our tri-band beam, but the wire antennas and rotatable dipole worked well. David Corsiglia, WA6TWF, brought his Elecraft KX3 QRP station for a short-term operation.

The 5:00 PM pot-luck dinner was well-attended. OCSD Emergency Communications Manager Delia Kraft, KF6UYW, treated us well from her large, impressive trailer, with her husband Brian cooking delicious hamburgers and hot dogs.

OCRACES Field Day *Continued from page 2*

We had 296 phone QSOs during Field Day, plus two digital QSOs. With multipliers, our claimed score was 600. Total bonus points claimed was 750. Final score was 1,350.

Besides Ralph Sbragia, Jim Dorris, and John Roberts, other attending OCRACES members included Sgt. Jack Barth, AB6VC, Randy Benicky, N6PRL (and his wife Lee Anne, KI6VUH), Capt. Ken Bourne, W6HK (and his wife Carol, N6YL), Sgt. Ernest Fierheller, KG6LXT, Nancee Graff, N6ZRB, Ray Grimes, N8RG (and his wife Carol, WB6VMH), Walter Kroy, KC6HAM, Martin La Rocque, N6NTH (and his son Rod, KK6DBP), Sue Mickelson,


Gathered outside the OCRACES van at Field Day are (left to right) Fran Needham, KJ6UJS, Marty Oh, KJ6RWE, Martin La Rocque, N6NTH, visitor Charlie Poirier, KA1DVC, and Applicant Bob McFadden, KK6CUS.

Lt. Ralph Sbragia, W6CSP, who was the OCRACES Field Day coordinator, is shown operating his Kenwood TS-480S transceiver in his well-equipped mobile communications trailer.

KJ6LCJ, Fran Needham, KJ6UJS, Marty Oh, KJ6RWE, Tom Riley, K6TPR, and Tom Tracey, KC6FIC. Besides Bob McFadden, other applicants included Don Cooke, AF6CV, and Steve Zipperman, KK6DRH. From OCSD Communications & Technology Division were Division Director Robert Stoffel, KD6DAQ, and Assistant Director Joe Saddler, W6PAZ. From OCSD Control One was Brenda Bartee, KG6NPC. Also visiting our Field Day site were Fullerton RACES Radio Officer Gene Thorpe, KB6CMO, and Members Cheryl Thorpe, KE6TZU, and Kevin Briley, KG6IIS, former OCRACES member Kenan Riley, KR6J, Brea RACES Member Richard Raine, KG6MJL, and Charlie Poirier, KA1DVC, from Chino Hills.

Marty Oh, KJ6RWE, operates on HF with an Icom IC-7200 transceiver (supplied by Applicant Bob McFadden, KK6CUS) outside the van.
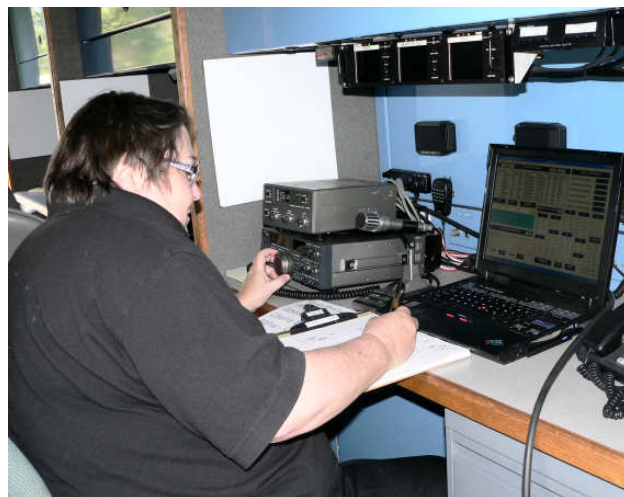
Sue Mickelson, KJ6LCJ, makes Field Day points on HF from inside the van, on a Kenwood TS-690S transceiver.

Next OCRACES Meeting: July 1st

The next County of Orange RACES meeting is on Monday, July 1st, 2013, at 7:30 PM, at 840 N. Eckhoff Street, Suite 104, in Orange. Frank Columbus, WA2KWR, will talk about and demonstrate the Raspberry Pi Linux microcomputer, including how to image, how to put a system together, and how to use the tile-based Scratch visual programming language.

Also at this meeting, OCSD Emergency Communications Manager Delia Kraft, KF6UYW, will conduct a "poker run" (see her article below).

1st Annual OCRACES Poker Run
by OCSD Emergency Communications Manager Delia Kraft, KF6UYW

A *poker run* is an organized event where participants, usually using motorcycles, all-terrain vehicles, boats, snowmobiles, horses, or other means of transportation must visit five to seven *checkpoints*, drawing a *playing card* at each one. The object is to have the best *poker hand* at the end of the run. Winning is purely a matter of chance.

Since the county will not approve the purchase of motorcycles for the purpose of a poker run, I have changed the rules slightly. Players will participate as a team of 4-6. Each team will be asked seven questions, and will draw a playing card for each question answered correctly. Unlike the standard poker run, your chances of having the best hand will diminish if your team answers the questions incorrectly. The questions will vary and include topics such as ICS, OCSD, OCRACES, and more. The team with the best 5-card poker hand wins.

Since a game of poker is often paired with suds, I will have ice cold root beer available at our meeting on July 1, 2013. This poker run is for our members, applicants, and visitors to participate. If this *back to basics* training works out well, we will make this an annual game for our monthly meeting in July. Thank you April Moell, WA6OPS, for sharing this training idea with me.

OCRACES Exhibits at HRO's HAM JAM

County of Orange RACES exhibited its emergency communications response vehicle at HRO's HAM JAM in Anaheim on Saturday, June 15, 2013. The day started before 7:30 AM, when Jim Dorris, KC6RFC, and Tom Riley, K6TPR, arrived with the van. They quickly set it up, with others arriving to help. Before 8:30 AM, we headed across the street to IHOP for breakfast, with discussions on planning for Field Day led by Lt. Ralph Sbragia, W6CSP. Before 10:00 AM, we headed back to the van at HRO, and began meeting with the many hams who visited us and talked about our emergency communications capabilities. Several application forms were picked up, which we hope will result in more applicants attending our meetings.

Some of those representing OCRACES at HAM JAM included (seated) Martin La Rocque, N6NTH, and Sue Mickelson, KJ6LCJ, and (standing, left to right) Jim Dorris, KC6RFC, Capt. Ken Bourne, W6HK, Tom Riley, K6TPR, Applicant Bob McFadden, KK6CUS, Randy Benicky, N6PRL, Fran Needham, KJ6UJS, and Lt. Scott Byington, KC6MMF.

Besides Jim, Tom, and Ralph, other OCRACES members who participated at HAM JAM included Sgt. Jack Barth, AB6VC, Randy Benicky, N6PRL (with his wife Lee Anne, KI6VUH), Capt. Ken Bourne, W6HK, Lt. Scott Byington, KC6MMF, Walter Kroy, KC6HAM, Martin La Rocque, N6NTH, Sue Mickelson, KJ6LCJ, Fran Needham, KJ6UJS, and Marty Oh, KJ6RWE. OCRACES Applicant Bob McFadden, KK6CUS, was very helpful with setup and teardown. Applicant Steve Zipperman, KK6DRH, also participated. Applicant Don Cooke, AF6CV, attended the Field Day breakfast. Lending their support to our activity were OCSD Communications & Technology Division Director Robert Stoffel, KD6DAQ, and Emergency Communications Manager Delia Kraft, KF6UYW.

MFJ-225 Graphic Analyzer Covers 1.8-170 MHz

MFJ Enterprises has introduced the MFJ-225 HF/VHF two-port graphic antenna analyzer. It includes a built-in, back-lighted, 3-inch LCD graphics display that shows an SWR bar graph, swept SWR displays, impedance, return loss, phase angle, etc. You can adjust the center frequency, tuning step, and sweep width, while viewing your plot.

In the field, it is a compact, self-contained, handheld analyzer. On the bench it becomes a two-port (S21) desktop machine when interfaced with a PC. Using IG-miniVNA freeware, you can run detailed data analysis and then print out color-graphic plots.

The MFJ-225 tunes from 1.5 MHz to 179.9 MHz. Its VFO is a programmable DDS (direct digital synthesis) optical encoder with 1-kHz resolution. The DDS stimulus generator provides a leveled –5 dBm signal source for driving mixers, low-power amplifiers, filters, networks, diplexers, and antennas on the test range. The test signal has over –50 dBc of harmonic and spur suppression. With an external step attenuator, it becomes a signal generator for peaking sensitive receivers and preamplifiers.

The MFJ-225 measures SWR (1:1 to 9.9:1), complex impedance (R + jX), impedance magnitude (Z), return loss (RL, 0-30 dB), phase (0-180°), capacitance (0-9999 pF), inductance (1-80 μH), cable length (0.5-45 m), and cable loss (0 -30 dB).

In addition to single-port (S11) reflected-power measurements, two-port (S21) forward-power measurements may also be made, for optimizing filters, diplexers, matching networks, etc.

In the field, the MFJ-225 runs for up to four hours on three self-contained AAA NiMH cells. On the bench, it accepts an external 12-Vdc power source or a 12-V AC wall adapter such as the MFJ-1312D. It also runs off of a PC's USB jack. Connecting an external power source automatically indicates recharging of the internal NiMH batteries with an LED charge indicator that goes out when the charge cycle is complete. The analyzer's price is $399.95.

The MFJ-225 uses built-in firmware to perform its entire calibration routine in less than a second.

The analyzer's OUT port is N-female (an N-to-SO-239 adapter is included), and the IN port is SMA female.
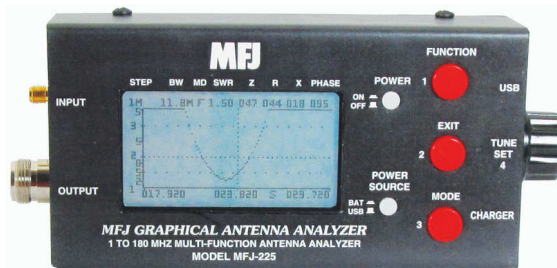
FEMA and Ad Council Give Wireless Alerts

The Federal Emergency Management Agency (FEMA) and Ad Council have developed public service advertisements (PSAs) that talk about Wireless Emergency Alerts (WEAs). This link, http://www.ready.gov/alerts, is a site where you can watch one of the PSAs. The PSAs were launched during Hurricane Preparedness Week as part of the *Ready* campaign.

Recent severe weather and the start of the Atlantic hurricane season reinforce the need to familiarize yourself with the look, sound, and authenticity of real-time WEAs. Go to http://www.fema.gove/wireless-emergency-alerts.

What to expect with the WEAs:

♦ WEAs are emergency messages sent by local authorized government authorities through wireless carriers' networks.

♦ The alerts include a special tone and vibration.

♦ The messages are no more than 90 characters and contain the type and time of the alert, any action individuals should take, and the issuing agency.

♦ Types of alerts include extreme weather such as hurricanes, tornados, or flash flood warnings, Amber alerts, and alerts issued by the U.S. President.

♦ Alerts are broadcast from area cell towers warning everyone in range with a WEA-capable device of a potential emergency situation.

♦ You do not need to register to receive WEA notifications. You will automatically receive alerts if you have a WEA-capable phone and your wireless carrier participates in the program.

To encourage, educate, and empower Americans to identify WEAs so they can take steps to prepare for emergencies, including natural and man-made disasters, FEMA and the Ad Council are unveiling new PSAs. For more information on WEAs and to access radio, TV, and digital PSAs, visit http://www.ready.gov/alerts.

Volunteer for the National APCO Conference

As OCSD Communications & Technology Division Director Robert Stoffel, KD6DAQ, mentioned in the May 2013 issue of *NetControl*, the largest national public-safety communications conference is coming to Anaheim this August. "APCO 2013" is being held at the Anaheim Convention Center and Anaheim Marriott Hotel on August 18-21, 2013. You will certainly want to walk the exhibit hall on Monday, August 19th, or Tuesday, August 20th, to see an impressive display of the latest public-safety communications equipment.

Adriana Spirescu from the Sheriff's Communications & Technology Division is serving as the volunteer coordinator for this conference and is seeking volunteers who would like to serve in a variety of ways. You will meet other individuals in the public-safety sector who will be attending from around the world. As a volunteer, you will receive a free day pass for each four hours of service, as well as a Volunteer Shirt. Certain meals will be provided for volunteers, consisting of breakfast and lunch on the day of service. Volunteers will serve in a variety of ways, including classroom monitors, staffing the registration desk, serving as ushers, and operating as a dispatcher in the command center.

A volunteer application is available if you would like to participate. If you have any specific questions about volunteering for this event, please contact Adriana at 714-628-7150.

Powerwerx Offers DB-750X Dual-Band Mobile

Powerwerx has introduced the Model DB-750X dual-band VHF/UHF 750-channel commercial mobile radio with 10 memory banks. Frequency range is 136-174 MHz (which includes the 2-meter ham band) and 400-490 MHz (which includes the 70-centimeter ham band). Power output is 50 watts on VHF and 40 watts on UHF. It operates on single receive or true dual receive (V+V, U+U, V+U).

The radio features narrowband transmit (for 2.5 kHz steps) except on the amateur bands (selectable wide or narrow receive), AM aircraft receive (108-136 MHz), and user-selectable multicolored LCD display. This land-mobile multiband radio (FCC Part 90 certified for commercial use) ships keyboard-locked. The RPS-DB750X-USB programming software kit is required to initially unlock and program this radio before use.

Other features include a seven-character alphanumeric display, and dual receive operation with separate volume controls.

Standard accessories include removable control head, DTMF microphone, DC power cable, and mobile mounting bracket (with mounting screws). The price is $299.00. The optional MBXCOVR radio cover enclosure, which mounts to the optional SS-30DV power supply for base-station use, is $24.99. The SS-30DV is $119.99. The RPS-DB750X-US programming kit is $39.99.

Powerwerx DB-750X VHF/UHF transceiver with optional MBXCOVR radio cover enclosure and SS-30DV power supply in a base-station configuration.

Thanks to Jim Carter, WB6HAG, for His Service

RACES Sgt. Jim Carter, WB6HAG, has announced his resignation from County of Orange RACES, effective July 1, 2013. He has been offered to join a new business venture that will require most of his time and attention. Also, a project with OCSD is taking many hours of his time to implement.

Because Jim is still a volunteer with OCSD Community Services, he will remain a liaison between Orange County Communications and the unit he serves for RF licenses or frequency coordination.

Jim has served in OCRACES for many years, heading up our amateur television (ATV) efforts and coordinating our ATV activities during drills and activations. He developed informative "how to" documents for us on ATV, and assisted city RACES units in ATV/SSTV implementation. We will miss Jim and the skills he provided us for many years, not only in ATV but also other areas of radio communications. He is an ardent follower of FCC rulings and kept us advised of the Commission's proceedings. Thanks, Jim, for your service and your friendship.

July 2013

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 *OCRACES Meeting* & *Weekly ACS Net*	2	3	4 *Independence Day*	5	6
7	8 *Weekly ACS Net*	9	10	11	12	13
14	15 *Weekly ACS Net*	16	17	18	19	20
21	22 *Weekly ACS Nets* & *SWACS Radio Test*	23	24	25	26	27
28	29 *Weekly ACS Net*	30	31			

Upcoming Events:

- **Jul 1:** OCRACES Meeting, 1930, 840 N. Eckhoff Street, Suite 104, Orange; Raspberry Pi microcomputer
- **Jul 22:** OCRACES 2-m, 70-cm, 6-m nets, 1900, 1915, 1930; Cal EMA 75-m net, 2000; SWACS Frequency/Radio Test, 2015
- **Aug 5:** OCRACES Meeting, 1930, Orange County EOC; Severe Fire Weather Patrol training
- **Aug 17-21:** APCO 2013, Anaheim Convention Center; call Adriana Spirescu at 714-628-7150 to volunteer
- **Sep 16:** City/County RACES & MOU Meeting, 1915, 840 N. Eckhoff Street, Suite 104, Orange
- **Sep 18:** SONGS Dress Rehearsal Exercise (primary and alternate players)
- **Oct 5:** City/County RACES & MOU Drill, 0900-1100
- **Oct 23:** SONGS Evaluated Exercise (primary players only)

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 (off the air)
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: Off the air until reprogrammed to new coordinated frequencies

*Primary Net—Mondays, 1900 hours

RACES Program Manager
Delia Kraft, KF6UYW
714-704-7979

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

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

Assistant Radio Officers (Sergeants)
Jack Barth, AB6VC
Chuck Dolan, KG6UJC
Ernest Fierheller, KG6LXT

County of Orange RACES

OCSD/Communications & Technology
840 N. Eckhoff St., Suite 104, Orange, CA 92868-1021
Telephone: 714-704-7979 ● Fax: 714-704-7902
E-mail: ocraces@comm.ocgov.com

County of Orange RACES

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

Telephone – 714-704-7979
Fax – 714-704-7902
E-mail – ocraces@comm.ocgov.com

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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	**Harvey Packard** KM6BV	**Ralph Sbragia** W6CSP	**Delia Kraft** KF6UYW	**Marten Miller** KF6ZLQ	**Robert Stoffel** KD6DAQ
Jack Barth AB6VC	**Chuck Dolan** KG6UJC	**Ernest Fierheller** KG6LXT	**John Bedford** KF6PRN	**Randy Benicky** N6PRL	**Bill Borg** KG6PEX	
Jim Dorris KC6RFC	**Nancee Graff** N6ZRB	**Ray Grimes** N8RG	**Walter Kroy** KC6HAM	**Martin La Rocque** N6NTH	**Brian Lettieri** KI6VPF	**Sue Mickelson** KJ6LCJ
Fran Needham KI6UJS	**Marty Oh** KJ6RWE	**Tom Riley** K6TPR	**John Roberts** W6JOR	**Joe Selikov** KB6EID	**Tom Tracey** KC6FIC	**Brian Turner** KI6WZS