May 2016

County of Orange RACES
NetControl

Newsletter of the County of Orange Radio Amateur Civil Emergency Service

The Next OCRACES Meeting Is

**May 2, 2016
1930 Hours**

**840 N. Eckhoff Street,
Suite 104, Orange**

**Map Reading Refresher
Tom Riley, K6TPR**

Orange County Sheriff's Department
Communications & Technology Division

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

EchoLink

It's been quite awhile since I've talked about EchoLink in this column. I was reminded of its potential during an emergency by reading an ARRL article about how it has proved useful in handling traffic in Ecuador after their recent 7.8 magnitude earthquake.

Michigan physician Rick Dorsch, NE8Z/HC1MD, and his wife Maria, HC1MM, also a physician, have been helping to handle health-and-welfare traffic via EchoLink, which is connected to the Ecuadorean interfaced 2-meter repeater network.

"EchoLink is actually a fantastic amateur radio service," Dorsch told ARRL. "It has become extremely useful for the hams to reach out to the outside world via 2 meters."

A lot of health-and-welfare traffic is headed not only between Ecuador and the United States but also to Spain, Chile, and elsewhere, Dorsch reported. He said more bilingual Spanish-English speakers are needed on the HC1BG-R EchoLink channel.

In case of a major disaster in our area, requiring communications via EchoLink, the OCRACES 2-meter repeater currently is accessible via EchoLink, thanks to Jim Dorris, KC6RFC. You can connect to the repeater by using EchoLink software on your computer or laptop, or via an Echo-Link app on your smartphone, through the KC6RFC-R node. Bob McFadden, KK6CUS, has also provided an EchoLink connection to the repeater.

Besides using EchoLink during an emergency, OCRACES members may also check into the Monday evening 2-meter net via EchoLink when they are out of the area. For example, Fran Needham, KJ6UJS, has often checked into the net during his trips to the Midwest, using the EchoLink app on his smartphone. Because of network delays, net control must pause a few seconds to allow the transmission from the remote member to be received.

Software may be downloaded from the EchoLink Web site at http://www.echolink.org. The app may be downloaded from the iPhone App Store or the Android Market.

EchoLink interfaces are available for use with various radios, if you wish to set up your own EchoLink node, which functions as a gateway between local RF signals and the EchoLink network.

If you have a Kenwood TM-V71A or TM-D710G transceiver, setting up an Echo-link node is easy. Those radios have a built-in interface. Simply use an optional PG-5H cable (or homebrew cable) to connect the radio directly to your computer (which must be connected to the Internet). As pointed out on the EchoLink Web site, these Kenwood radios support EchoLink "node memories," for use when mobile. You can store the node number of your favorite EchoLink nodes in the transceiver's memory. When you are in range of a local EchoLink node, you can use a shortcut command to have the radio send the correct DTMF sequence to connect the local EchoLink node to a distant EchoLink node.

City/County RACES & MOU Exercise: May 7th

The next City/County RACES & MOU Exercise will be on Saturday, May 7, 2016, from 0900 to 1100 hours. OCRA-CES members are asked to arrive at the EOC RACES Room by 0830 hours for orientation. Some members, especially those who need training on setting up the OCRACES van, will instead be deployed with the van to the Fullerton Airport during the exercise. May 7th is Fullerton Airport Day, and this will be an opportunity to show our capabilities to the public attending this event. (See page 3 for more information about Fullerton Airport Day.)

Our May and October countywide exercises stress the emergency amateur radio communications network, discovering the best and worst of amateur emergency radio traffic protocols, communications equipment linkage, message corruption, and exchange rates, while providing each City RACES unit a platform to work with other organizations such as the Hospital Disaster Support Communications System (HDSCS). The purpose of the exercise is to expose strengths and weaknesses that enable informed decision making in the future among the various volunteer emergency communications units, strengthening the handling of an actual emergency.

The test event will exercise the Orange County amateur emergency communications system and determine the quality of its performance set against a disaster event. The focus of the exercise is to determine:

- Quality and quantity of radio message exchanges
- The digital capability of the system through radio aided e-mail or Winlink message exchange

City RACES teams will generate outgoing messages (maybe an e-mail message and one Winlink message), using repeaters and simplex radio between OCRACES and participating cities.

The disaster scenario for the exercise will be a massive power outage caused by terrorists hacking into the power infrastructure and coordinated explosions at critical points of the power grid, affecting several states for several weeks. EOCs and repeaters will be operational, simulating the functioning of generators on existing fuel, but some messages will reflect expected generator failure due to depletion of fuel. Power companies estimate that it will take at least several weeks and perhaps months to restore power. Public-safety systems in Orange County are expected to stay operational for at least two weeks, due to storage of fuel for site generators. After that, communications will be spotty, and RACES repeaters will eventually go off the air, requiring simplex operations. Delivery and pumping of fuel will become difficult to impossible without power. Air conditioners will not run, and refrigeration will not be available for food storage within 10 days. Without power and a shortage of fuel, civil unrest is expected before the end of the month, lasting possibly for several months. Coordination of RACES communications with law enforcement and all other public-safety agencies is essential. Martial law is expected to be enacted within two weeks, to battle looting and violence.

The drill will consist of four elements—Voice, Simplex, HF (utilizing Near Vertical Incidence Skywave propagation), and Winlink. Each City shall construct messages (a minimum of eight), then transmit to a predetermined set of other cities while exchanging message traffic with OCRACES and the HDSCS. In the Voice element, communications will be via primary County, City, and MOU frequencies as listed in the 2016 *Official RACES Guidebook*. City RACES and MOU units will call County RACES on the 449.100 MHz repeater (primary) or on the 146.895 MHz (secondary) repeater. County RACES might also accept some traffic on the 52.620 MHz repeater, although this resource will be limited. Messages sent to HDSCS stations should be addressed to a specific hospital. In the Simplex element, primary simplex frequencies as listed in the 2016 *Official RACES Guidebook* should be used, with the exception of the OCRACES primary simplex frequency, which has been changed to 146.595 MHz. The secondary OCRACES simplex frequency is 446.000 MHz. The HF element will test 40-meter countywide SSB communications, using NVIS propagation, on 7250 kHz lower sideband. In the Winlink element, all agencies should use their tactical Winlink addresses (such as CAORCO for OCRACES). Stations on Winlink must have previously procured a password for their Winlink account, to be used for Secure Login. Otherwise, they will not be able to connect to the worldwide Winlink network. (See article on page 4.)

Messages shall be on the approved modified ICS-213 form. In the upper left of that form, a message number shall be inserted by the originating agency (and given when transmitting the message). The message "number" shall begin with letters designating the agency of origin, such as (for message number one) A-1 (Anaheim), BREA-1 (Brea), BP-1 (Buena Park), CM-1 (Costa Mesa), CY-1 (Cypress), DP-1 (Dana Point), FV-1 (Fountain Valley), F-1 (Fullerton), HB-1 (Huntington Beach), IDEC-1 (Irvine), LB-1 (Laguna Beach), LN-1 (Laguna Niguel), LW-1 (Laguna Woods), LP-1 (La Palma), LA-1 (Los Alamitos), MV-1 (Mission Viejo), NB-1 (Newport Beach), ORG-1 (Orange), OC-1 (Orange County), OCV-1 (OCRACES van), PL-1 (Placentia), SC-1 (San Clemente), SJC-1 (San Juan Capistrano), SB-1 (Seal Beach), W-1 (Westminster), ARC-1 (American Red Cross), HD-1 (Hospital Disaster Support Communications System), and SKY-1 (Orange County SKYWARN). In addition to sending outgoing message traffic, each agency must have someone monitoring their primary frequency for incoming message traffic.

Next OCRACES Meeting: May 2nd

The next County of Orange RACES meeting will be on Monday, May 2, 2016, at OCSD Communications & Technology Division, 840 N. Eckhoff Street, Suite 104, in Orange. Our featured speaker will be Tom Riley, K6TPR, who will give us a refresher course on map reading. Important events will be discussed at this meeting, such as the next City/County RACES & MOU ACS Exercise on Saturday, May 7, 2016 (0900-1100 hours), and Field Day on Saturday and Sunday, June 25-26, 2016, at Craig Regional Park in Fullerton.

OCRACES to Exhibit at Fullerton Airport Day

During the City/County RACES & MOU ACS Exercise on May 7, 2016, OCRACES will deploy its emergency communications response vehicle to the Fullerton Airport. Some OCRACES members who need training in setting up the van will be deployed with the van rather than reporting to the Loma Ridge EOC for the exercise. They will communicate with Loma Ridge and some City RACES units during the exercise. May 7th is Fullerton Airport Day, and this will be an opportunity to show our capabilities to the public attending the event. The OCSD Aero Squadron will also be exhibiting.

The van must arrive well before 0830 hours for setup, and to begin communicating during the exercise at 0900 hours. The exercise will end at 1100 hours. Gates will open to the public at 1000 hours. We will be required to participate in the event until 1600 hours, when teardown is permissible. Here is the planned schedule of events:

- 1000-1300: ATCT (Air Traffic Control Tower) tours
- 1000-1115: Helicopter rides
- 1115-1300: Runway unavailable
- 1115-1125: California Highway Patrol chase
- 1130-1150: West Coast Ravens
- 1200-1215: OCFA water drop
- 1215-1245: Opening ceremony/color-guard/remarks
- 1245-1300: Air Combat (ACUSA) formation fly-over
- 1300-1600: Airplane/helicopter rides
- 1330: Fullerton Police Department K9 demonstration
- TBD: Goodyear airship

The Orange County Fire Authority and Fullerton Fire Department, the Anaheim and Fullerton Police Departments, the California Highway Patrol, other public agencies, airport businesses, and the Civil Air Patrol will participate.

W6TNY Tells How to Build Battery Box

Thanks to Tony Gawel, W6TNY, for his interesting presentation at the April 4th OCRACES meeting on how to build a battery box for emergency communications. This was a follow-up on his descriptive article in the March 2016 issue of *NetControl*. His goal with the article and the lecture was to get radio amateurs involved and motivated to once again build things. His secondary purpose was to get radio amateurs prepared. He hopes us RACES members are interested in building some kind of an emergency go box for our homes and vehicles. Tony believes we are forgetting how reliant we are getting on technology and are ignoring what is needed to keep this technology going. Tony has provided the latest version of the build instructions and spread sheet. These are posted in the file section of the ocsd-races Yahoo! Group. If you are a member of the Group, go to https://groups.yahoo.com/neo/groups/ocsd-races/info and click on "Files" at the top of the page. Then click on the "Emergency Communications Battery Box by Tony Gawel, W6TNY" folder to go to his two files, so you can start building the battery box!

Tony Gawel, W6TNY, describes how to build a battery box for emergency communications, at the April 4th OCRACES meeting.

Winlink Now Requires "Secure Login"

The Winlink Development Team advises that if you have not logged into the Winlink Web site (http://www.winlink.org) recently, you're missing news and important support announcements. The site has tools for monitoring the system, making quick changes to your account (such as quickly adding a forwarding address or a password-recovery address), and a convenient Webmail program for sending and receiving mail when you're away from your radio. It's also where you can get a password if you want to use "Secure Login" to avoid on-air call-sign spoofing. "Secure Login" is supported by RMS Express, Airmail, and BPQ32, and soon other clients will too. "Secure Login" became required for all accounts on April 15, 2016, and is no longer optional to enhance the privacy and protection of the Winlink community. Users need to have entered a password and turned on "Secure Login." No other changes had to be made. The transition that took place on April 15th did not require an operational change.

For RMS Express, to set a password and "Secure Login":
1. Connect your computer to the Internet.
2. Run RMS Express.
3. Click the menu item "Files," then "RMS Express Setup."
4. Enter your password in the field next to your call sign, and check the "Require password on connections (Enable Secure Login)" checkbox.
5. Enter a password recovery e-mail in the appropriate field. This must be a non-Winlink address.
6. Click "Update."

If you are using a different Winlink e-mail client program such as Paclink, you must follow these steps:
1. Go to http://www.winlink.org, and select the "My Account" tab.
2. If you haven't previously selected a password, select one now. Otherwise, log in.
3. Navigate to the screen that lists your account information, and click "Edit."
4. Scroll down and enter your password-recovery e-mail.
5. Check the box to enable Secure Login.
6. Click "Save" at the bottom of the screen
7. Last, find the place in your Winlink client program where you can enter your password, and set it for the client.

Your Winlink account is a use-it or lose-it thing. If you have not used your client program via radio or telnet for 400 days (using Webmail online doesn't count), your Winlink account will be automatically purged and your correspondents will receive non-delivery messages. If you have used your client software recently, you need not be concerned.

If your account is purged—no worries. It is easy to create a new account when you need Winlink radio e-mail again. Just configure and use your client program, make a connection, and your account is re-created.

The Winlink Development Team would like registered Winlink users to contribute their fair share of the cost of running the system. A USA tax-deductible donation of $25 annually is suggested. The Team reminds that there are casual users caught in a pinch where Winlink use has contributed to several lives and property. They say it happens every few weeks. Donations are accepted online at https://www.arsfi.org/donate.aspx.

"ESDR" Portable SDR HF Rig Due Soon

News about a new "ESDR" portable SDR HF transceiver being developed in China by BG5ROJ has been leaked on http://www.qrpblog.com by Razvan, YO9IRF/M0HZH. It is supposed to be released in August 2016. It features a large color display, digimode decoder/keyer, two USB ports, and micro-SD card for storing the log. A keyboard can be connected for standalone digital modes use. It runs on 12.6 Vdc and the maximum output power is 30 W. Its large color LCD shows supply voltage, current draw, battery level, final stage temperature, time, and date. It uses a 32-bit microprocessor from the Microchip PIC32MZ family. Hopefully a spectrum/waterfall display will be ready by August. Expected price is around $500.00.

K6TPR Hides in San Juan Capistrano

Tom Riley, K6TPR, was the fox on Monday, April 18, 2016, on the monthly cooperative T-hunt. He turned on the fox box immediately following the 2-meter OCRACES ACS net, in a shopping center south of Ortega Highway and east of Rancho Viejo Road, east of the I-5 Freeway in San Juan Capistrano. Within a few minutes, Richard Saunders, K6RBS, from Mission Viejo, found the fox, followed shortly by a team consisting of Patrick Williams, KJ6PFW, and Eric Bowen, W6RTR, of MESAC, and Bill Rose, KA6HMS, of HBRACES. Third place was taken by Ron Allerdice, WA6CYY, from Costa Mesa. Gray Bickford, WA6BJY, of San Juan Capistrano RACES (Tri-Cities RACES), came in fourth. Ken Bourne, W6HK, of OCRACES, came in fifth. Bob McFadden, KK6CUS, of OCRACES, took sixth place.

The next cooperative T-hunt will be held on May 16, 2016 (the third Monday in May), immediately following the OCRACES 2-meter net (approximately 7:20 PM). The fox will transmit on the input (146.295 MHz) of the 146.895 MHz repeater. Hunters will

At the fox's den are (left to right) Eric Bowen, W6RTR, Tom Riley, K6TPR (the fox), Patrick Williams, KJ6PFW, Richard Saunders, K6RBS, Bill Rose, KA6HMS, and Gray Bickford, WA6BJY.

compare bearings via the 449.100 MHz repeater, and are encouraged to beacon their positions via APRS throughout the hunt. The fox will be hiding in a sector of Orange County (to be announced a few days prior to the hunt) on paved, publicly accessible property. No fees will be required to drive directly to the fox.

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

Fox-hunt loops and beams are available from Arrow Antenna and HRO, including the Arrow Model FHL-VHF fox-hunt loop (covers 1 MHz to 600 MHz) and the Arrow Model 146-3 three-element portable hand-held yagi. The Arrow OFHA 4-MHz offset attenuator can be useful when close to the fox, to prevent receiver overload. An all-mode transceiver is quite useful, allowing

Bob McFadden, KK6CUS (left), checks out the beautiful new T-hunting vehicle owned by Ron Allerdice, WA6CYY.

hunters to switch to the SSB or CW mode for detecting extremely weak signals, or to switch in a built-in attenuator, reduce RF gain, or tune slightly off frequency when dealing with extremely strong signals. Some hunters use the DF2020T radio direction finder kit, which is a Doppler system available from Global TSCM Group, Inc. (http://www.kn2c.us). A very similar system is the MFJ-5005 Doppler direction finder. Other useful tools are the Foxhunt app for iPhones and the Triangulate app for Android phones. For some excellent information on T-hunting, see http://www.homingin.com.

Anker Introduces 434-Wh PowerHouse

The new Anker Model AK-A1701011 PowerHouse is a compact 434-Wh off-grid power supply for camping or emergency backup, capable of powering lamps, phones, laptops, TVs, miniature refrigerators and other small appliances, and, of course, amateur radio stations. It has triple output modes—a 12-volt car socket, an AC outlet, and four fast-charging USB ports. It consists of a 12-volt lithium-ion battery, AC inverter with 10-foot cable, and a 2-foot micro USB charging cable. Recharging options include a wall outlet (10 hours) or solar (16 hours, under direct sunlight). Its dimensions are 7.9 × 6.5 × 5.7 inches, and it weighs 9.3 pounds.

The Anker PowerHouse would be handy for RACES field operations. It is available from Amazon.com.

Anker PowerHouse.

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 in Orange County.

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

w6hk@ ocraces.org

Irvine RACES (IDEC)

The next IDEC VickiBrek no-host breakfast meeting will be on Saturday, May 14, 2016, at 0800 hours, at Knowlwoods, Sand Canyon and Burt. Visitors are welcome.

Laguna Woods RACES

The next meeting of the Laguna Woods Amateur Radio Club (W6LY) is on Thursday, May 5, 2016, from 10:30 AM until 12:00 noon, at Clubhouse 1, Dining Room 3. Club meetings are on the first Thursday morning each month, January through June and September through December. Licensed amateur radio operators living in the village are welcome to join the club at any time of the year. Members and Laguna Woods Village residents and their guests only may attend the meetings.

Seal Beach/Los Alamitos RACES

The next regular meeting of Seal Beach/ Los Alamitos RACES is on Wednesday, May 11, 2016, at 7:00 PM, at Fire Station 48.

County of Orange RACES

Congratulations to OCSD Emergency Communications Coordinator Lee Kaser, KK6VIV, and Denise Noordman, who were married on April 2, 2016, in a private ceremony under a majestic canopy of coastal oaks at the picturesque Oak Canyon Nature Center in Anaheim Hills. Lee and Denise met while working together at the Emergency Communications Bureau, with Lee on the Control One side and Denise on the other side dispatching for Station 18. They both share interests in traveling and camping along the California coast with their dog Summer, a Great Pyrenees.

On April 29, 2016, a crowd of friends, OCSD/Communications employees, Sheriff Sandra Hutchens, Undersheriff Don Barnes, Susan Markey, OCSD Executive Director Brian Wayt, OCSD/Communications Assistant Director Steve Miller, Program Support Manager Delia Kraft, KR6AFT, Walter Wilson, K7WWW, Gary Gray, W6DOE, Joe Saddler, WA6PAZ, and many other noteworthy people gathered for lunch at the Prime Cut Café in Orange to give best wishes to retiring Director Robert Stoffel, KD6DAQ. Master of Ceremonies was OCSD Emergency Communications Manager Lee Kaser, KK6VIV. OCRACES members attending included Randy Benicky, N6PRL, Ken Bourne, W6HK, David Corsiglia, WA6TWF, Ray Grimes, N8RG, Martin La Rocque, N6NTH, Bob McFadden, KK6CUS, Harvey Packard, KM6BV, and Brad Russo, KB6GPM.

May 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 *OCRACES Meeting* & *Weekly 2 m ACS Net*	3	4	5	6	7 *City/County RACES & MOU Drill*
8 *Mother's Day*	9 *Weekly 2 m ACS Net*	10	11	12	13	14 *Weekly 40 m ACS Net*
15	16 *Weekly 2 m ACS Net* & *Cooperative T-Hunt*	17	18	19	20	21 *Weekly 40 m ACS Net*
22	23 *Five-Band ACS Nets* & *Cal OES Nets*	24	25	26	27	28 *Weekly 40 m ACS Net*
29	30 *Memorial Day* & *Weekly 2 m ACS Net*	31				

Upcoming Events:

- **May 2:** OCRACES Meeting, 840 N. Eckhoff Street, Suite 104, Orange, 1930-2130 hours
- **May 7:** City/County RACES & MOU Drill and Fullerton Airport Day
- **May 16:** Cooperative T-Hunt on input of 2-meter repeater, 1920 hours
- **May 23:** Five-band ACS nets and Cal OES Nets at OC EOC
- **May 30:** Memorial Day (active net)
- **June 13:** City/County RACES & MOU Meeting, 840 N. Eckhoff Street, Suite 104, Orange, 1920-2130 hours
- **June 25-25:** Field Day, Craig Regional Park, Fullerton

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

40 m: 7250 kHz SSB (City/County/MOU Net—Saturdays, 1000 hours)
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: 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: 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

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

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

Assistant Radio Officers (Sergeants)
Jack Barth, AB6VC
Ernest Fierheller, KG6LXT
Bob McFadden, KK6CUS
Tom Tracey, KC6FIC

County of Orange RACES

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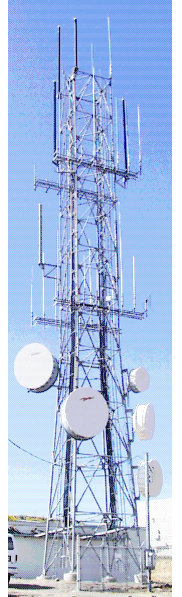**E-mail: ocraces@comm.ocgov.com**

*"W6ACS ...
Serving
Orange County"*

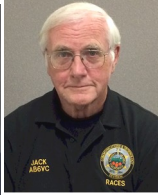# Meet Your County of Orange RACES Members!

Ken Bourne W6HK	Scott Byington KC6MMF	Harvey Packard KM6BV	Jack Barth AB6VC	Ernest Fierheller KG6LXT	Bob McFadden KK6CUS	Tom Tracey KC6FIC
Randy Benicky N6PRL	Roger Berchtold WB6HMW	David Corsiglia WA6TWF	Jim Dorris KC6RFC	Nancee Graff N6ZRB	Ray Grimes N8RG	Walter Kroy KC6HAM
Martin La Rocque N6NTH	Fran Needham KJ6UJS	Kenan Reilly KR6J	Tom Riley K6TPR	Brad Russo KB6GPM	Tony Scalpi N2VAJ	Joe Selikov KB6EID
Robert Stoffel KD6DAQ	Ken Tucker WF6F	Tom Wright KJ6SPE				Lee Kaser KK6VIV