

# Field Day Was A Lot of Fun

By Ken Larson, KJ6RZ

The joint VCARS/CVARC Field Day event held at the President Reagan Library was a great success. Bob Paull KK6UE and his VCARS Field Day team put in many hours of work preparing for Field Day and coordinating with the President Reagan Library staff. As a result, all of the Field Day activities went very smoothly and everyone had a lot of fun. The dinner served by Jim Crawford KE6CWD and his wife Saturday evening was wonderful. The dinner provided everyone with an opportunity to take a break from radio operations, relax, and socialize for awhile. It was great!

We had 14 radio stations on the air which qualified us as one of the larger Field Day sites. In comparison, most amateur radio clubs participating in Field Day operated 3 to 6 radio stations. Our large number of stations, coupled with operating from the President Reagan Library, drew comments of "well done" from many of the stations that we talked to throughout the United States, Canada, and Caribbean. Our contacts were not limited just to North America, however. Greg Lane K7SDW and Bruce Elbert K6ZB contacted Zambia Africa and Sweden on 20 meter CW and Peter Heins N6ZE logged contacts with Fiji, the Marshall Islands, and Cook Island.

For all amateur radio activities at the Reagan Library, including Field Day, the FCC has issued VCARS the special event call sign N6R (Nancy 6 Reagan) in honor of the former President and First Lady. This call sign was used by all of our stations during Field Day.

Field Day provides amateur radio clubs and individuals the opportunity to test their emergency preparedness by setting up and operating radio station in the field for 24 hours. It is also a contest. Each Field Day site records the number of contacts that it has made from 11 AM PDT Saturday morning to 11 AM Sunday morning. This information is sent in to the Amateur Radio Relay League (ARRL). The ARRL compiles the information and publishes the results in QST Magazine later in the year, usually October or November). For each class of operation, the Field Day site logging the largest number of contacts has the honor of seeing their call sign listed first. The class of operation is determined by the number of stations operating at that site, the type of power being used (battery power, commercial electrical power, etc.), plus other factors. Our class was 14A, or 14 Alpha, since we had 14 stations operating at a field site (a non-residential or commercial site) and were running off battery power. When making a contact, each station is required to identify its class as well as the ARRL Section in which it is located. The United States and Canada are divided up into a total of 80 Sections. Our Section is the Santa Barbara Section which covers the counties of San Luis Obispo, Santa Barbara, and Ventura Counties. In many cases a Section will be an entire state such as the Idaho Section. Each time that we made a contact we identified ourselves as N6R 14 Alpha Santa Barbara.

Our ability to contact stations throughout the United States and Canada, plus a number of foreign countries, was particularly impressive when you consider that all of our stations were operating at only 5 watts from battery power! Operating QRP (at 5 watts or less) earned us additional points for each station that we contacted. We operated CW on 40, 20, and 15 meters, Digital on 40 and 20, and Phone on 80, 40, 20, 15, 10, 6, and 2 meters plus 70cm, so we had the major operating modes and all the major frequency bands well covered.

Operating QRP presented some significant challenges. The normal procedure for contacting other stations by calling CQ often did not work. With the bands crowded with Field Day stations, most of whom were running 100 watts, other stations could not hear us calling CQ. At 5 watts our signals were simply too weak to be heard. Instead we often had to resort to tuning up and down the bands looking for others stations who were calling CQ. Responding to others in general worked out well since those calling CQ

were listening for us.

An interesting quirk occurred on 80 meter Phone. Sunday morning from 6 to 9AM the band was relatively quiet. Those stations that were left on 80 meters were searching up and down the band looking for last minute contacts. So we selected a frequency and began calling CQ as fast as we could. Since the band was quiet, other stations heard us and responded. On 80 meter Phone we made 1/3 of our contacts in the 3 hour period from 6 to 9AM Sunday morning. During Saturday night and Sunday morning we and logged about 90 contacts.

Peter Heins N6ZE made use of Meteor Scatter communication techniques to compensate for his low power QRP operation on 20 meters. When meteors come through the Earth's atmosphere they leave a trail of ionized gas behind them. These ionized trails allow amateur radio operators on 6 meters, and to some extent on 2 meters, to communicate over much longer distances than normally would be possible. However, the signals received from a meteor's ionized trail are weak and tenuous. So special operating techniques, consisting of breaking a message up into very small segments and repeating each segment multiple times, have been developed to communicate by meteor scatter. Using this same technique allowed Peter to make Field Day contacts with stations that were having a particularly hard time hearing him. Peter also found that announcing that he was operating QRP attracted the interest of other stations who then worked harder to "pull" Peter in. Using these novel approaches, Peter made over 150 contacts on 20 meter Phone to 54 ARRL Sections, including Hawaii and Alaska, plus his contacts with islands in the Pacific.

Bruce Elbert K6ZB, Greg Lane K7SDW, and Tom Stough W0UFC were very successful on 20 meter CW. Using a tri-band beam on top of Vern Potter's W6NCT portable 30 foot tower, they were able to log 8 pages of contacts. According to Bruce, the 20 meter band was wide open and they worked all of the stations that they could possibly work. During peak periods they were running 20 to 30 contacts an hour. Good band conditions finally died out at around 2AM Sunday morning and then returned at 6AM as the sun rose.

Rick Tate KQ6NO, Tom Stough W0UFC, and Ben Champion NE6NY also did well on 15 meter CW logging over 80 contacts. Rob Hanson W6RH and Ed Hakovek KE6URX logged a similar number of contacts on 15 meter Phone. Surprisingly 15 meters remained open till about 10PM Saturday night and then reopened around 6AM Sunday morning as the sun came up. Interestingly, an unusually large number of the 15 meter Phone contacts were with Georgia and Hawaii stations.

Steve Curtis KE6SCS and crew worked 75 stations on 40 meter Phone. The band was open throughout the day and particularly good at night. Again, running QRP power was a real challenge. Steve could hear far more stations than he could work. Using an Inverted V dipole antenna, most of the stations that Steve worked were west of the Rocky Mountains. Sometimes really strange things happen. Steve thought that he recognized the call sign for one of the stations that he worked, but then thought that it couldn't be because the station was transmitting from the mountains north of Sacramento instead of from the San Francisco area where it should have been. It turned out that Steve was right. The station was that of his sister's brother-in-law. The brother-in-law was on a camping trip up in the mountains.

Neil Waybright KG6QEL worked with Carl Jelinek N6VNG and Mike Pershing KD6IJF on 2 meter Phone (SSB). Despite using an 11 element beam their results were disappointing. They logged only 25 stations, most of which were in the L.A. Section and the Orange Section (Orange County and San Bernardino County). According to Neil, they could hear a lot of stations but could not work them. Being limited to 5 watts in addition to the surrounding hills and mountains made contacts on 2 meters tough. However, Neil said that he very much enjoyed field. For Neil, the most interesting part of Field Day was seeing some of the other stations, learning operating procedures, how to erect antennas in the field, and

what to keep in your Field Day kit. According to Neil, it was just a fun event!

20 and 40 meter Digital PSK31 also turned out to be a challenge. The 40 meter Digital station was located on top of the hill, along with the 2 meter station, overlooking the Reagan Library. Also on the same hill was a portable cell phone tower. Noise from the cell phone generator blocked out all but the strongest 40 meter PSK31 signals according to station operator Mike Gogesch KG6KZA. As a consequence the 40 meter Digital team worked only 10 stations.

A variety of antennas were used for Field Day including multi-element beams and Inverted V wire antennas. Fred Martin KI6YN on 40 meter CW and Rob Hanson W6RH on 15 meter Phone used Hamstick dipoles. A Hamstick is a single band antenna designed for use as a mobile vertical antenna on a car or truck. A Hamstick is made of a fiberglass rod with wire wrapped around it and roughly a 3 foot stainless steel whip at the upper end. The overall antenna is about 8 feet long. The manner in which the wire is wrapped on the fiberglass rod determines the frequency band on which the antenna operates. Fred took two 40 meter Hamsticks, connected the base of one to the center lead of a coax cable and the base of the other to the coax shield, and then mounted them horizontal on top of a 30 foot pole to form a shortened portable 40 meter dipole. Rob did the same thing using 15 meter Hamsticks to form a 15 meter dipole, also mounted on the end of a pole about 25 to 30 feet up. We were able to perform an interesting experiment with the 15 meter Hamstick dipole. We had a third 15 meter Hamstick that was mounted in the normal manner as a mobile vertical antenna on top of the RV that served as the location for our 80 meter and 15 meter Phone stations. We ran the coax feed lines from both antennas into Rob's antenna tuner, and then switched between the two antennas to see which worked better. Stations received on the Hamstick dipole were consistently louder than the same stations received on the Hamstick vertical. If a barely perceptible increase in signal strength represents a 3db gain, then the Hamstick dipole was achieving a 3 to 5db estimated gain over the Hamstick vertical.

The most interesting antenna was Rick Tate's 15 meter CW antenna. Called a Moxon Rectangle, it consists of a wire horizontal rectangle formed using four radial fishing poles to support the corners of the wire rectangle. The wire rectangle is cut on the two sides of the rectangle to form a two element antenna. The front half of the rectangle is the driven element while the back half is the reflector. Because of the way it is built, this antenna seems to exhibit characteristics similar to that of a three element 15 meter beam antenna. One of the most interesting aspects of this antenna is that all of the material needed to build it are obtained from a ham's favorite stores (Wal-Mart, Home Depot, and Radio Shack). According to Rick, the antenna is an ideal Field Day antenna since it is light weight, easy to put up and take down, and easy to store since it takes little space when it is disassembled. The directions for building this antenna can be found in the May 2003 QST magazine.

In addition to their Field Day activities, Rob Hanson W6RH, Rory Eikland KG6HCU, and Tom Stough W0UFC got the solar controller installed in the CVARC Comm Van while it was being used as the 6 meter Phone station. The batteries in the Comm Van are now recharging and appear to be coming back to life.

This was an excellent Field Day. Many of the people visiting the Reagan Library stopped by our stations to see what we were doing and to learn something about amateur radio and Field Day. It was great public exposure for the two radio clubs, VCARS and CVARC. We had the opportunity to try different operating techniques and to experiment with a variety of hardware set ups. We had a wonderful dinner Saturday night. And everyone had a good time. Repeating the words of Neil Waybright KG6QEL, it was just a fun event! We are looking forward to doing this again next year.

# CVARC Meeting July 8th

Plan to join us for an exciting CVARC meeting on Thursday July 8 when ARRL Southwest Division Director Art Goddard returns to CVARC as our speaker. The meeting will begin at 7:30 PM at the Elks Lodge on Conejo School Rd. A pre-meeting social and technical session will begin at 7:00 PM.

## Operation Serenade - President Reagan's Final Trip Home

By Ken Larson, KJ6RZ

President Reagan's memorial services, culminating in his funeral at the Reagan Library Friday evening June 11th, was an emotional time for the entire country.

To help ensure that everything would go smoothly, the Office of Emergency Services activated Ventura County RACES. Our assignment as RACES members was to provide radio communications along the motorcade route from Point Mugu to the Reagan Library.

The Community Room at the East County Sheriff's Station served as the Emergency Operations Center (EOC) for the week long President Reagan memorial services. There were over 50 people working in the EOC including people from the Ventura County Sheriff's office, Simi Valley Police Department, CalTrans, California Highway Patrol, United States Secret Service, FBI, FAA and US Coast Guard. The EOC was so busy that we had to share our RACES communications room at the East County Sheriff's Station with the Secret Service Air Defense and FAA personnel. They were very enjoyable and interesting people to work with.

The RACES communications room was our primary net control facility for the motorcade and funeral on Friday afternoon and evening, with Rick Tate KQ6NO and Roy Deschene KE6UMW serving as the net control operators.

It was necessary to use handheld radios along the motorcade route to allow RACES members to move among the crowd to observe events as they occurred. This presented a problem, however, since a single repeater was not able to support handheld radio communications along the entire motorcade route from Point Mugu to the Reagan Library in Simi Valley. To solve this problem, net operations was broken into two subnets. Wayne Woodhams N6WIX organized and ran the Motorcade West net covering the motorcade route from Point Mugu to the top of the Conejo Grade. The Motorcade East net, covered the route from the grade to the Reagan Library and was run from the RACES communications room at East County Sheriff's Station.

All of the situation reports sent into net control by RACES members stationed along the motorcade route were delivered to the EOC Operations desk. A number of times I heard information on the same incidents coming in from law enforcement field personnel as I was delivering our RACES reports to the Operations people, which means that we were often the first to report the incidents. The Sheriff's Department was very impressed and pleased with our ability to report events so quickly.

The Operations people were very interested with our report of someone hiding in the bushes along the motorcade route. They were also very concerned with the truck that stalled along the south bound 101

Freeway in Newbury Park. At first they thought that we were reporting the accident that occurred in the north bound lanes in the same area. But we told them no, we were talking about a truck in the south bound lanes. They became very concerned and dispatched a team to the area immediately. The truck could easily have been loaded with explosives, and the motorcade was only about 20 minutes away. It turned out to be only a stalled truck.

The Sheriff's Department received reports of an elderly person who had fallen and was injured somewhere in the vicinity of Lynn Road and Highway 101 at about the same time we reported the incident to them. However, they didn't know exactly where the injured person was. We did! Using the information that we supplied, the Sheriff's Department was able to quickly direct an ambulance to the injured person.

During the motorcade, the EOC depended upon us for accurate reports on where the motorcade was. They were watching the motorcade on TV screens in the EOC, but the TV pictures were focused in so tight on the motorcade, all that you could see were the cars and the road. They couldn't tell where the motorcade actually was. We provided them with that information. They had a book of maps with two maps per page. Each map covered maybe an eighth of a mile along the motorcade route. They gave us a copy of the book and our job was to tell them on which page and in which map the motorcade was actually in based on reports coming in from our RACES members along the motorcade route.

Throughout the afternoon and evening a second operation was occurring at California Lutheran University (CLU) just off Olsen Road. Most of the funeral guests arrived at CLU and were bussed from there up to the Reagan Library for the funeral. Alumni Hall at CLU was set up as a second command post and staffed by Secret Service, FBI, and Sheriff Department personnel. RACES was directed by the Sheriff's Department to set up a communications facility in Alumni Hall as a backup for the police radios, which we did. That operation was a little more tense than many people realized.

Thursday afternoon we received an Urgent - Priority request from the Sheriff's Department to set up and test our RACES communication equipment at CLU. It turned out that the Sheriff's Department was having trouble getting a simplex police radio link to work from CLU back to East County Sheriff's Station. Because of that problem they wanted to make sure that our RACES equipment could communicate between the two locations so that they would have at least some radio communications available to them. We set up a RACES station in Alumni Hall which, of course, had no trouble communicating through the Bozo Repeater back to the RACES communications room at East County Sheriff's Station. But proving that we had RACES communications was not the end of job. The Sheriff's Department then asked us to get their police radios working for them, which we were very happy to do. There were two problems. First they were trying to use a mag-mount antenna sitting on a wooden table as their police radio antenna. Second, the hills between CLU and East County Sheriff's Station made simplex operations difficult. We solved the antenna problem for them by retuning a 2 meter J-Pole antenna to the police radio band and mounting it on 10 foot antenna mast. That fixed the antenna situation, but the hills were still a problem. So we ended up moving the police radio and antenna from class room to class room in Alumni Hall until we found the best location for simplex operation. That turned out to be the Alumni Hall lobby, so that is where both the RACES and police radio equipment were set up. Jerry Goldman KC6JSO, Dave Gilmore AA6VH, Steve Leong KC6IJM, and Paula Larson KG6FUM ran the CLU operations handling RACES check-ins during the morning and monitoring the arrival and departure of guests throughout the afternoon and evening.

Our RACES team received the following thank you from Sgt. Hibdon, our RACES point of contact at East County Sheriff's Department. I have received comments from many people, including those from the FBI and the Secret Service, who commended us all for the way we pulled things together. They were amazed at how well everything went so smoothly... a difficult task when you have so many agencies and

groups involved in a large scale operation. Anyway, from the Sheriff's Department, from all the other law enforcement agencies involved in the final farewell to Mr. Reagan, and especially from me... thank you for being there. You are the best representation of what volunteerism is about. ☺ Sgt. Hibdon †

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## **Spouse's Amateur Radio License Class**

**By Karl Moody, KE6WVZ**

The Conejo Valley Amateur Radio Class will sponsor another "No Code Technician" Amateur Radio License class which is scheduled to begin on July 20, 2004. This 8 week class will be held on Tuesday evenings from 7:00 p.m. to 8:45 p.m. and will end on September 7, 2004. While this class is open to all interested persons, it is being conducted as a "special" for husbands and wives of current Amateur Radio Operators.

The cost for this class is only \$20.00 which covers only the cost of class materials including the current edition of "Now You're Talking", the ARR. recommended text book for Technician License students. Those who already have the current text book may attend the class free and will be provided all other class materials at no charge.

Classes are taught at the Church of Jesus Christ of Latter-day Saints at 3645 Moorpark Road in Thousand Oaks. The church building is just East of Olson Road on Moorpark. Persons interested in attending this class should contact KARL, KE6WVZ at (805) 523-0622 to register for the class. Space is limited so call now if you wish to take this class. Husbands and Wives of current "Hams" will enjoy this class.

CALL NOW

73's, KE6WVZ, KARL

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## **FCC License Examinations - Next Exam On August 8th**

**By Jeff Reinhardt, AA6JR**

CVARC hosts FCC License Examinations at 8:30 AM on the second Sunday of even numbered months at the Ventura East County Sheriff Station on Olsen Rd. (near the Reagan Library). CVARC conducts exams for all license classes. Exam candidates must bring a form of government issued photo I.D., the original AND a photocopy of any existing license or Certificate of Exam Element Completion, a Social Security (or government issued Taxpayer I.D.) number, and \$12 ARRL VE Exam fee (cash is preferred). No advance reservation is necessary, walk-ins are welcome. Advance notice is needed for special circumstances, such as reading the exam to sight-impaired candidates. If you have any questions, contact CVARC VE Coordinator Jeff Reinhardt at 818-706-3853.

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## Event Calendar 2004

Date	Event	Comments
Jan. 8	CVARC Meeting	General CVARC Meeting
Jan. 11	So. Cal. Orienteering	In Griffith Park near Travel Town Arrive 9:30 AM
Jan. 13	CVARC Radio Class	New class for Amateur Technician Lic.
Feb. 8	FCC License Exam	Begins at 8:30AM at East County Sheriff Station
Feb. 12	CVARC Club Meeting	General Club Meeting
Feb. 20-23	Coyote 4 Play	3 day Cross Country Race in Ojai & Santa Monica Mts.
Mar. 1	CVARC Meeting	General Club Meeting
Mar 13	ARES/RACES Meeting	Open House at East County Sheriff Station
Mar. 14	CROP Walk	Radio Support for T.O. CROP Walk
Mar. 28	Westlake Street Fair	Radio Support for street fair set up
April 8	CVARC Meeting	General Meeting
Apr 24-25	Baker to Vegas Run	Supporting Ventura County Sheriff Dept.
May 8	Cruisin Conejo Bike Ride	Radio communications support for the bike ride
May 13	CVARC Meeting	Club Meeting
May 15	Sea To Summit Bike Ride	Radio support for bike ride from Ventura to Mt. Pinos
June 10	CVARC Club Meeting	General CVARC Club meeting
June 12-13	VHF QSO Party	ARRL VHF QSO Party
June 13	FCC License Exam	Begins at 8:30 am at East County Sheriff's Station
June 26-27	Field Day	CVARC annual field day event, you don't want to miss it!
July 3	Moorpark Fireworks	Support for Moorpark's 3rd of July Fireworks

<b>July 8</b>	<b>CVARC Club Meeting</b>	<b>General CVARC Club meeting</b>
<b>July 20</b>	<b>CVARC Radio Class</b>	<b>Spouses Amateur Radio License class</b>
Aug. 8	FCC License Exam	Begins at 8:30 am at East County Sheriff's Station
Aug. 12	CVARC Club Meeting	General CVARC Club meeting
Sept. 9	CVARC Club Meeting	General CVARC Club meeting
Sept. 11-12	VHF QSO Party	ARRL VHF QSO Party
Sept. 25	Country Days	Moorpark country Days Parade ( tentative date)
Oct 10	FCC License Exam	Begins at 8:30 am at East County Sheriff's Station
Oct. 14	CVARC Club Meeting	General CVARC Club meeting
Nov 11	CVARC Club Meeting	General CVARC Club meeting

## **Radio Amateur Civil Emergency Service**

Ventura County Area 2 R.A.C.E.S. members are encouraged to check in every Tuesday night at 7:00 pm on the Area 2 Check-in Net. Specific ARES/RACES times and frequencies are as follows:

### **ARES/RACES Times And Frequencies**

<b>Area</b>	<b>Time</b>	<b>Mode</b>	<b>Frequency</b>	<b>PI</b>	<b>Repeater</b>
County	7:30-8 pm	Voice	146.880 -	127.3	WA6ZTT
County	7:30-8 pm	Voice	224.020 -	127.3	WB6ZTR
County	Before 6:30 pm	Packet	145.710	No pl	Hospital Net
County	RACES Simplex	Voice	147.570	No pl	_____
Area 1	7:00-7:30 pm	Voice	147.930 -	127.3	WB6WEY
<b>Area 2</b>	<b>7:00-7:30 pm</b>	<b>Voice</b>	<b>147.885 -</b>	<b>127.3</b>	<b>Bozo - N6JMI</b>

Area 2	Simplex	Voice	147.555	No pl	—
Area 2	Backup Repeater	Voice	146.850 -	94.8	Grissom - K6AER
Area 2	Amgen Repeater	Voice	449.440 -	131.8	KE6SWS
Area 3	7:15-7:30 pm	Voice	147.150 +	127.3	WB6ZTQ
Area 4	7:15-7:30 pm	Voice	146.970 -	127.3	WB6YQN
Area 5	7:00-7:30 pm	Voice	145.400 -	No pl	N6FL
Area 6	7:00-7:30 pm	Voice	147.975 -	127.3	N6AHI
Area 7	7:00-7:30 pm	Voice	146.985 -	127.3	WB6ZTX
Area 8	7:00-7:30 pm	Voice	145.280 -	100	WB2WIK
6 Meter	6:45-7:00 pm	Voice	052.980 -	082.5	K6SMR

The Net Controller's script for the Area 2 weekly RACES check-in net is on the CVARC website, in printable form. Every member is encouraged to periodically serve as net controller. RACES members should remember that their RACES card is issued for only two years. When your card is due to expire call Jackie at the Office of Emergency Services in Ventura for an appointment to renew your card. Call (805) 654-2551 or toll free from the east half of the county at (800) 660-5474. For packet, call coordinator Dan Dicke KE6NYT (805) 983-1401. To register for Red Cross Disaster Services Classes, call (805) 339-2234 ext 0 Ventura County ARES/RACES web site: <http://home1.gte.net/res19999/>

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The Conejo Valley Amateur Radio Club is an ARRL affiliated Special Service Club. Meetings are held on the second Thursday of each month, unless otherwise noted. Meeting location is at the Elks Lodge, 158 Conejo School Rd., Thousand Oaks, CA. Meetings start at 7:30 pm. with a pre-meeting social and technical assistance session, for those who are interested at 7:15 pm. Meetings are open to the public, and members are encouraged to bring their friends.

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Editors: Ken and Paula Larson