

News From...



# CVARC

Conejo Valley Amateur Radio Club  
PO Box. 2093 Thousand Oaks CA 91358-2093

Web site: <http://www.cvarc.org>  
Robert "Neil" Waybright, Publisher



September 2006

## President's Message – The CVARC Board of Directors

By Steve Champion, AE6NX

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**S**oon a Nominating Committee will be looking for members who are willing to serve on the CVARC Board of Directors for January-December 2007. Our by-laws dictate that we must have a new President and some of the current board members are unable, for various reasons, to serve next year. The election for the Board takes place at the November CVARC meeting. At that meeting the Nominating Committee will present a slate of candidates, and additional nominations can be made from the floor.

Some of the existing board members that are offering to stand again are interested in continuing in their existing position. Others are open to changing their role. The function of the Nominating Committee is to match volunteers' skills to the positions and to recommend a slate of candidates to the membership. When the Nominating Committee meets, they need to have input from members who are willing to serve as well as suggestions of people who they should approach about serving. If you approach the Nominating Committee with such suggestions it is helpful if you already know that your suggested candidate is open to serving on the board.

You may have never considered serving on the CVARC Board, but I ask you to think about whether you would be able to do so. It is not essential to have a long history with the club. In fact, your experience with a Homeowners Association, Church, or Temple may be as important as your Ham Radio experience.

So what does the CVARC Board do?

(Continued on page 4)

## September 21st Club Meeting "DX'ing and QSL Bureaus"

Our own VP Greg Lane will be speaking on one of the more fun parts of the hobby—pursuing DX contacts, QSL'ing and QSL bureaus. People who are not hams, but have heard of them often picture us hunched over a HF rig trying to make distant contacts. With so many of us working digital and UHF modes that picture isn't nearly as universal as it once was. Greg will present an interesting overview of what many consider the most fun part of the hobby. Please join us and enjoy an interesting, informative evening. Please see the other note in the newsletter about parking.

Ventura County Area 2 ARES/RACES 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:



Radio  
Amateur  
Civil  
Emergency  
Service

| Area          | Time                   | Mode         | Frequency        | PI           | Repeater             |
|---------------|------------------------|--------------|------------------|--------------|----------------------|
| County        | 7:30 - 8:00 pm         | Voice        | 146.880 -        | 127.3        | WA6ZTT               |
| County        | 7:30 - 8:00 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>146.850 -</b> | <b>94.8</b>  | <b>Grissom K6AER</b> |
| <b>Area 2</b> | <b>Simplex</b>         | <b>Voice</b> | <b>147.555</b>   | <b>No pl</b> |                      |
| <b>Area 2</b> | <b>Backup Repeater</b> | <b>Voice</b> | <b>147.885 -</b> | <b>127.3</b> | <b>Bozo - N6JMI</b>  |
| Ares 2        | 220 Repeater           | Voice,       | 224.700 -        | 156.7        | K6HB                 |
| <b>Area 2</b> | <b>Amgen Repeater</b>  | <b>Voice</b> | <b>449.440 -</b> | <b>131.8</b> | <b>KE6SWS</b>        |
| Area 3        | 7:15 - 7:30 pm         | Voice        | 147.915 -        | 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 -        | 100.0        | KN6OK                |
| 6 Meter       | 6:45 - 7:00 pm         | Voice        | 52.980 -         | 82.5         | K6SMR                |

Net Control operations for the weekly ARES/RACES Area 2 check-in net is run from the ARES/RACE communications center at the East County Sheriff Station on Olsen Rd each Tuesday at 7:00 pm. Visitors are welcomed and have the opportunity to operate the station equipment. Contact Jerry Goldman KC6JSO (805) 241-9187 if you plan to attend. RACES members should remember that their RACES card is issued for only two years. When your card is due to expire simply call Jackie (805) 654-2551 at the Office of Emergency Services in Ventura to renew your card. For questions concerning ARES/RACES call Area 2 Emergency Coordinator Ken Larson KJ6RZ (805) 495-9435 or go to the ARES/RACES section of the CVARC web site at <http://www.cvarc.org>.

## 2006 CVARC OFFICERS

|                  |                |        |               |                         |
|------------------|----------------|--------|---------------|-------------------------|
| President        | Steve Champion | AE6NX  | (805)493-2564 | steve@stevechampion.com |
| Vice President   | Greg Lane      | K7SDW  | (805)498-0454 | k7sdw@verizon.net       |
| Secretary        | Ben Champion   | AE6NY  | (805)493-2564 | ben@benchampion.com     |
| Treasurer        | Mike Pershing  | KD6IJF | (805)493-1934 | mpershing@earthlink.net |
| Editor/Publisher | Neil Waybright | KG6QEL | (805)517-2962 | kg6qel@yahoo.com        |
| Operations       | Ken Larson     | KJ6RZ  | (805)495-9435 | kj6rz@verizon.net       |
| Education        | Karl Moody     | AE6TO  | (805)523-0622 | ke6wvz@aol.com          |
| Public Relations | Jeff Reinhardt | AA6JR  | (818)706-3853 | aa6jr@pacbell.net       |
| Technical        | Hugh Bosma     | AE6YC  | (805)498-1987 | hrbcrb@aol.com          |
| Social           | Rob Hanson     | W6RH   | (805)376-9350 | w6rh@verizon.net        |
| Member-at-Large  | Mary Ho        | KI6COG | (805)494-9241 |                         |
| Member-at-Large  | Dave Davis     | KG6WRG | (805)479-8879 | kg6wrg@yahoo.com        |



The Conejo Valley Amateur Radio Club is an ARRL affiliated Special Service Club. Meetings are held on the third Thursday of each month, unless otherwise noted. Meeting location is at the East Valley Sheriff Station, 2101 E. Olsen Road, Thousand Oaks. Meetings start at 7:30 pm. with a pre-meeting social and technical assistance session from 7:00 to 7:30 pm. Meetings are open to the public, and members are encouraged to bring their friends.

## 2006 EVENT CALENDAR

| DATE             | EVENT                              | COMMENTS   |
|------------------|------------------------------------|--|
| Jan 12           | CVARC Club Meeting                 | General CVARC Club Meeting                                     |
| Feb 9            | CVARC Club Meeting                 | General CVARC Club Meeting                                     |
| Feb 12           | FCC License Exam                   | Begins 8:30 am at East County Sheriff's Station                |
| Feb 14           | Introductory New Ham Class         | Technician Class @ LDS, contact ke6wvz@aol.com                 |
| Mar 9            | CVARC Club Meeting                 | General CVARC Club Meeting                                     |
| Mar 12           | CLU CROP Walk                      | Annual CVARC/ARES T.O. Charity Walk                            |
| Apr 2            | Westlake Street Fair               | Radio support for Westlake Rotary Club (morning)               |
| Apr 20           | CVARC Club Meeting                 | General CVARC Club Meeting                                     |
| Apr 22           | Arbor Day                          | CVARC/ARES radio demo at N. Conejo Creek Park                  |
| June 13          | Cruisin' The Conejo Bike Ride      | This is a major yearly CVARC field activity                    |
| June 18          | CVARC Club Meeting                 | General CVARC Club Meeting                                     |
| Jun ??           | Orienteering                       | Amateur Radio Direction Finding Competition                    |
| Jun 15           | CVARC Club Meeting                 | General CVARC Club Meeting                                     |
| Jun 11           | FCC License Exam                   | Begins 8:30 am at East County Sheriff's Station                |
| Jun 24 - 25      | Field Day                          | CVARC annual field day event, don't miss it!                   |
| Jul 3            | Moorpark Fireworks                 | Comm support for Moorpark's 3rd of July Fireworks              |
| Jul 20           | CVARC Club Meeting                 | Visitors welcome. See web site for speaker                     |
| Aug 8            | Technician Class Begins            | 3rd Technician License Class of year begins                    |
| Aug 13           | Santa Barbara Hamfest              | 8:30 am—1:30 pm at 150 N. Kellogg Ave, Goleta                  |
| Aug 13           | FCC License Exam                   | Begins 8:30 am at East County Sheriff's Station                |
| Aug 17           | CVARC Club Meeting                 | Visitors welcome. See web site for speaker                     |
| <b>Sep 17</b>    | <b>CVARC Summer Picnic</b>         | <b>Picnic at Conejo Valley Community Park in T.O.</b>          |
| <b>Sep 21</b>    | <b>CVARC Club Meeting</b>          | <b>Visitors welcome. See web site for speaker</b>              |
| <b>Sep 22-24</b> | <b>ARRL SW Division Convention</b> | <b>at the Marriot Mission Valley in San Diego</b>              |
| <b>Sep 26</b>    | <b>Technician Class Ends</b>       | <b>Class completes with two weeks to FCC exam</b>              |
| Oct 8            | FCC License Exam                   | Begins 8:30 am at East County Sheriff's Station                |
| Oct 10           | Technician Class Begins            | 4th Technician License Class of year begins                    |
| Oct 19           | CVARC Club Meeting                 | Visitors welcome. See web site for speaker                     |
| Nov 16           | CVARC Club Meeting                 | Visitors welcome. See web site for speaker                     |
| Nov 28           | Technician Class Ends              | Class completes with two weeks to prepare for FCC license exam |
| Dec 2            | CVARC Christmas Party              | Club Christmas party at the Cameron Center                     |
| Dec 10           | FCC License Exam                   | Begins 8:30 am at East County Sheriff's Station                |
| Dec 14           | CVARC Club Meeting                 | Club Christmas party meeting                                   |

### Next FCC License Examinations On October 8th

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). The next exams will be held on Sunday morning October 8th. 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 \$14 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.

(Continued from page 1)

The purpose of The Board is to deal with the day-to-day running of the club. In most businesses The Board functions in a way that means the people "at the top" make decisions which are passed down to those below. A volunteer organization like CVARC works the opposite way. The elected Board makes decisions *on behalf of* the membership. Before making really major decisions they may consult all members, but for practical reasons most decisions are arrived at by consensus among the Board members about the best course to take.

The Board meets once a month, currently on the Thursday prior to regular CVARC meetings. The meetings run from 7:30pm to about 9:30pm. In addition to the Board Meetings themselves, there is often some informal discussion at General Meetings or by email. The functions of Board positions are outlined in the By-Laws ([www.cvarc.org/By-laws.htm](http://www.cvarc.org/By-laws.htm)), but in reality the exact division of labor varies somewhat each year depending on the skills and interests of the individuals involved. Sometimes particular responsibilities are handled individually and sometimes through committees.

Here are my own synopses of the positions as I see them. In practice, there is considerable overlap between the positions.

- President:* Chairs the Board and General meetings. Writes a monthly message in the newsletter
- Vice President:* Performs the role of the President in his or her absence. Arranges Guest Speakers.
- Secretary:* Takes minutes at meetings. Keeper of official records (including insurance policies, etc.).
- Treasurer:* Pretty much everything financial. Maintains the Membership roster
- Publisher:* Newsletter, and currently the Web site too.
- Education Coordinator:* Licensing Classes and other education issues
- Technical Coordinator:* Technical issues. Interference
- Operations Coordinator:* Van, Field Day
- Public Relations Coordinator:* Publicity. ARRL interface
- Social Coordinator:* Arranges social events
- Member at Large I:* Miscellaneous
- Member at Large II:* Miscellaneous

So, I'd like you to think about a few things. Are you able to serve on the Board? Can you serve on the Nominating Committee? Who would you like to see serving on the Board? Please consider these questions and contact the

Nominating Committee chairman, Greg Lane at (805) 498-0454 or [k7sdw@verizon.net](mailto:k7sdw@verizon.net).

73 de AE6NX



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## Results from the June 11, 2006 CVARC VE Session by Jeff Reinhardt AA6JR

| NAME              | CALL   | NEW LICENSE CLASS   |
|-------------------|--------|---------------------|
| Carl E Fairbairn  | KI6ELB | Technician          |
| Kenneth D. Miller | KI6ELA | Technician          |
| Albert Febraro    | KI6EKY | Technician          |
| Chris Hogan       | KI6ELC | Technician w/<br>HF |
| Timothy R. Kunes  | KI6EKZ | Technician          |
| Barry R. Enders   | KC6WVZ | Extra               |

Special thanks to all the VEs who help make the CVARC Exam session possible.

Next scheduled VE session is Sunday, October 8th at 8:30 a.m. at the East Valley Sheriff Station on Olsen Road.

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## Preview of October Club Meeting "EMI" by Steve Jensen

Steve, Jensen (who presented a real crowd-pleasing talk on spark gap radio in March 2006) is back talking about Electromagnetic Interference (EMI)

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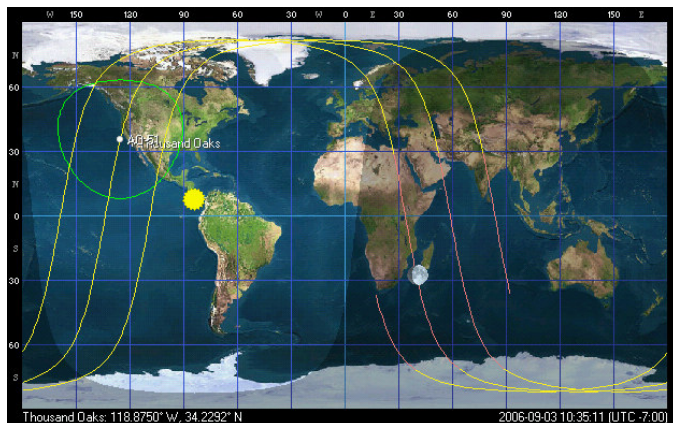
## Working through AO-51 with an HT By Steve Champion, AE6NX

At this year's Santa Barbara Hamfest, Clint (K6LCS) was demonstrating how it is possible to work through AMSAT's AO-51 satellite with a 144/440 hand-held transceiver. I was fascinated by this, and right away I wanted to give it a try.

It is possible to *hear* the satellite on an HT using just the built-in antenna (especially the high-gain type) but a hand-held Yagi works much better. I'm told that it is possible to work through AO-51 with just a whip antenna, but I have not done so myself.

You won't hear the satellite if you just go outside and listen at some random time. AO-51's orbit passes approximately over the North and South Poles, going completely around the earth every 100 minutes. This, in combination with the earth's rotation, means that it passes over any given location six times every day. On some passes it does not rise more than a few degrees above the horizon, but on others it gets high in the sky and passes nearly overhead.

When the satellite passes overhead it is 750km away. When it is close to the horizon it is roughly 3000km distant. In both cases the satellite is in direct line-of-sight but, of course, the signal is a lot stronger when it is overhead and nearer. This and the presence of obstructions near the horizon means that, to start with, you will want to choose a pass where the satellite will peak at 60 degrees or more above the horizon.



**Figure 1 – Orbitron's Map View**

Finding out the times that AO-51 will go over is relatively straightforward. On the AMSAT web site ([www.amsat.org](http://www.amsat.org)), under "Tools" there are links to several suitable computer programs. I use Orbitron from [www.stoff.pl](http://www.stoff.pl) in Poland. After downloading AO-51's current orbital parameters from the web, it can be used to print out a list of passes or it can be used real-time to indicate the position of the satellite. The author's price for registration of this program is a postcard or QSL card, so a 75 cent stamp will fulfill your obligation there.

Having figured out when the satellite will pass over, you will need to pick a time when it is operating in the correct mode. AO-51 is operated in several different modes, with uplink and downlink moving between bands. The mode changes approximately once a week according to a published schedule. The schedule can be found at:

<http://www.amsat.org/amsat-new/echo/ControlTeam.php>

For much of the time the downlink is on 435.300MHz FM, either at "normal" or "high" power. When the uplink is on 2 Meters, it is usually on 145.920MHz. Occasionally it is on 145.880MHz, when only QRP stations are allowed. A 67Hz PL tone is required on transmit.

You will need to tune your receiver to compensate for the Doppler shift caused by the satellite's speed. This is quite simple if you set your 440 receiver for 5kHz steps. Tune 10kHz high at the beginning of the pass and tune down in 5kHz steps until you are 10kHz below 435.300MHz at the end of the pass. This is easier than it sounds because, once you hear the quieting of the signal, it is simply a matter of tuning for maximum quieting by ear. You do not necessarily have to be watching the display on your handheld. Your transmit signal will also be Doppler-shifted from the satellite's perspective, but at 2 Meters the shift is much less. Also, the satellite's receiver is wide so it is not necessary to tune your transmitter for Doppler.



**Figure 2 – Orbitron's Sky View**

Pointing the antenna requires an elementary knowledge of the sky. The satellite's position is given in terms of Azimuth (compass direction) and elevation (how high it is above the horizon). You should familiarize yourself with the points of the compass at your location, noting that North, East, South, and West are 0 (or 360) 90, 180 and 270 degrees respectively. The elevation is 0 at the horizon rising to 90 degrees overhead. Orbitron gives a little diagram of the satellite's path across the sky rela-

tive to the observer, which I find indispensable.

Aiming a whip can be a little counter-intuitive. The direction of maximum radiation (or reception sensitivity) is perpendicular to the antenna, so at the beginning of the pass your HT will be upright and at mid pass it will be lying on its side. Pointing a Yagi probably does not require a lot of explanation but just like the whip antenna, some experimentation can be helpful. The satellite's transmissions are circularly polarized, so in some ways a horizontally or vertically polarized antenna should be equally disadvantaged (by 3dB). However the effects of reflections and other factors will result in a signal that distinctly favors one polarization or another. In practice you have plenty to think about during a pass, so the best advice regarding pointing the antenna is to rotate it and wave it about a bit to get the best signal.

Whatever your exact operating technique there are a few important rules to follow:

Listen to a few passes before attempting to transmit.

This will allow you to familiarize yourself with your equipment and with operating protocols.

Never transmit unless you can hear the satellite clearly.

The satellite's receiver is quite sensitive and it will certainly hear your 5W signal. If you transmit, it WILL hear you and it is easy to stomp on someone else. AO-51 is busy and it is highly unlikely that you will be the one waking the satellite up with your PL. So if you don't hear it, do not transmit.

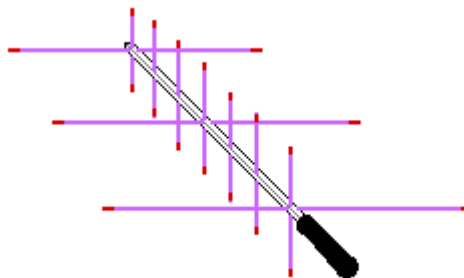
Some people just announce their Callsign, Maidenhead Grid Square (e.g. DM04), and "Handheld". This *can* work, but what works better is to call someone specifically. Give their callsign, then yours (phonetically), then "DM04 handheld".

If you can, listen at the same time as transmitting. Your 440 receiver may be desensed a bit by your 2m transmission, but you will usually be able to hear if you are being overridden by a stronger signal. You can then back off and try again.

If you are working with just the HT, without a Yagi, then look on the schedule for days when the High Power mode is being used. You will stand a good chance of hearing the satellite on a high pass on one of these days.

The Yagi that I purchased can be obtained from arrowantennas.com or from cheapham.com. It is beautifully made from aluminum arrow shafts and is quite light. The basic model can be had for as little as \$66, with up-market models costing as much as \$140. I went

for a more expensive split-boom model with a duplexer, which can be used with a single hand-held and breaks down very small for travel. In reality, I could have easily managed with the cheapest model since the antenna is reasonably compact when only the 2m elements are removed. The duplexer adds a lot to the cost and is unnecessary if you use a separate HT for transmit and receive. At K6LCS's suggestion, I replaced the "bike grip" handle with a hacksaw handle, which is much easier on the wrist.



**Figure 3 – The Arrow 146/437-10**

I have had a lot of fun playing with AO-51 since first hearing about it. Also, it occurred to me that there could be a serious use for it too. I have set up a web site listing contact details for my relatives. In the event of a major communications outage, a 15 second QSO via AO-51 would be enough to tell someone "we are okay" and give the URL where contact details can be found. At the time of writing I have not tried sending a test message this way, but I see no reason why it would not work.

In concluding, I'd particularly like to thank Clint, K6LCS, for introducing me to this aspect of the hobby. Also, I'd like to thank the community of AO-51 users for help and encouragement, especially on those first few passes. So why not give it a try? And let me know how you get on!

*Steve Champion*

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## **CVARC Summer Picnic**

### **By Neil Waybright, KG6QEL**

A late-summer CVARC picnic has been planned for all CVARC members, family, and friends beginning at 1 PM Sunday afternoon September 17th at the Conejo Community Park in central Thousand Oaks (known to some of us as the Dover and Hendrix Park). Like our Holiday Party in early December, the picnic is an opportunity for members, spouses, and friends to social and become better acquainted. The picnic will be a pot luck.

Bring a side dish or dessert to share with others. CVARC will provide burgers, hotdogs and buns. Please bring a side-dish to share.

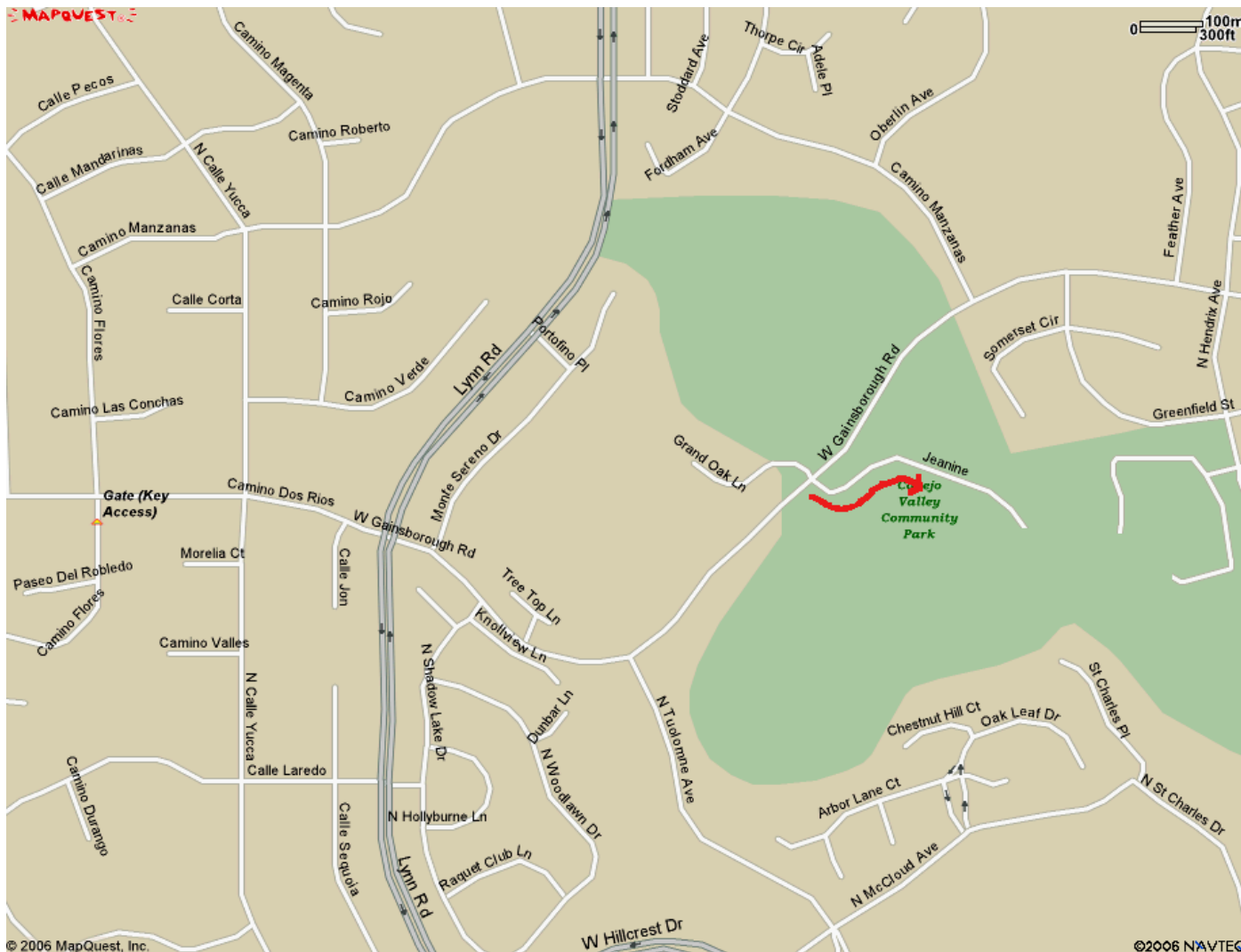
For entertainment we plan to have a family style T-Hunt (transmitter hunt). No fancy T-Hunting equipment. The idea is for family members to use simple 2 meter hand-held radios to search for and find a 2 meter transmitter hidden somewhere in the park. The event will be timed so that people do not all have to participate at the same time. Each T-Hunt team will check in with the judges prior to starting their hunt and report back when they have found the transmitter. The team finding the transmitter in the shortest amount of time will win a prize. We will be having other games suitable for both adults and younger kids, and if you have a favorite game suitable for a picnic, bring it along.

For those living in Newbury Park, the easiest way to get to the Conejo Community Park is to take Lynn Rd North from the 101 Freeway to Gainsborough Rd. Turn right

on Gainsborough and follow it to Jeanine. Turn right follow it down the hill to the park. Those living near Los Robles Hospital and CLU will want to take Lynn Rd. South to Gainsborough. The other route to the park from the 101 Freeway is to take Moorpark Rd. North from the freeway to Gainsborough Rd. Turn left on Gainsborough and follow it to Jeanine. Turn left on Jeanine and follow it to the park. Those coming South on the 23 Freeway from Moorpark and Simi, exit at the Janss Rd. exit. Take Janss Rd. to Moorpark Rd. and turn left on Moorpark to Gainsborough. Go South on Moorpark and turn right on Gainsborough. Follow Gainsborough to Jeanine, left on Jeanine and go down the hill into the park. We will set up the CVARC Comm. Van next to our picnic site. So look for the Comm. Van when you enter the park. We will also be monitoring the Bozo Repeater. So if you can't find us, give a call on Bozo.

We look forward to seeing you there!

Neil



News from CVARC  
Neil Waybright KG6QEL  
4818 Avedon Road  
Moorpark, CA 93021

## Membership Application Form

Name: \_\_\_\_\_

Call Sign: \_\_\_\_\_ Class: \_\_\_\_\_

Address: \_\_\_\_\_

City, ST Zip \_\_\_\_\_

Tel: (\_\_\_\_\_) - \_\_\_\_\_

E-Mail: \_\_\_\_\_

ARRL Member expiration date (on QST label) \_\_\_\_\_

RACES # \_\_\_\_\_ ARES# \_\_\_\_\_

Date: \_\_\_\_\_ Update Roster Only? \_\_\_\_\_

Family Membership: \_\_\_\_\_ Names/Calls \_\_\_\_\_

Send Information/Application to:  
Conejo Valley Amateur Radio Club  
ATTN: Michael Pershing, treasurer  
P.O. Box 2093  
Thousand Oaks, CA 91358-2093

New    Renewal  
Single Membership - \$25 \_\_\_\_\_ Multi-year \_\_\_\_ years @ \$20 = \_\_\_\_\_  
New Ham, New Member - \$10 \_\_\_\_\_  
Single Membership, Full-Time Student \$10 \_\_\_\_\_  
Family Membership - \$30 \_\_\_\_\_

ARRL Membership Renewal (include ARRL form) \$ \_\_\_\_\_  
AD Space (2x3) One Year (member) - \$35 \_\_\_\_\_  
AD Space (2x3) One Year (non-Member) - \$75 \_\_\_\_\_

Total Enclosed \$ \_\_\_\_\_

Cash \_\_\_\_\_ Check Number \_\_\_\_\_

Interested in License Upgrades? \_\_\_\_\_

Joining ARES/RACES? \_\_\_\_\_

Disaster Action Team? \_\_\_\_\_

Obtain a HAM License? \_\_\_\_\_