

OCTOBER 2005

THE MONTHLY NEWSLETTER of the SANTA CRUZ COUNTY AMATEUR RADIO CLUB

# SHORT SKIP



## What is a SET...

On Saturday October 22nd the Santa Cruz County Amateur Radio Emergency Service (ARES) will conduct a simulated emergency test (SET) to ensure its readiness to handle a real emergency. Amateur radio operators throughout the county will be activated Saturday at an unannounced time. "The SET drill will help develop and hone the skills needed to complete emergency communications needed by our served agencies," said Cap KE6AFE, ARES District Emergency Coordinator.



The ARES Van will be used in the October SET

"Often, emergencies are confused and worsened due to lack of effective communications. This hands-on practice, along with other training, helps prepare the volunteer communicators, who even then must still improvise and adapt to overcome failures of the normal communications systems. The test also provides a public demonstration to served agencies of the value that amateur radio provides, particularly in time of need."

Santa Cruz County ARES amateur radio operators have provided communications support in emergencies in Santa Cruz County for many years and logged thousands of hours during local natural disasters, including earthquakes, fires, and winter storms.

Amateur radio operators, who are licensed by the FCC, are called into action when normal communications - such as two-way radios, telephone, and cellular - fail or become overloaded. They are often faced with unexpected hazards, while improvising needed communications solutions. Amateur radio operators pride themselves on relay-

ing emergency and welfare message traffic correctly and efficiently for those who need help getting their messages passed, both within the county and to/from the rest of the country.

The SET exercise is an activity of the Amateur Radio Relay League (ARRL), the national organization for amateur radio. ARRL organizes and provides training to local emergency communications volunteers and is a member of the National Voluntary Organizations Active in Disaster (NVOAD). ARRL guidelines for the drill are published at <http://www.arrl.org/FandES/field/setguide.html>. The Santa Cruz County ARES Web site is <http://ares.santa-cruz.ca.us>.

Typical among the agencies served by ARES are the Santa Cruz County Office of Emergency Services, Dominican Hospital, Watsonville Hospital, Santa Cruz County Chapter of American Red Cross, National Weather Service Monterey Office, Mountain Community Resources, Valley Churches United, Santa Cruz Police Department, Loma Prieta Community Center, Zayante Fire Department, and Paradise Park Community Emergency Response Team.

—Cap, KE6AFE

## Packet Radio for Emergency Communication

After seeing all the disasters in the south, and coming up on the Loma Prieta earthquake of '89 anniversary, I want to let you know that the "digital" end of the Monterey Bay Area Packet LAN is operational.

We plan to upgrade this system over time, but as it is right now, it works pretty good, and is RELIABLE, and has been for MANY years...

All is in place, and ready for use. For more info, go to <http://ares.santa-cruz.ca.us/> and <http://ares.monterey.ca.us/>

Telpac Nodes are also abundant in the Monterey Bay Area! These Nodes allow you to send and receive EMAIL using standard AX25 Packet. Telpac Nodes are located in, Santa Cruz, Boulder Creek, Ben Lomand, Corralitos, and Salinas. With all these Nodes, the Monterey Bay Area is covered from the Santa Cruz mountains to King City. The only exception is the Carmel Valley. We need a Node or digipeater to cover that area. Any volunteers? Call it wireless 1200 baud EMAIL, it is there and ready for your use.

Maybe you can TEST your skills in the Simulated Emergency Test on October 22nd.

I am sure that Cap, KE6AFE would like to hear from you!

—73, Scott WA6LIE

## Cognitive Design

Cognitive Design A fresh word appearing in both professional and amateur publications is "cognitive" which Webster defines as "the mental process or faculty of knowing". It seems uncanny but on a Thursday evening I first found the word used in a current professional journal and the following day I found the concept, but without the label, described in the records of a 1967 conference on ionospheric propagation. It surfaced yet again the next day in the July QST on page 50.

Continued page 2

**CLUB MEETING FRIDAY OCTOBER 21, 7:30 P.M.**

## CQP- 05 de W6W0/M

For the benefit of new members, the California QSO Party (CQP) is a fun event where the rest of the world tries to work our State with as many counties as possible. Bob K6XX suggested that Trinity County would be a good choice. The whole County has a population of less than 14,000 and evidently not much in the way of ham activity. Jean and I thought we might make it a camping trip. However after Googling around we discovered that nearly all campsites were down in river gorges



or surrounded by the majestic "Trinity Alps". The County Fairground in the Hayfork Valley was an exception so the die was cast and we set off on the 450-mile journey North.

On such a trip as this one will always encounter unusual people and memorable events. Breezing into a dot on the map called Platino we saw a sign saying "Congested Area" outside the solitary General Store. There we met two friendly locals and I asked if this was indeed the "congested area". After a microsecond or two the man answered "yes I have a head cold". I could see that he was ready for tourists with smart remarks.

At one camp en-route I was delighted when a Pileated Woodpecker came within a few feet of me. These are beautiful birds and only the second that I had ever seen. At another sublime and deserted lake site I saw my first rare American Bittern.

At 2,200 ft elevation Hayfork is a peaceful place, in fact traffic congestion is considered to be one car moving in each direction. We

learned there are no traffic lights in the whole County. The desire for coffee prompted me to enter a small store advertising Espresso. Jokingly I enquired whether this was a branch of Starbucks but the blank look on the proprietor's face revealed that he did not recognize the name. I ordered a Capuccino but he only knew how to make Latte, we agreed on something in between.

Now you may recall the purpose of this expedition so in due course I erected my 40 ft fiber pole supporting a combined 20 /40 meter dipole. I had not used this antenna before so spent quite a long time gradually trimming it for the CW ends of the bands. As a trial run with my Icom 706 I worked two stations in Arctic Russia, had a long chat with a friend in Jamaica and a weak QSO off the end of the wire with Guatemala. I then tried to use a laptop running the K1EA logging/keying program CT. Unfortunately it would not key the radio reliably, no doubt due to the local RF interference—this forced me into manual mode. At the appointed hour of 0800 the contest began with some pretty heavy pileups on 20 in response to my CQP de W6W0/M TRIN calls. During the day it took progressively more effort to raise anyone on either



band but as expected things brightened up at dusk. After a total of 6 hours of operation I had logged 250 QSOs and was well satisfied when we made our exit the following morning.

For future reference the campground is quite suitable for antennas and electric power is provided at each site and is included in the price of \$12/night, people were very friendly and the bathrooms with lots of hot

## Cognitive Design

Cognitive radios that will make dynamic use of the spectrum are heralded as the next major development in wireless communications. They will be more intelligent than current state-of-the-art radios and more able to adapt to channel imperfections or the need to share spectrum with competitors. "Spectrum Mining" is likely to become another term in vogue and perhaps we will soon drop the notion that the spectrum is limited—our ability to use it effectively is the real limitation.

The problems of propagation impairments and congestion are nowhere better illustrated than in the HF region, relying as it does on the ionosphere. It is a challenge as old as radio and in a sense Radio Amateurs have always provided the cognitive ability to use different bands and the flexibility to share them fairly well. We will need to do better in future given the need to accommodate so many new modes within our allocations.

The period prior to 1967 was the zenith of HF radio with the dominant modes being CW and RTTY. It was also a period when HF communications had great significance for national defense. The problem is summed up in the early research as follows "Real-time day-day management in an efficient manner is a nearly insurmountable task unless every possible aid can be provided". The aid envisaged was to use computers (remember this is the 60's) supplied with measurements of noise, propagation conditions, interference and available resources to predict operational performance and to optimize continuity and capacity.

The problem has migrated well beyond the HF regions and is becoming a major limitation to cell-phone, wi-fi and other uses of microwave frequencies. The solution now has a fancy name "cognitive radio" but it is essentially the same as that described nearly 40 years ago. Fortunately now there are powerful tools to augment our own cognitive ability. Given the incredible computing advantages and real-time frequency agility derived from DSP we can surely become very proficient users and good neighbors within any part of the spectrum available to us.

I often find it helpful to study prior research as the more things change, the more they remain the same.

—W6W0

water were excellent. This is a fine time of year to be camping and operating /M. Why not try your own DXpedition next year.

—73, Ron W6W0



By Art Lee WF6P

**CHATTER**

We all received the Treasurer's report this morning via email from Jim Koger, N1IPP. I was startled to learn that he was moving to Cambridge, Massachusetts. I hate to see him go as he is such an enthusiastic club member always willing to help others or pass on valuable tech info at the CAKE meetings. He did turn over all his club material to new club member Kathleen McQuilling, KI6AIE, to carry on in his stead. Jim invited us all to visit his city, advising us not to rent a car, good advice. In most cities, there is no place to park them. I think some parking lots in our own San Francisco charge \$2.50 or more for an hour or less. Public transportation is the answer these days. Back in 1951, my XYL Donna, AB6XJ, worked for an attorney and his wife. The attorney rarely took their car out of the garage, used bus transportation daily from their home near Golden Gate Park to his downtown office. Jim said that there was a chance of him returning to Santa Cruz in the future. We hope so.

Hurricane Katrina was quite an eye-opener when it comes to self-sufficiency in an emergency. We have had a couple of floods here, plus an earthquake of sizable proportion. Those of us here in the 1989 quake recall that we were without telephones or power for over a week. Fortunately, water and sewer services were not interrupted for most of us. At our recent special club meeting, Cap, KE6AFE, reviewed the problems to be solved in cases of natural or man-made disasters. It behooves all of us to dust off those forgotten or neglected lists of items we need in case of such a happening in our own community. Cap, KE6AFE and Leon Fletcher, AA6GP, developed lists of recommended supplies and materials we might keep on hand. Leon made up a very handy "grab and go" bag of useful items, i.e., food and water, toilet items, a first aid kit and a nice emergency radio. The radio is one of those with a wind-up spring which runs a small internal generator for an hour, plus batteries if your hands get tired. One useful tidbit I'm using is the filling of used one gallon plastic milk bottles with water. We filled about five and when I went to put them in our attic, I was delighted to find several others we had filled after the last emergency. I'll refresh the water in those.) For communications purposes I will replace the five year-old 12 volt battery I kept around for that purpose. Through neglect, I let the cells run dry. The next time I'm at Costco, I'll pick one of those deep-cycle Marine types, with handles. For our hand helds, Don Moore, W6IBN, recommends keeping a supply of alkaline AA batteries on hand. Costco carries these in boxes of 20 or more and their advertised life before use is several years.

I talk to Terry Parks, N6NUN, on a daily basis. We make contact on the Baja Maritime Mobile Net (7.260 0800Local). Forty meters is so up and down these days that he can boom in here one day, and not at all on others. If he is on his boat in Sausalito we can get through by QSYing to 80 meters. If he is at his home in Watsonville, 15 meters is the band to use. We hams have a great advantage in that we can not only change to a multitude of frequencies, we can actually change bands and still communicate. Our own K6BJ repeater is another great communications mode. Was talking to my old friend and new club member, Donald Kerns, AE6RF, and his beautiful young daughter CeCe. Not only was she on the air, she was present at one of our club meetings. Donald brought his dad along as well, but I don't know if he is a ham.

Last week I sailed in the weekly Wednesday night beer can race. There was the usual gaggle of boats pushing their way out of the yacht harbor at about the same time. I looked over on our starboard side and spotted Steve Smardan, N6TGM in the cockpit of a sleek racing boat. I hailed him and we exchanged greetings. He was on a faster boat than ours so they undoubtedly won the race. At least they beat us.

A letter from Rick, N6GOW: "Hi Art, We are having a great get together on Veterans' Day, November 11, 2005. Come and bring your guitar and dancing shoes and singing voice. Have fun. Call VFW at 429-8345 or 426-5409 for times and info. /s/ Rick, WWII, US Navy." Rick runs the Vets Amateur Radio Club at the Veterans' building and needs volunteers to work in emergencies. His net is on 7.250 on Fridays at 0830.

**A Farewell to Jim Koger N1IPP**

It has been a pleasure to serve our club in the role of the club treasurer this past year. It has been a good experience for me and it is wonderful to have had the opportunity to acquaint myself with all of the club members. However, my impending move to Cambridge, Massachusetts necessitates my resignation from this role. It is fortunate that a new member, Kathleen McQuilling KI6AIE, has stepped up to the plate. I believe her experience in other treasury roles and her impressive computer experience will serve her in good stead in the role. It does require some real work. Those of us who have served in the position know this. I will remain

quarterly statement time). The raffle has been a real addition to the club income. While it does not quite make up for the monthly expenses, it does help provide some funding in the lean part of the year. Membership is all important and I will be keeping mine up to date. You never know, I may be back some day and I want to see



Jim N1IPP is the one with the hat.

available by email and phone to help the transition process. I have turned over all of the records, keys, postage, paper materials and files to Kathleen. The club's finances are in OK condition for this time of year. There are only two bills unpaid and that is the club's overall liability policy and a printing bill for Short Skip (for Sept.) I have tried to get the insurance company to send it but it has not yet been mailed to my knowledge. The bill will be due in December. There will be some expenses for the club holiday banquet. As of 9/21/05, and there has been no other spending since, there is \$2,161.21 in the checking account and \$55.13 in cash from the kitty and raffle. In addition there is more than \$3,950.00 in the money market account (this is an estimate because we are near the

what the club is doing. SCCARC is a really great group of hams and I worry that there will be nothing like it in the Boston area. My future address will be 444 Franklin St. Cambridge, Ma. 01239. We will retain this email address pv544@earthlink.net and our current cell phone 831 428 3672. Should you visit the area, we are close to everything in Metro Boston. Come by and visit! One tip: don't rent a car and think you will be driving a car around the city. I can guarantee you will not have a good time. Take public transportation or walk. Boston is really that small. Many thanks to everyone and special thanks to Kathleen for volunteering. 73 de N1IPP Jim pv544@earthlink.net

## SCCARC Board - 2005

<b>President</b>	Vic Linderholm	AE6ID	476-5567
<b>Vice President</b>	Christopher Angelos	KG6DOZ	688-3562
<b>Secretary</b>	Allen Fugelseh	WB6RWU	475-8846
<b>Treasurer</b>	Kathleen McQuilling	KI6AIE	
<b>Board</b>	Mike Doern	KM6IKE	477-1161
	Rich Hanset	KI6EH	438-0615
	Ray Matteis	KE6NHG	688-6668
	Allen Fugelseh	WB6RWU	475-8846
	Bob Wolbert	K6XX	426-5699
<b>K6BJ Trustee</b>	Royce Krilanovich	AC6Z	475-4798

## MONTEREY BAY REPEATER ACTIVITY

Santa Cruz	K6BJ 146.790- PL 94.8 Santa Cruz
County ARC	KI6EH 147.945- PL 94.8 Watsonville K6BJ 440.925+ PL 123.0 Santa Cruz • SCCARC Net Monday 7:30 PM 146.79- /147.180+ /440.925+ linked • SCCARC 10 Meter Net 28.308 MHz USB Monday 7:00 PM
San Lorenzo	WR6AOK 147.120+ PL 94.8 Ben Lomond
Valley ARC	• SLVARC Net Thursday 7:30 PM
Loma Prieta RC	WR6ABD 146.640-(PL 162.2) • LPRC Net Tuesday 8:00 PM
Naval Postgraduate School ARC	K6LY 146.97- PL 94.8 / 444.700+ PL 123 (Linked) Monterey • NPSARC Net Wednesday at 8 PM on K6LY/R • Monterey ARES Net Wednesday 7:30 PM K6LY 146.970- (PL 94.9)
ARES Nets	SC County Wide ARES Tuesday 7:15 PM on AB6VS 440.550- W6WLS 147.180+ AE6KE 146.835-(Linked repeaters / PL 94.8)
Followed directly by	• SLV ARES W6JVS 146.745-(PL 94.8) & WR6AOK 147.120+(PL 94.8) on alternate Tuesdays • South County ARES K6RMW 147.00+ (PL 94.8) • LPrieta ARES AE6KE 146.835- / AB6VS 440.550+ (Linked /PL 94.8) • Santa Cruz ARES K6BJ 146.79- / (PL 94.8)
	• Newline (Ham News) Broadcast Wednesday at end of NPSARC Net • Santa Clara Valley Section Traffic NET Tuesday 9:00PM 146.640- (PL 162.2)

**FOR MORE INFO SEE: <http://www.k6bj.org/freq.html>**

## SCCARC Calendar of Events

SCCARC Board Meeting 6:30	Friday	Oct 21
SCCARC Meeting	Friday	Oct 21
County SET	Saturday	Oct 22
Short Skip Deadline	Monday	Nov 7
SCCARC Meeting	Friday	Nov 18

## MONTHLY MEETINGS.

The SCCARC Meets at 7:30 PM, on the THIRD FRIDAY of the each month (except December). Meetings are at Dominican Hospital, 1555 Soquel Drive, Santa Cruz.

## CAKE Meeting

The CAKE session scheduled for our normal hour of 10:00 AM on October 22 will start officially at 11:00 AM by which time we hope many of the participants of the Simulated Emergency Test will be free to join us. This will provide a good opportunity to debrief lessons learned from the exercise in addition to our usual topics. It is also a good opportunity for us to enjoy a light lunch together.

So be alert and radio-active that morning and plan on joining us at Gigi's bakery.



SANTA CRUZ COUNTY AMATEUR RADIO CLUB  
P.O. BOX 238  
SANTA CRUZ, CA 95061-0238

## CLUB MEETING FRIDAY OCT 21, 7:30 P.M.

### October Meeting: NPS Monterey and Their Katrina Mission

We are delighted that LT Richard W. Clement (AE6QE) from the Naval Post Graduate School has agreed to be our speaker at the SCCARC meeting on October 21. Richard will be speaking on behalf of their Katrina Detachment and was the team's Amateur Radio Operator. We will hear his perspective on what ARES was doing while he was there as well as an overview on the network they developed.

This promises to be an exceptionally informative talk so make sure that you do not miss the opportunity to be there.\*

—Chris KG6DOZ