

NOVEMBER 2009

THE MONTHLY NEWSLETTER of the SANTA CRUZ COUNTY AMATEUR RADIO CLUB

# SHORT SKIP



## The Big One — ARES SET'09



Operators (From r to l) David Copp WS2I, Lyn Hood KI6TKC, Chris Angelos KG6DOZ  
The Aptos Village Park Public Information Booth

Celebrating the "Big One", the 1989 Loma Prieta earthquake as our Simulated Emergency Test for 2009.

Santa Cruz County Amateur Radio Emergency Service team members established communications operations at various locations throughout the county to commemorate the 1989 Loma Prieta Earthquake and to demonstrate to the public at events scheduled throughout the county the importance of amateur radio.

The 2009 Santa Cruz County SET drill provided a vital public awareness as to the importance of amateur radio when disaster strikes. When all else fails...amateur radio is there.



Bob Wisner K6RMW, JV Rudnick K6HJU, Shawn Rudnick KA6RFZ  
Watsonville Airport Airlift Operations

Not shown were: David Katinsky N2RDT, Charlie Norman AB6VS at Loma Prieta Community Center Special Event K6K; George Smith AE6KE at Loma Prieta Community Center Resource Net; Bruce Hawkins AC6DN at the Santa Cruz County Red Cross; Don Taylor K6GHA Santa Cruz County Emergency Operations Center (EOC); Hap Bullard KQ6YV at the Graham Hill Show Grounds Event Safety

## The Big Apple Honors Santa Cruz Hams

Wayne Thalls, KB6KN

Were you aware that kudos for the amateur radio role in the 1989 Loma Prieta quake came from as far away as New York City? Their subtle recognition probably had a wider impact than any local recognition.

Such routine roles are often overlooked when looking back at the big picture. After all, the communicators merely did their jobs, just like the professionals and the other volunteers. Communication services were a small, but critical, component of the event.

In virtually any situation, those who volunteer to receive personal recognition are likely to be disappointed. Peer recognition usually has to suffice. Why does this have anything to do with NYC?

Following the quake my account of the local ham quake disaster communications was published in WorldRadio. Later it was included by the New York City School Board in a teachers guide for incorporating ham radio into the high school curriculum.

Naturally the guide treats ham radio as a practical application of math, science, and geography. It is applied to more than that. The Santa Cruz story was selected for a section on sociology and civics. It was cited as an example of the role played by voluntarism in a disaster situation.

How many of the New York students of the 1990s may have been inspired to volunteer following the events of September 11, 2001?

## Club Auction

The annual SCCARC auction will be held during the regular club meeting on Friday, November 20. Bring your unwanted treasures and toys to delight somebody that actually wants them! Items do not have to be ham radio related.

Items submitted so far include: a weathered but probably complete beam with rotator, controller, and controller cable, a large recording rain guage (both of these items can be inspected at the shack), last year's Handbook, a couple of boat-anchors, several movie DVDs, a huge universal remote control, and a packet of astronaut ice cream. We would like to have at least fifty more items to make the auction interesting.

The donor can specify what percentage of the price goes to the club, but it must be at least 20%. The donor can also specify the opening bid.

The auction is the only SCCARC fund-raising event of the year. The income is an important part of our budget. Please look for something to donate!

**CLUB MEETING FRIDAY NOVEMBER 20 7:30PM**



If variety be the spice of life our lively session today certainly confirmed it. Here is just an overview but as some topics rather dated the individuals I will refrain from naming them.

One mystery item was correctly identified as a section of core memory from the 60's and it recalled the days when memory sold for \$1/bit (not Byte) From the same era the practice of patching holes in paper tape to remove errors was acceptable. Treasures from the flea market included several mystery small boxes with knobs and a co-linear array of 4 dipoles for 2 meters. A problem with getting faithful color prints was discussed. The choice of free-standing towers their foundations, erection and grounding was covered in some depth. Techniques for reviving dead lap-top batteries didn't sound all that convincing but what's to loose, an explosion perhaps? Some of the tools and techniques to make money on the internet showed that those present were quite well informed. An Optivisor head band with a choice of lenses and built-in lamp was tested on the above-mentioned core memory. The question of what good and suspect solder joints look like was discussed by an expert.

So as usual lots of well grounded know-how was exchanged but where are our new members? Are they on the BJ list yet?

Two dozen attended the session on October 24th and conversations were intense and varied, even more so than usual.

As most know the CAKE format has proven



to be quite popular, simply because of what all bring to each session. Vic AE6ID and Past President of the club has been a regular contributor and this was recognized in the form of a humorous book on his other love, Sailing

We were pleased to welcome George Williams W2CSN who has recently relocated from the East Coast to Aptos. The call belonged to his father and George has run into OTs who remember his Dad. We must also congratulate Jean KI6DXX and Dean KJ6CQC on upgrading to general class. Dean is pleased with his recently acquired FT60. Tom Stollar AE6XQ is now KW6S, doesn't get much better than that. Tom often brings items of great interest and his latest mystery item was the dielectric lens on a 5GHz antenna. This antenna is used for digital communications in a predator aircraft and could be used in the 5GHz ham band. Need at least two Tom!

Don K6GHA is moving very fast with his new tower installation with the able help of Reed N1WC, we can look forward to a party soon, no doubt. Jeff AE6KS was well back in form and it was so good to see how fit he looks. A discussion began with Kerry K6RRY describing how an end-fire array of dipoles might be tuned to have a side lobe pattern with nulls in certain directions. This led to a broad discussion on direction finding and beam steering techniques under the tuition of AE6KS.

The ARRL annual frequency measuring test came up for discussion and while this is subject for the more technical types it was helpful to gain some insights once more from AE6KS

Ron W6W0 had that morning taken delivery of an Elecraft W2 Wattmeter and remarked on the article in the current QST on the principles of Wattmeters and the repair of the slugs used in Bird instruments.

Ask and ye shall receive so they say and no better place to ask than at CAKE. Ron W6W0 has been looking for an isolation transformer at 1 KVA for some time. This quest was floated around the table and our dear friend Frank K6BDK ( his original call by the way) said he had one in his garage that he would like to have removed. Problem #1 solved for Ron, problem #2 it is so heavy he can't lift it out of the car!

I regret if I missed any other pearls of wisdom!

Any ideas for club projects or excursions would be very welcome

—73 Ron W6W0

## SCCARC Election

Well, folks, it's that time of year again: the annual SCCARC Election of Officers is upon us! Our President and Secretary have termed out this year; we thank them for their two years of service to the club (and encourage them to run for another office!)

If you would like to run for an office or seat on the board, know of someone whom you think would make a good officer or board member, or have a nomination in any shape or form, please contact me by phone or email so I can put your nominee(s) on the ballot. Still unsure you want to run for office? Nominations from the floor are welcomed at the meeting!

Currently, the nominations stand thus:

President: Open

Vice President: Greta Steinbruner, KI6NTL

Secretary: David Copp, WS2I

Treasurer: Kathleen McQuilling, KI6AIE

Board of Directors:

Rich Olsen, W1WUH, past pres.

Bruce Hawkins, AC6DN

Mike Doern, KM6IKE

This list is most definitely subject to change. The list will be announced on the club net the week before the meeting, as well as on the K6BJ reflector.

—73 de Greta, KI6NTL



This is my contribution to CAKE. A friend sent me this picture asking what it was. She found 30 of them under the house. I think I know. If you know, tell W6W0 at the next CAKE meeting —K6EXT

## November 2009 Directory Updates

Please note the following updates (additions, changes, or corrections) to the 2009 SCCARC directory:

KJ6CAI	Louis Arbanas (new member 419-1503 sunnyway@sbcglobal.net
WA6FYD	Jack Wooldridge (returning member) 423-4806 jackpot@cruzio.com
K6HJU W3IVQ	JV Rudnick's XYL Lenette is N6HJU Jack Ragen's new apartment number is D 202
KI6NTL	Greta Steinbruner's autodial number is 233
KW6S	Tom Stollar (new call sign)
KI6TJZ	Robin Samuels (call sign correction)

## Res - A Proud old Ohm Speaks

In a recent Short Skip issue my cousin Cap mentioned our complex relationship and indeed that is true but from what he said you may have concluded that Resistors (Ohms like me) are the villains of the electronics world. I want to set the record straight. What Cap failed to mention is that losses occurring in capacitors are primarily due to movement of atoms within their dielectric materials and not movement of electrons in conducting materials. This dielectric loss can be expressed as an equivalent series resistance ESR, unfortunately this tends to give us resistors a rather bad name.

Resistors have a vital job in life which is to exercise control over currents of electrons and without our influence few electronic designs would work as planned. Cap described what bad things happen if a connection with zero or near zero resistance was placed across a fully charged capacitor. He makes my point; resistors can precisely control the rate at which his energy can be stored or released.

Like capacitors our technology has evolved from simple lumps of carbon into very small, accurate and stable packages with values ranging from fractions of an Ohm to very many millions of Ohms (Megohms) and as you would expect our symbol is the Greek letter Omega.  $\Omega$ .

We have to admit that our relationship with cousin Coil leaves much to be desired especially when large RF currents are involved. At many frequencies of interest to Radio Amateurs current does not flow uniformly in a conductor but instead it takes the path of lowest inductance which is close to the surface. This called the Skin-Effect and the higher the frequency, the more the current is concentrated on the surface which results in higher losses. We can mitigate this problem to a degree by plating the surface of a conductor with silver because its resistivity is less than the two other common conductors, copper and aluminum. Where heavy Direct Currents are involved it is possible to ignore inductance altogether and use power resistors that are wound as coils of special wire. Other areas where resistance is unwelcome are at points of contact in connectors and switches, in critical cases we have to resort to gold plating which lowers resistance below that of silver.

No component is perfect but I claim that resistors come closer to perfection than either cousin Cap or Coil. It's true resistors can introduce inductance where it isn't wanted but with minimum packages and lead length the inductance of a modern resistor is quite small nevertheless it can become a problem at high frequencies. Like Cap we have a very complex relationship with Coil and will no doubt hear about that later on.

73 Res (an Ohm OM)



By Art Lee WF6P

## CHATTER

Went to the library to photocopy some 1930s music when in came Rich Olsen, W1WUH, hurriedly crawling around on his hands and knees looking on the lower shelves for overhaul manuals for transmissions, V8 engines and other things mechanical. I always avoid books on lower shelves. Getting down on one's knees is easy, getting back up, ain't! (In readings in one of my marketing classes, vendors were said to fight for eye-level space on grocery and bookstore shelves.)

The October club meeting was well attended with 41 members and guests. It began with the ARES segment of 45 minutes prior to the regular club meeting. Wayne Thalls, KB6KN, was present to give a brief synopsis of ham activity during the Quake of 1989. The role of hams in the Lockheed Fire and surprise rainstorms of October were covered. This was followed by a highly informative technical presentation by George Badger, W3AB, on the subject of GPS.

I wish to thank Ron, W6W0, for all his efforts with the CAKE sessions. While the technical goals he wishes for appear elusive, the interest he stimulates in those who attend is highly productive.

Ron said, "It began well over 5 years ago by Eric (WA6HHQ) and I as an informal way of sharing the wealth of know-how (generally but not exclusively of a technical nature) in our Club with emphasis on new members and prospective members.

## HELP SAVE OUR CLUB'S PRINTING COST

Printing and postage expenses have gone up! You can help your Club cut costs if you're getting Short Skip by postal mail but would rather just access it on the Club's web site (k6bj.org). Just let me know at ki6aie@k6bj.org and I'll take you off the mailing list.. If you're on the K6BJ email reflector, you'll get notification when each month's Short Skip has been posted to the web site. Just click on the Short Skip image on the front page to read or download the current issue (PDF file).

CAKE stands for Coffee Assisted Knowledge Exchange and we meet every second and fourth Saturdays at GIGI's bakery at the junction of River St and Hwy 1 in Santa Cruz. Our sessions begin at 10:00AM and usually conclude at noon. A few come and have their breakfast during that time. There is generally no agenda or rules or ceremony. Anyone who asks a question or poses a problem will receive constructive responses and we like it when someone brings a mystery item. In short CAKE is aimed at helping, exploring and having fun."

Field Day statistics given by Donald Kerns, AE6RF:

We were the #6 6A in the nation.

We were #46 out of 2612 overall stations at Field Day.

We are the #4 station OVERALL in the Pacific division. (Behind Stanford, PAARA, West Valley) We edged out SARA this year! AC6P (UCSC) placed a very respectable 14/31 in the SCV section!

He added: (And no it isn't too early to be thinking about next year...)

Donald, AE6RF, is, as this is being written, using the K6BJ shack radio from 1100 to 2400 PST for a CW contest. He invites observers but said, "I won't be much company as I will be doing some serious CW contesting." (Good hunting -Art)

## Treasurer's Report

The good news is that as of October 28 the net worth of the club was about \$1,900. The bad news is that we are living beyond our means. If we do nothing the expected deficit for 2010 will be about \$900.

Our total annual income (exclusive of the holiday luncheon) is about \$3,000. There is only one large and controllable expense item: Short Skip. It costs \$1,750 per year to print and mail, or about one dollar per month per copy.

Elsewhere in this issue Kathleen KI6AIE has encouraged people to forego their paper Short Skip and read it on the website. You can always print your own copy, in color. If we can persuade 75 members of the club to drop their postal mail subscription the deficit would be erased.

The Board is looking for other ways to reduce Short Skip costs but eliminating paper and stamps is the quickest and surest.

## SCCARC Board - 2009

<b>President</b>	Rich Olsen	W1WUH	464-7474
<b>Vice President</b>	Greta Steinbruner	KI6NTL	325-9482
<b>Secretary</b>	Kathleen McQuilling	KI6AIE	476-6303
<b>Treasurer</b>	David Copp	WS2I	708-2206
<b>Board</b>	Christopher Angelos	KG6DOZ	688-3562
	Reed Cotton	NIWC	460-1801
	Mike Doern	KM6IKE	477-1161
	Bruce Hawkins	AC6DN	
	Jeff Watson	KG6YPS	
<b>K6BJ Trustee</b>	Allen Fugelseth	WB6RWU	475-8846

## MONTEREY BAY REPEATER ACTIVITY

Santa Cruz County	K6BJ 146.790- PL 94.8 Santa Cruz 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 Monday 7:00 PM 28.308 MHz USB
ARES Nets	SC County Wide ARES Tuesday 7:30 PM on 147.180+ PL 94.8 443.600+ PL 110.9 (Linked repeaters)
San Lorenzo Valley	WR6AOK 147.120+ PL 94.8 Ben Lomond • SLV Net Thursday 7:30 PM
Loma Prieta	AB6VS 440.550+ / AE6KE 146.835- PL 94.8 (Linked for net 94.8) • LP Net Tuesday 7:15 PM
Monterey	K6LY 146.97- PL 94.8 / 444.700+ PL123 (Linked) Monterey • NPSARC Net Wednesday at 8 PM on K6LY/R • Monterey ARES Net Wednesday 7:30 PM K6LY 146.970- (PL 94.9) • Newsline (Ham News) Broadcast Wednesday at end of NPSARC Net
LPRC	WR6ABD 146.640- PL 162.2 / 442.900+ PL 162.2 (winsystem) • LPRC Net Tuesday 8:00 PM 146.640-(PL 162.2) • Newsline (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

ARES Meeting	Friday	Nov 20
SCCARC Meeting	Friday	Nov 20
Cake Meetings	Sat	Nov 14, 28?
Board Meeting	Wed	Nov 25
SCCARC Holiday Luncheon	Sat	Dec 12
Short Skip articles due	Tue	Dec 15
SCCARC Meeting	Friday	Jan 15

## MONTHLY MEETINGS.

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

## NET CONTROL SCHEDULE

(Subject to Change)

11/9	Chris KG6DOZ
11/16	Tom K6TG
11/23	Greta KI6NTL
11/30	Phil KE6UWH
12/7	Chris KG6DOZ
12/14	Tom K6TG

## SHORT SKIP

Published 12 times per year.  
Free to members.

**Santa Cruz County Amateur Radio Club, Inc.**

Post Office Box 238  
Santa Cruz, CA 95061-0238

## December 12 Holiday Luncheon (and Raffle)!

This year we continue our tradition of a festive holiday luncheon at Marie Callender's in Capitola. And again this year, if you renew your membership when you pay for the holiday luncheon, you'll get an extra five (that's right, five!) raffle tickets in addition to the one raffle ticket included with your \$20 for the luncheon. For most of you, luncheon plus dues will be \$45 (dues for each additional family member are still \$6), preferably paid ahead of time, either at a Club meeting or by mail (SCCARC, P.O. Box 238, Santa Cruz, CA 95061-0238). Of course, you may also pay at the door, but we need your reservations made by Saturday, December 5 -- by email to [ki6aie@k6bj.org](mailto:ki6aie@k6bj.org) or by phone to (831) 476-6303. We'll start checking folks in at 12:30 PM, with the meal starting at 1:00; the servers will ask for your choice among turkey, meat loaf, and chicken (also a vegetarian option), along with choice of beverage and pie. And while you're looking around for items for our November auction, why not gather up some choice pieces for the holiday luncheon raffle as well? The Club will provide some nice raffle prizes, but member-donated items will also be very welcome (and are often among the most entertaining prizes!).

—Kathleen, KI6AIE, SCCARC Secretary

## SET 2009 continued



Hap Bullard KQ6YV  
Graham Hill Show Grounds Event Safety



George Smith AE6KE  
Loma Prieta Community Center Resource Net

Not shown, Don Taylor K6GHA, at the Santa Cruz County Emergency Operations Center (EOC)



(left) David Katinsky N2RDT (right) Charlie Norman AB6VS  
Loma Prieta Community Center Special Event K6K



Bruce Hawkins AC6DN  
Santa Cruz County Red Cross