

SEPTEMBER 2007

THE MONTHLY NEWSLETTER of the SANTA CRUZ COUNTY AMATEUR RADIO CLUB

# SHORT SKIP



## Veteran's Memorial Amateur Radio Station



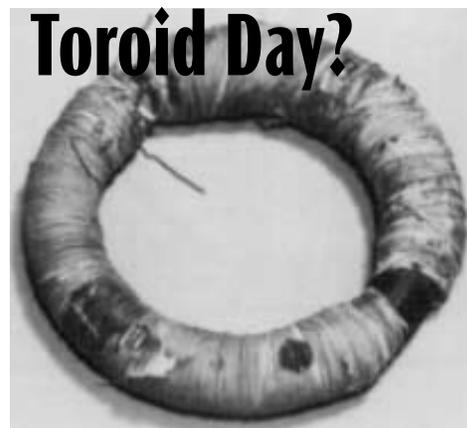
Our 85 year old WWII combat veteran Maurice "Rick" Ricketts N6GOW is still desperately seeking assistance especially with operating the public service Veterans Memorial Amateur Radio Station in Santa Cruz (still upstairs next-door to the Post Office on Front Street, now upgraded including a new antenna tower atop the roof).

What that facility most needs now is another Vet or two (of any age) to take an interest in the ham station. Rick is rightly concerned that he can't keep the station staffed and in service by himself forever due to his advancing age, and if the ham station is not routinely used, then the veterans building managers will eventually consign a different use to the ham room.

A special operating event will be held at the upgraded station this Veteran's Day weekend in November using the special event callsign K6V. You can hear Rick operating from the Vet's station most weekday mornings around 8:30-9:30. Rick checks into the 40meter California Rescue Communications Net (A.k.a. 'The Gordo Net') daily, and recently the 20meter Alaska-Pacific Emergency Preparedness Net too. Of late, Rick has been providing a daily announcement (on K6BJ repeater and on 146.520 Simplex and on CB Ch.17 at least) to help spread the news about Veterans being relieved at "South Bay Stand Down" in Boulder Creek on September 8,9,&10. <http://www.palo-alto.med.va.gov/SBSD.asp>

—73, Cap KE6AFE

## Did You Miss International Toroid Day?



The toroidal transformer was the first kind of transformer ever wound.

Michael Faraday (1791 - 1867), British physicist and chemist invented the electric motor, the generator and the transformer.

In 1821 he plotted the magnetic field around a conductor carrying an electric current based on Danish physicist Hans Christian Oersted's observations of the existence of the magnetic field in 1819.

On August 29, 1831, Faraday followed this accomplishment with the discovery of electromagnetic induction and demonstrated the induction of one electric current by another on a ring of iron - a toroid.



In commemoration of International Toroid Day, Wednesday August 29, 2007, a group of US Amateur Radio Operators activated the callsign .

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



### Conditions of use

The following text may have errors and is not to be used by anyone who has ever met a lawyer. Use should be confined to Radio Amateurs with more than 250 course hours of electronic engineering or 0.25 hours of practical experience. All ingredients become the property of CAKE, LLC but rest assured, your contributions won't be sold for profit and will be publicly available.

### Do I have your attention?

Our session, although depleted in attendance, was not short of the usual mix of exciting and informative items. We welcomed Brian the son of Kathleen (KI6AIE). Tee shirts commemorating CQP (K6EP) and World Radiosport Championships (K6XX) were much in evidence.

Marc (W6ZZZ) brought an example of clamp-on ferrites that he uses on nearly all wires going in and out of his radio. They certainly help with RFI of many kinds. Dave W8FLL told the tale of running across an adult ham that he first coached as a young lad. Dave then pointed out the review of the Firefly QRP kit in the Sept QST. Do life members get their magazine ahead of the herd Dave? Bob (K6XX) provided a fine example of his lathe work with a carefully balanced tuning knob including a hand-crafted set-screw. This will look great on my DDS VFO Bob.

Our discussion on the Effective Series Resistance (ESR) of capacitors showed that this parameter has a bearing on their effectiveness in noise reduction when used as bypass and in switching power supply applications.

The sizes of surface mount components came up and Ron (W6WO) opined that 1206 is a good practical choice if room on the PCB is available. Bob described very tiny devices used in cell phones and how they are soldered to the board in ovens. We discussed constructing surface mounted transformers rather than pay Mini Circuits

\$10 each. The merit of beads, torroids and binocular cores justifies further consideration.

Kathleen showed the Sugar Daddy tin box (Dinky carrying handle included) in which she plans to install her home brew QRP radio. Fine tuning of a XTAL oscillator is sometimes useful but the consensus was it is hard to predict how much shift is possible.

Typical HF auto antenna tuners include banks of relays and capacitors. We compared ideas on the rating of these components to deal with the high voltages and currents that occur at high levels of VSWR. Marc (W6ZZZ) mentioned testing a FL2100 linear and Bob commented that they were prone to instability. Bob is looking to the base for an 8877 tube if anyone knows where to find one let him know.

There are no stupid questions at CAKE so keep asking.

—73 de Ron W6WO

### ON THE WWW: NEW GRIDFINDER AT QRZ.COM

The popular QRZ.com website has added a new feature. It's called GridFinder and it can be used to determine the Grid and latitude and longitude coordinates for just about any point on the planet. Check it out at [www.qrz.com/gridfinder](http://www.qrz.com/gridfinder) (QRZ)

### Don't Need Short Skip In Your Mailbox?

If you're getting Short Skip by postal mail but would rather just read it on the Club's web site, just let me know at [ki6aie@k6bj.org](mailto:ki6aie@k6bj.org) and I'll take care of it. If you're on the K6BJ email reflector, you'll get notification when each month's Short Skip has been posted to the Club web site.

### CAL QSO Party

The California QSO Party (CQP) is the premier state QSO party held every year on the first weekend of October. The Northern California Contest Club (NCCC) has sponsored CQP since 1974. CQP has traditionally opened the annual contest season by providing an opportunity for contesters to prepare for the ARRL November Sweepstakes since the format is similar.

Stations outside of California, worldwide, work stations in California only. The 58 counties of CA are the multipliers. California stations work all stations in or out of CA, The 50 US states and 8 Canadian areas are the multipliers. Stations outside of Canada and the US add to one's QSO total but do not count as multipliers. See the full set of CQP Rules for more details at [www.cqp.org](http://www.cqp.org)



Our esteemed Treasurer Kathleen KI6AIE showing her Sugar Daddy box soon to see a QRP radio inside, as shown at Cake meeting.



By Art Lee WF6P

## CHATTER

I missed the last club meeting but was happy to attend the CAKE session Saturday at Gigi's. Ron, W6WO, our leader, is back from his adventures in Kentucky. We had about a dozen or more attendees, all laughing and scratching and telling lies, sea stories and a few exaggerated accounts of past accomplishments computerwise. Lacking, were tales of DX due to such miserable conditions on HF. Ron, while trying to bring order to chaos, really tries to have our group get serious about the meeting and I have to apologize, we just have too much fun with our eyeball QSOs. I can see the frustration in his eyes as he tries to settle us all down but his efforts seem to be futile. He did bring us around a time or two, jotting down some serious and not so serious thoughts and suggestions from us about how to stimulate interest in the hobby. Actually, the suggestions were quite interesting and productive if followed. I squeezed my chair in between Bob Wolbert, K6XX, and Frankie Carroll, K6BDK. This was good for me as in the course of the meeting, the topic of tuners came up. The internal tuner on my ICOM

761 is kaput and no parts available from the manufacturer. When I professed my need for such an accessory, Frankie offered me one of his two spare tuners. As he lives only a few blocks from me, I will walk over (not really!) and pick it up.

When borrowing chairs from adjacent tables for late arriving members, some ladies couldn't resist asking about our gathering. Obviously, we were having lotsa fun. I explained that we were ham radio operators. They were quite interested and asked about our participation in emergencies, Morse code, the impact of the internet on our hobby, etc. I invited them to join us at our next meeting after their pool exercises at their local spa. I told them we could get them licensed if they wanted to get on the air. I have found that nearly all the customers at Gigi's express a high level of curiosity about our group. This side effect seems like good publicity for ham radio.

Was reading a book about the Japanese attack on Pearl Harbor. When CDR Fuchida had his radioman send "Tora, Tora, Tora" announcing a complete surprise for the air raid, it was done in CW, the chosen mode for radio communications in 1941. Fuchida circled Pearl Harbor in his aircraft, directing the raid. While the transmission was sent to the offshore carriers for Admiral Nagumo's information, propagation was such that the transmission was picked up in Japan by naval headquarters.

## HAM RADIO IN SPACE: PACKET RETURNS TO THE ISS

Some good news from Earth orbit. Packet is once again on the air from the International Space Station.

The first beacon was reported at 2110 UTC on Tuesday, September 4th by JH4XSX in Japan on 145.825 Simplex. A bit later at 2136 UTC WA4AEJ had an APRS confirmation from ROISS.

Ken Ransom, N5VHO is the I-S-S Ham Radio Project Engineer. He says that we will all have to watch and see how long the packet system stays active. (ARISS)

## EMERGING TECHNOLOGY: NEW FIREPROOF LI ON BATTERIES

New lithium-ion batteries being developed for hybrid electric automobiles may hold promise as a dependable high power source of emergency communications power. This, as A123 Systems of Watertown, Massachusetts announces a new type of high power lithium ion cell not prone to the fire hazards associated with current batteries.

Although the lithium-ion cells you see in laptops and mobile phones pack twice as much energy per pound as any other current battery, they have not been adopted for hybrid cars and other power demanding uses because they are worryingly prone to fires. But A123 believes it has solved the fire potential problem with a new lithium-ion design that utilizes a special formulation for the battery's cathode.

Lithium Ion battery fires seem to begin when a small manufacturing defect, perhaps compounded by overcharging, causes oxygen to separate from the cathode. As the cell overheats, it can prime oxidation in neighboring cells, a process known as thermal runaway. A123 overcomes the problem by making its cathodes out of iron phosphate, which bonds to the oxygen far more powerfully than does the cobalt dioxide found in conventional lithium-ion batteries. So its cells are theoretically far less subject to oxidation, and thus less prone to thermal runaway.

A123's batteries are already in use in other applications demanding a combination of power and safety. More on these new lithium ion batteries is on-line at [www.a123systems.com/](http://www.a123systems.com/) (IEEE Spectrum via Science OnLine.)

### Treasurer's Report

At the August 2007 Board of Directors meeting, Treasurer Kathleen McQuilling, KI6AIE, reported that the SCCARC treasury had \$5,480.01 in cash and bank accounts. At that time all financial obligations had been met, including the annual equipment insurance premium.

### HRO Discount for Club members

SCCARC members are eligible for a 5 percent discount at HRO in Sunnyvale on any purchase over \$20 excluding radios. Show them your current membership card once and they will update their database for future discounts.

### Special Deal: Holiday Luncheon and Membership Renewal

If you renew your membership when you pay for the December 15 holiday luncheon, you'll get an extra five (count 'em, five) tickets for the holiday luncheon raffle! That's in addition to the one raffle ticket that is included with your \$15 for the luncheon. For most of you, that will mean \$40, preferably paid ahead of time, either at a Club meeting or by mail (SCCARC, P.O. Box 238, Santa Cruz, CA 95061-0238).

--Kathleen, KI6AIE, SCCARC Treasurer

## SCCARC Board - 2007

<b>President</b>	Christopher Angelos	KG6DOZ	688-3562
<b>Vice President</b>	Pat Barthelow	AA6EG	
<b>Secretary</b>	Cody Adams	KG6YPK	
<b>Treasurer</b>	Kathleen McQuilling	KI6AIE	476-6303
<b>Board</b>	Mike Doern	KM6IKE	477-1161
	Allen Fugelseth	WB6RWU	475-8846
	Bruce Hawkins	AC6DN	
	Vic Linderholm	AE6ID	476-5567
	Ron Skelton	W6WVO	477-1021
<b>K6BJ Trustee</b>	Allen Fugelseth	WB6RWU	475-8846

## 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 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 100.9 (Linked repeaters)
San Lorenzo Valley	WR6AOK 147.120+ PL 94.8 Ben Lomond • SLVARC Net Thursday 7:30 PM
Loma Prieta AB6VS	440.550+ / AE6KE 146.835- PL 94.8 (Linked for net 94.8) • LPRC 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

SCCARC Meeting	Friday	Sept 21
Board Meeting	Wednesday	Sept 26
Short Skip Deadline	Monday	Oct 8
SCCARC Meeting	Friday	Oct 19

## 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.

## NET CONTROL SCHEDULE

(Subject to Change)

9/17	Allen WB6RWU
9/24	Chris KG6DOZ
10/1	Tom K6TG
10/8	Cody KG6YPK
10/15	Phil KE6UWH

## SHORT SKIP

Short Skip is published 12 times per year.  
Free to members.

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