

OCTOBER 2008

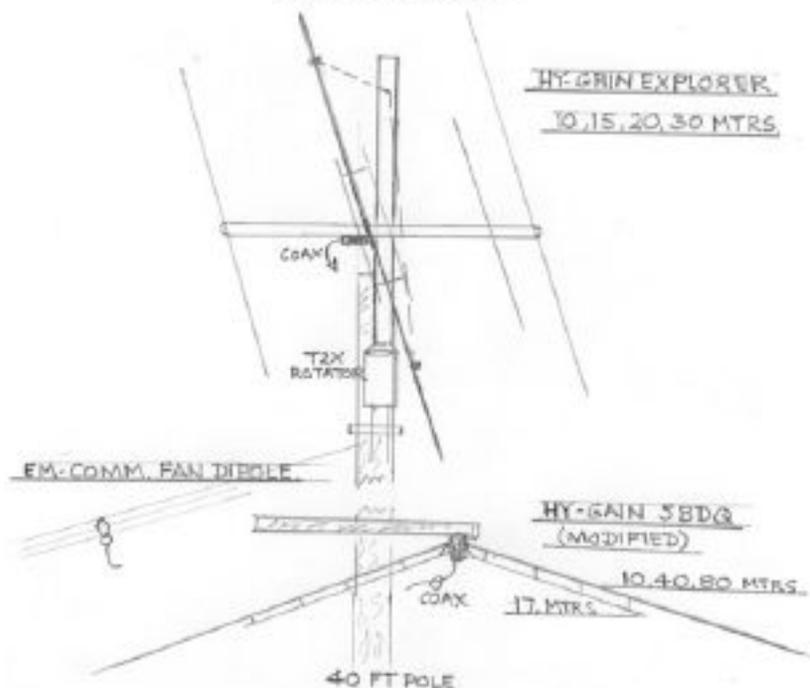
THE MONTHLY NEWSLETTER of the SANTA CRUZ COUNTY AMATEUR RADIO CLUB

# SHORT SKIP



## K6BJ Antenna Fix

K6BJ HF Antennas  
Sept 27th, 2008



See Cake Crumbs on page 3 for story.

## New Hams

Congratulations to these new hams! Now get 'em having fun on the air!

- KI6TJY SAMUELS, JEFFREY, FELTON
  - KI6TJZ SAMUELS, ROBIN, FELTON
  - KI6TKA STEINBRUNER, STU, APTOS
  - KI6TKB STEINBRUNER, REBECCA, APTOS
  - KI6TKC, HOOD, LYNDY, SANTA CRUZ
  - KI6TKD REAP, PATRICIA, FREEDOM
  - KI6TKE MEANS, ROBERT, BOULDER CREEK
  - KI6TKF DOWDY, JERRY, SCOTTS VALLEY
  - KI6TKG SIGMUND, ANDREW, BOULDER CREEK
  - KI6TKH SPENCER, ROBERT, SANTA CRUZ
  - KI6TKI LINDBERRY, SCOTT, APTOS
  - KI6TKJ THOMAS, CRISTIE, APTOS
- 73, Cap KE6AFE

## QST On-line

The ARRL has placed all QST articles from 1915 to 2004 online, with free access for ALL ARRL members.

Here is the link: <http://www.arrl.org/news/stories/2008/09/09/10322/?nc=1>

—Rich Olsen, W1WUH, club president

## SCCARC Holiday Luncheon

SAVE THE DATE: Saturday, 12/6

This year our holiday luncheon will be on the first Saturday in December--12/6. It will be at our usual place, Marie Callender's in Capitola. Arrival and check-in starts at 12:30 PM and luncheon will begin at 1:00. The cost per person, which will include five raffle tickets, will be \$20, with the usual choice of three different meals.

This is a great opportunity to bring our families together to celebrate and have some fun; this year we will have some

special entertainment as well. I'm taking reservations now, by email, by phone, or in person. More details will follow, including directions and menu options.

—73, Kathleen McQuilling (831) 476-6303 ki6aie@hotmail.com

## Time to Clean Out the Shack! — Nov. Auction

Just think how nice and spacious your shack will be once you've cleared out all that extra radio gear and brought it for the raffle at our September membership meeting or the auction at our November meeting! We are not limited to radio-related items, though anything someone else might want is fair game.

--Kathleen, KI6AI

**CLUB MEETING FRIDAY OCTOBER 17, 7:30PM**



### CAKE bakings Sept 13

Much topical variety of CAKE was consumed as usual at Gigi's on Sept 13th. Jeff KG6YPS reports great progress on his 2 element Yagi for 20 meters using software design tools and an antenna analyzer. We responded to some questions on construction. The most curious item was provided by our President W1WUH. Our guessing champion Eric K6EP was right on target (pun intended) in claiming it to be a proximity fuse for a warhead. Richard gave us great detail on how this amazing device used Doppler shift at VHF and he described its important role in WWII. Other curious items were provided by Don K6GHA our VP. These include some 1930 vintage items of Western instruments. See if you can determine the from the image in the next issue of Short Skip how zeroing the direct reading Ohmeter was done.

Ron W6WO congratulated Reed N1WC on his discovery of a new rare element he calls Unobtanium ! Ron showed a beautiful home-brew dummy load on loan by Rene K6XW. Eric suggested that power dissipated in a dummy load could be used to run a fan. The punitive price of printer ink was bemoaned and while less expensive black may be OK the same is probably not true for colors.

A well-known personality Gordon West will be here on October 19 and he intends to visit the HF station at the Vets building. Watch for more details on his plans.

Ron mentioned a type of hearing aid that can be tuned to a persons actual needs via on-line software. According to Cap KE6AFE there is an implant designed to relieve back pain in much the same way. I wondered what other physiological short comings might be enhanced in this way. Are we likely to become "Software Defined "people?

How to decide what can be removed from a cluttered hard drive brought out some novel ideas. Marc W6ZZZ finds it helpful to use Google to dig out info on mysterious items

We discussed the work TBD on the beam, dipole and coax systems at the K6BJ HF station. The September 27 CAKE session will be devoted to this but in addition we plan

to make a survey of the required efforts and resources by meeting on-site on Sept 20th at 10:00. Come join us on one or both of these dates as we need both brain and brawn

Unless you have nothing to say please consider writing up something for Short Skip CAKE and Donuts September 27th

The morning of this unusual CAKE meeting for me began 8AM with the cultural experience of a first visit to a donut shop. Hey I arrived here only 33 years ago and these things take time! Arriving soon after at the Club shack I found Mike W6YDG with his BIGGGG bucket truck. A few minutes later Tom WB9VXY arrived complete with climbing gear and a hard hat. Allan AF6BO then showed up with the details of the modification to add 30 meters to the 10,15 and 20 meter bands covered by the beam. By the appointed hour of 9:30 we had the beam on the ground just as many others arrived. After a brief overview two teams were formed; one to dismantle the beam and the other to construct the new multi-band dipole.

Work progressed so rapidly it seemed at one point that we may be finished by noon. Not So - nothing is as easy as it looks and everything takes longer than you expect is as true as ever. The beam was in remarkably good condition but it is quite complicated so dismantling, cleaning and de-oxidizing all the connections required a lot of time and effort. Similarly the modification to add the 30 meter band took a lot of care and time. At one stage 6 team players were busy re-assembling and measuring under the watchful eye of Allan who had the detailed drawings to follow

By mid afternoon we were ready to see how it was behaving and Mike lifted it up about 10ft above ground so that Ron could make a sanity check using an Autek analyzer. As the results came in I felt spirits sagging as clearly all wasn't well. We deduced that most likely something may be wrong with the driven element. We tried a few times to see the effects of minor adjustments before concluding these were not at the root of the problem. Allan then proceeded to examine the way the critical traps were installed. It turned out that those for 20 and 15 meter had been interchanged. With renewed confidence up she went again and immediately we saw good numbers and with a few more ups and downs we had it nicely trimmed on all bands. All this time poor Mike was sitting aloft in his bucket.

Off to the side we had Jeff KG6YPS wiring up the T2X rotator, donated by W6YDG. George W3AB was busy putting coax connectors on the 100ft of brand new LMR400 so generously donated by Tom AE6XQ who also donated the 8ft extension mast. The beam team included Don K6GHA, Chris KG6DOZ, yet another Dave KD6CYC, Greta KI6NTL. Roy KF6KVD, Rich W1WUH and Kerry soon to become K6RRY

While all this was going on the other team was busy constructing the wire dipole to cover 10,17, 40 and 80 meters. The aluminum wire of this antenna has a distinct aversion to being straight but this challenge was overcome by the combined efforts of David WS2I, Rich KI6LQL, Dave KE6HQZ and Roy KF6KVD. When aloft, measurements showed that on all bands it was OK except on 80 where it resonated in the band but the VSWR was 3.0:1. This calls for some more experimentation and anticipating this we had put pulleys in place at each end and in the center. I used the coax from the previous 80meter dipole but it really needs replacing.

We must recognize the contributions of other items from David WA6NMF and Jim WB6YAM- thanks to you both. Several others donated sufficient cash to cover the light duty refreshments and I personally enjoyed my sandwich lunch provided by the club

It had been a very long but rewarding day and as it was wrapping up at 5:00 PM I selfishly left others to deal with the trash.

In closing if I have overlooked anyone please accept my apologies and once again we can express our sincere appreciation to the key actors in this drama W6YDG, AF6BO and WB9VXY

Watch the next Short Skip for pictures and diagram of the resulting antenna arrangements

I have already been asked what projects come next here's what come to mind.

Fix the Club coffee pot that let us down so badly

Deal with the entry coax in a pro-amateur manner

Once and for all clear out ALL extraneous items

Provide remote control of antenna switching and rotation

Sincere thanks to all of you

—73 Ron W6WO



Mike W6YDG and his truck



Rotator workers



K6BJ beam coming down



Allan Handforth, AF6B0, performing his high-wire act on September 20, 2008 installing the new yagi for the Watsonville link. Allan put on an amazing exhibition with his prowess and endurance!

—Warren, AC6IZ



Delicate work



Dipole consultants



K6BJ dipole construction



K6BJ beam construction



Up she goes



Beam going back



By Art Lee WF6P

## CHATTER

Last Wednesday night ten of us boarded the 34 foot sailboat *Misty* for the Wednesday Beer Can races. A welcome new crewmember was our very own editor/publisher of Shortskip. Ron, K6EXT, came on board to help with the sails and to enjoy the evening afloat. As is our norm, we stayed clear of other racing boats (to avoid collisions!) and came in, by design, as the last boat on the Bay. It is fun to sail around the Santa Cruz Wharf and Boardwalk at night. We get to look at the folks eating at Gilda's and other restaurants, they in turn, watch us.

I just received a nice newspaper article from club member Patrick Henry, WA6PKM, living in Gold Beach, Oregon. The piece describes the Sept 9th, 1942 attacks on our coast by a Japanese seaplane launched from a submarine. The aircraft, a Yokosuka E14Y1 was transported on deck in a tube, taken out and reassembled. Pilot Nobuo Fujita and crewman Shojo Okuda dropped fire bombs on the wooded Oregon coast hoping to start large forest fires. They made two such flights but neither bombing raid produced fires which were of any consequence. Unexploded incendiary pellets from 162 pound bombs were found by fire fighters. The actual site is close to Brookings. Pilot Fujita returned after the war and presented the city with his 400-year-old samurai sword, which he carried on the flights. While I was aware of Japan's wartime incendiary balloon project, I was unaware of these bombing flights. Both events were kept secret by the US government during the war.

From the volume of emails received, club members have been hard at work building up communications capabilities of our repeater shack. Thanks gang, we all appreciate it. Classes for Tech licenses have been successful with new hams being welcomed into the fraternity; additional testing for licenses are scheduled. Somehow, I missed the last club meeting. It's always good to have an eyeball QSO with everyone. (I think I fell asleep after the evening election news)

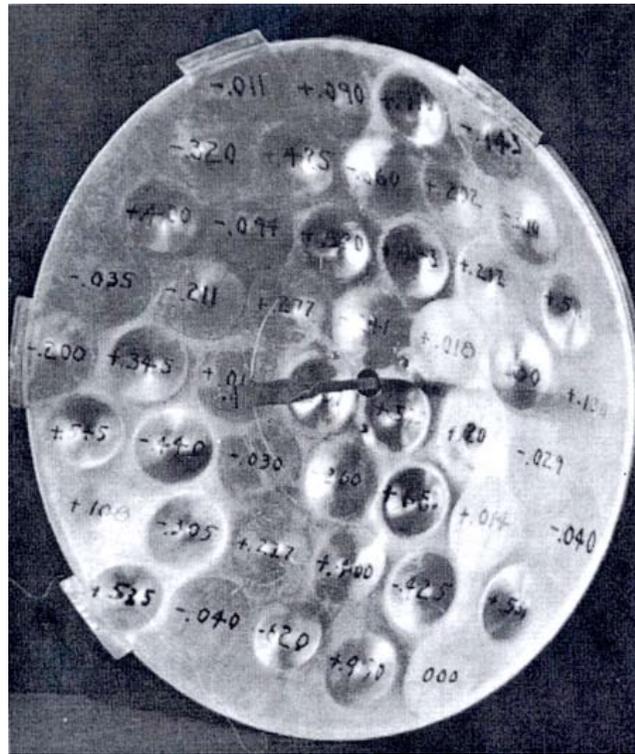
Did receive an email from Hank Bond, KG6EE. He had been in the sick bay when his defibrillator started giving him prob-

lems. He went to Stanford Medical Center for a replacement (his #3). It had something to do with his battery having been dead for about a year. Hank is home and his condition improving.

I'm reading a book, *The Coastwatchers*, by Eric A. Feldt. Donna found a yellowed paperback copy at the Goodwill for a quarter. Teams of Australian radio operators fought the hardships of jungle living to observe the movements of Japanese

shipping off the island of Guadalcanal and others. They had to drag heavy transmitters and receivers, a gasoline engine driven power supply and the necessary petrol (an Australian writer) over hostile terrain. It took several carriers to transport the equipment. This was done while evading Japanese soldiers sent to eliminate them. The Japanese radio operators homed in on outgoing signals and tracked down many of the teams with disastrous results.

## What is this:



An Iraqi IED Shaped charge? An IED Shaped Charge test Target?  
A bullet proof vest test article? Special unobtainium Armor Plate?  
Hint: It is not a Ruse. It was developed by Mr Ruze.

OK OK...

This is a parabolic reflector test article to prove the math for determining how real parabolic dishes degrade from their theoretical gain vs diameter, when surface errors are included. With some "calibrated dents". Mr John Ruze, in the 60's studied this very relevant phenom, and developed the math to predict how the gain and patterns of Parabolic dishes deteriorate when the frequency/wavelength of use gets larger/smaller than the imperfections in making the dish.

We have to look at this at Jamesburg, because the dish is not perfect, in fact, sloppy by today's standards.

We found that the dish surface "dents" at Jamesburg are about 40 mils, about 2 credit cards thickness. Not bad for 100 ft, 300 tons of dish. If we want to do Moon Bounce or other things up in the X band or higher. Turns out there is so much gain, that even at the higher frequencies the degraded gain leaves huge amounts of gain left over....So we can do moon bounce easily in the X band or higher, with the C Band dish.

If anyone wants detailed information, I can send some papers published by Mr Ruze in the 60s that will explain.

—Best, 73, de Pat AA6EG

## SCCARC Board - 2008

|                       |                     |        |                |
|-----------------------|---------------------|--------|----------------|
| <b>President</b>      | Rich Olsen          | W1WUH  | 464-7474       |
| <b>Vice President</b> | Don Taylor          | K6GHA  | k6gha@k6bj.org |
| <b>Secretary</b>      | Kathleen McQuilling | KI6AIE | 476-6303       |
| <b>Treasurer</b>      | Cody Adams          | KG6YPK |                |
| <b>Board</b>          | Christopher Angelos | KG6DOZ | 688-3562       |
|                       | Reed Cotton         | NIWVC  | 460-1801       |
|                       | Mike Doern          | KM6IKE | 477-1161       |
|                       | Bruce Hawkins       | AC6DN  |                |
|                       | Ron Skelton         | W6WO   | 477-1021       |
| <b>K6BJ Trustee</b>   | Allen Fugelseth     | WB6RWU | 475-8846       |

## MONTEREY BAY REPEATER ACTIVITY

|                    |  |
|--------------------|--|
| Santa Cruz County  | K6BJ 146.790- PL 94.8 Santa Cruz<br>KI6EH 147.945- PL 94.8 Watsonville<br>K6BJ 440.925+ PL 123.0 Santa Cruz<br>• SCCARC Net Monday 7:30 PM 146.79- /147.180+ /440.925+ linked<br>• 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<br>443.600+ PL 110.9 (Linked repeaters)  |
| San Lorenzo Valley | WR6AOK 147.120+ PL 94.8 Ben Lomond<br>• SLV Net Thursday 7:30 PM   |
| Loma Prieta        | AB6VS 440.550+ / AE6KE 146.835- PL 94.8 (Linked for net 94.8)<br>• LP Net Tuesday 7:15 PM  |
| Monterey           | K6LY 146.97- PL 94.8 / 444.700+ PL123 (Linked) Monterey<br>• NPSARC Net Wednesday at 8 PM on K6LY/R<br>• Monterey ARES Net Wednesday 7:30 PM K6LY 146.970- (PL 94.9)<br>• Newsline (Ham News) Broadcast Wednesday at end of NPSARC Net |
| LPRC               | WR6ABD 146.640- PL 162.2 / 442.900+ PL 162.2 (winsystem)<br>• LPRC Net Tuesday 8:00 PM 146.640- (PL 162.2)<br>• 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 | Oct 17 |
| Board Meeting           | Wed    | Oct 21 |
| Short Skip articles due | Monday | Nov 10 |
| SCCARC Meeting          | Friday | Nov 21 |

## 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)

|       |              |
|-------|--------------|
| 10/13 | Phil KE6UWH  |
| 10/20 | Allen WB6RWU |
| 10/27 | Chris KG6DOZ |
| 11/3  | Tom K6TG     |
| 11/10 | Diane KI6IFS |
| 11/17 | Cody KG6YPK  |

## SHORT SKIP

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Free to members.

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

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