

FEBRUARY 2005

THE MONTHLY NEWSLETTER of the SANTA CRUZ COUNTY AMATEUR RADIO CLUB

SHORT SKIP



SOME NEW FIELD DAY RULES

Those planning to participate in this year's Field Day will need to bone up in advance on a few changes in the rules for the ever-popular operating event. Field Day this year takes place June 25-26. The 2261 Field Day entries for 2004 were the most ever. While similar in format to a contest, Field Day is primarily a means to exercise and demonstrate Amateur Radio's emergency operating capabilities while having fun at the same time. ARRL Contest Branch Manager Dan Henderson, N1ND, says that among other things rule changes for 2005 expand eligibility for bonus points.

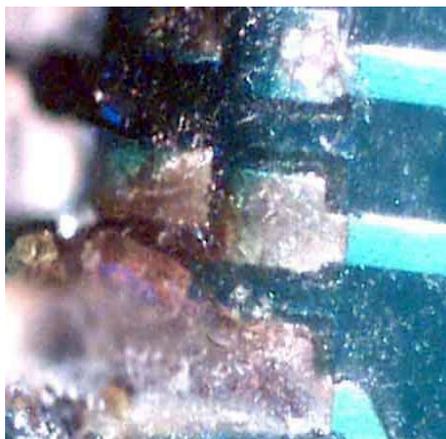
"All groups will be eligible for some kind of bonus points," Henderson said. "Make sure you carefully read Field Day Rule 7.3." That rule spells out how to qualify for such bonus points as 100 percent emergency power, media publicity, message handling, making satellite contacts, using an alternative power source and copying the W1AW bulletin, among other things. Many bonus point categories are available to all entry classes.

Henderson notes that some large clubs often compete among themselves to see who can claim the highest number of transmitters. Under the revised rules, all transmitters must be on the air with an operator to count toward a club's entry class. "You have to actually have individual people and sufficient equipment capable of operating simultaneously," Henderson emphasized, referencing Rule 4. "The key word there is 'simultaneously.'"

The Field Day exchange consists of the number of transmitters on the air followed by the participation category (A through F). Operators would send "3A," for example, for a club or non-club portable setup with three transmitters on the air at the same time. Rule 4 also specifically prohibits switching and simulcast devices.

The 2005 Field Day rules also modify the number of transmitters eligible for bonus points that a group can claim for its operat-

BAD SOLDER



Microscopic view of a "bad" solder joint.

Jim N1IPP has a very intriguing product developed years ago by Intel as a child's microscope. You can buy them today on eBay for \$50 or less. This 'scope has no eyepiece but connects to a PC USB port and you view images on the screen. You have many software options to play with. Jim and I wanted to see how useful it might be when working with fine grain ICs. The picture is at X60 magnification and it certainly can highlight bad soldering of a dense IC chip but our conclusion was that it would not be much help in doing things well. Great product for it's original purpose however.

ing class. "You can only claim the emergency power bonus points for up to 20 transmitters," Henderson explains. "That's a maximum of 2000 emergency power bonus points." There no limit on the number of transmitters eligible participants may have on the air, however. Field Day rules already generally prohibit the use of more than one transmitter at the same time on a single band-mode.

In addition, Field Day 2005 will introduce a new "Youth Element" bonus category (Rule 7.3.15). Clubs or groups operating in Class A, C, D, E or F now can claim 20 bonus points--up to a maximum of 100--for each person aged 18 or younger, who completes a valid Field Day contact. Single-operator Class B stations can

MEMBERSHIP

A thorough review of the membership roster shows that as of today (2/6/05) 47 members have paid status including 4 new members. It appears that we have roughly 115 active members of a possible total of 126 members.

Yearly membership dues are the primary source of financing of the club functions. These functions include the K6BJ repeaters and HF station, Short Skip and insurance for the club functions. If you have not yet submitted your dues could you please submit them as soon as possible. It is helpful to the keeper of the roster to include the little green card with your contact information on it.

If you are not already a member of the ARRL; would you consider joining the ARRL through our club? The cost is the same but the club gets some revenue for affiliation.

Since the beginning of 2005 we have accumulated roughly 1/3 of the yearly expenses. Expenses for the year are estimated to be in the range of \$2500-2900 (based on previous years expenses). At press time there is some uncertainty to the expenses for Short Skip. We will probably have a better estimation in the next few days.

—73 N1IPP

earn a 20-point bonus if the operator is age 18 or younger. Two-person Class B setups can claim a 20-point bonus for each operator age 18 or younger, for a maximum of 40 points. The maximum number of participants for Class B entries remains at two.

Henderson encourages Field Day participants to submit their Field Day summaries electronically using the Web applet form <<http://www.b4h.net/cabforms>>. "You may input your summary information at that site for a 50-point bonus," Henderson points out.

The complete 2005 Field Day packet now is available on the ARRL Web site <<http://www.arrl.org/contests/forms/05-fd-packet.pdf>>. -- 73 Ron W6WO

CLUB MEETING FRIDAY FEB. 18, 7:30 P.M.



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Home Brew at Radiofest

I am very pleased to inform you that the organizers of Radiofest have agreed to provide a table for individuals who wish to show their examples of the Home Brew art.

This is a very useful way to get some attention to the fact that Home Brew from scratch is alive and well. We expect some students from CSUMB to attend so this is an ideal opportunity to show them this side of Ham Radio.

Items of any age and complexity will be welcome so don't be bashful, bring as many items as you like to show and brag as much as you like HI HI

Now is a good time to enter February 26th in your diary and to check on details on the Radiofest web site.

PS No items on display should be for sale

—Ron W6WO

Welcome New Members

Brian N. Jones KG6WZT

Scott Pugmire KG6YDF

Kendra Pugmire KG6YDG

Olive Wendt future ham

What a pleasure it was to see both young and old having a great time at our CAKE session. It took four tables to seat us all and we welcomed Austin AB6VU for the first time. As usual your scribe had a hard time keeping up with all the overlapping threads.

Art WF6P wanted to know if higher was always better for an antenna and the answer (as for most antenna questions) was-it all depends. It is unsound to make general statements however more height often leads to lower angle radiation and less ground loss.

Bob K6XX showed some of his efforts from using computer-aided schematic drawing and PCB fabrication. Steep learning curve without a doubt but how else could you get such impressive results?

Latest copies of the Mouser catalog were handed out and we were interested to learn that the origin of the well-known parts supplier DigiKey was their Ham Radio Digital Keyer from the '60s.

One of the curious items on show was an airwound inductance with a single turn rotatable link inside. Evidently this could act for fine tuning of reactance and perhaps also Q. Another curious item was Jim N1PP's quack medical device purported to cure cancer by generating ozone. Some said it was to promote growth of facial hair. Roy KF6KVD showed a nice tiepin in the shape of a microphone. Cody brought a copy of Termans Radio Engineer Handbook circa 1943 and what an amazing publication that remains to this day. Ron K6EXT brought along a book with the unlikely name of Vacuum Tube Valley published as recently as 1997 for the Audio Hi-Fi enthusiasts. Ron also brought a copy of the ARRL book QRP Classics-worthy of any Hams bookshelf.

Eric discussed the challenges of temperature management in solid state amplifiers. One novel idea proposed was to incorporate a tropical aquarium in the design. Eric mentioned the care taken in the K2 noise blanker to accurately time the blanking interval with the arrival of a noise spike. We broached the complex topic of AGC in receivers.

The unusual HF conditions today might be related to the impacts of sunspot activity that are predicted for the next few days. It was neat to look at the sun's disc on the SpaceWeather.com site via the local Wi-Fi connection.

Ron W6WO reminded the group to support Radiofest on Feb 26th. We will have a table set up to show examples of Home Brew projects so please bring one or more items finished



or not. Stay tuned for the next CAKE session and take part in the Elmers Net following the club net on Monday nights.

Summary of Report of Discussions with staff of Cal State University Monterey Bay (CSUMB) on January 20, 2005

Those present: Arlene Krebs, Director of the Wireless Education & Technology Center; Gil Gonzales, Chief Technology Officer; John Ittelson, K6JCI, Professor and head of the CSUMB Idea Lab; Ron Skelton W6WO and Pat Bartelov AA6EG, self styled emissaries. We explained that neither of us could act on behalf of our respective clubs and that actions requiring Board approval would be referred

Purpose of the meeting was to to expand and refine prior discussions about collaboration between CSUMB and the Ham community, to explore possibilities and develop a plan of action.

The meeting was an unqualified success. Seldom have I attended a meeting where so much was accomplished in the space of little more than one hour. No time or effort was required to promote Ham Radio. Gil stated at the outset his belief that there is a natural alliance between universities, municipalities and the Ham community. Naturally we agreed and were delighted

Gil would like an early meeting with Board members of MBARA to solidify the relationship thereby enabling him to propose several measures that will especially benefit N6IJ. Examples discussed were to extend conduit and fiber to N6IJ, and to position N6IJ as a remote lab they refer to as a "service point". He is very keen to develop what could be described as a Memo of Understanding.

Arlene and Gil requested that we take part in their Wireless Community & Mobile User Conference scheduled June 1-3, 2005

a) We would deliver a presentation/demonstration on the amateur High Speed Multimedia Initiative.

c) We discussed a workshop to be held in conjunction with the conference and possibly a BBQ at N6IJ hosted by CSUMB. These possibilities needed further discussion

Gil outlined his intent to establish a Ham club on campus and a repeater site that would share space on an 80 ft tower to be used by KCET for public digital TV. He wanted our recommendations for equipment operating at whatever bands we care to suggest.

We discussed CSUMB taking part in the forthcoming Radiofest event. We confirmed a slot on the agenda for a presentation on their vision for a tricounty canopy network..

Cake Crumbs continued

A priority item on the CSUMB agenda is a high bandwidth link between researchers at Elkhorn Slough and the campus. From Pat's previous study of the path a microwave link does appear to be practical and Tom Minnis (WB6HYD) and Sam Wood (WB6BUP) have already offered equipment for such a link. CSUMB requested a project description to present to their researchers and the Park Service. Within two weeks of receiving the information they anticipate a meeting with those involved. This link will be an example of our close working relationship and would be featured in our presentation during the June conference.

John has offered to establish an email list server for HSMM messages so as to expand membership in the region and replace the cumbersome 802.xx special interest list we have now.

Additional threads of conversation occurred illustrating wide-ranging possibilities that will benefit us. For example CSUMB would incorporate aspects of Ham Radio into the "Service Learning" obligation associated with some of their courses and projects. Emergency Preparedness is but one example. CSUMB had previously been offered a 70 ft monopole but as CSUMB no longer need this, it possibly could become available to us.

Contact me with any questions/suggestions
Ron Skelton W6WO

PTT - Emerging Technology

The following comment in an IEE journal caught my eye. "Push to Talk (PTT) is a different way to engage in communications" Pascal Coutier, Senior Partner and Chief Technology Officer, Logan Orviss. The article goes on to state. "The idea is simple, but the technology is expected to create a market worth over \$5Bn by 2010, according to market research firm IMS".

Curiouser and curiouser me thinks so I read on. "PTT is being married with instant messaging as a single button function on a handset. It is a half-duplex, always-on, Voice Over IP technology operating over wireless networks. Connections are almost instantaneous and groups of users can listen to voice calls whilst simultaneously texting each other. PTT is part of a broader set of services called "presence-based" messaging services".

What has this to do with ham Radio? Well in my view it is a creative example of Multi-media communications where a common network can support applications with simultaneous voice, data, text and images. This is in essence what the ARRL High Speed Multi Media (HSMM) is all about.

—Ron W6WO



By Art Lee WF6P

CHATTER

Forty meters has been spotty of late. The other evening while in Sacramento, I left the rig on in the shack as I did some computer work. A net controller in Erie, Pennsylvania, came in at about a 5-9 at 2100 (local). A station in Louisiana checked in, also loud and clear. I picked up the mic and did the same. It was a surprise to the Erie station to connect with me. Don Moore, W6IBN, worked the East coast a week earlier. Strange propagation.

Our son Bruce just bought a house in Roseville, near Sacramento. The seller is a widow, moving into an assisted living community. Her husband is a SK. Bruce agreed to take the tower down in the backyard. In one room there is a complete ham station with lots of ham gear. The widow said she couldn't take it with her and was happy if the gear found a new home. I'll take a look, it could be interesting. There were several straight keys laying around. Evidently the ham husband had a lot of home-brew equipment. I wonder if he had an amp? Bruce said a lot of the radio gear looked very old.

I attended the monthly CAKE meeting yesterday (2/4/05). It meets the first Saturday of the month. There were 16 of us usual suspects there, and we had to keep dragging extra tables up to accommodate us all. Conversations overlapped as we all swapped tech or operating information. There were several "show-and-tell" items to play with. Ron, W6WO, brought some QRP boards and a large coil with taps. Frankie Carroll, K6BDK, and I peeked inside the coil to view a tunable metal loop. The coil was bigger than my handheld Kenwood TH-28A. The QRP material was impressive as entire radios were reduced to 4 square inches. One chip Ron showed us was smaller than the surface area of a pencil eraser. Soon-to-be-ham Cody Adams brought a copy of Frederick Terman's engineering text. It was a collector's item, in beautiful condition. It was dated 2/23/44 and stamped as the property of the Naval Post Graduate School, then located at Annapolis, Maryland. We all had a nice time thumbing through the pages. Cap, KE6AFE, and I had a nice eyeball QSO. He attended a very interesting meeting of the San Lorenzo Valley Club. The speaker for the evening was the head of the Electronics Department at UCSC.

Worked KL10S on 40 meters. The operator, Issac, was aboard a large wooden ketch, headed to the Panama Canal. He and his whole family, including his mom and dad, were the crew and live aboards. He said they used ham radio as their only source of communications and entertainment.

Last month I had fun crewing for Rich Hanset, KI6EH, aboard *Seaweed*, his Navigator 50 powerboat. We motored from Discovery Bay to Bethel Island and back. Rich, met with some high winds on an earlier trip, was forced aground. In the towing attempt, he injured his hand and had to undergo some painful surgery. There was some damage to the props so we took the boat to the yards for repairs. Rich let me run the boat through the sloughs. He knows those waters very well and guided me through all the hazards. I learned to keep a sharp eye on the depth sounder. *Seaweed* draws five feet of water and at times I read 5.8 feet on the sounder.



Rich KI6EH aboard the Seaweed

Centenarian QSO

At age 100, ARRL member Emma Berg, WOJUV/AAR7AX, of Lawrence, Kansas, remains active daily in the Military Affiliate Radio System (MARS). Berg achieved centenarian status on Sunday, January 16. The occasion elicited greetings this week from ARRL President Jim Haynie, W5JBP, who extended best wishes to Emma Berg and congratulated her on more than four decades as a member of both Army MARS and the ARRL.

On the Friday, January 14, MARS net session she always checks into--the last before the weekend of her birthday--fellow operators likewise extended birthday wishes.

The philosophy she expresses may sum up her view of retirement, if not of human existence in general.

"Bread may be the staff of life," she wrote, "but this is no reason anyone's life should be a continual loaf."

Emma Berg certainly has no plans for loafing. She recently renewed her Amateur Radio license for another 10 years.--contributed by Bill Sexton, N1IN

SCCARC Board - 2005

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	Ray Matteis	KE6NHG	688-6668
	Allen Fugelseth	WB6RWU	475-8846
	Bob Wolbert	K6XX	426-5699
K6BJ Trustee	Royce Krilanovich	AC6Z	475-4798

MONTEREY BAY ACTIVITY

- SCCARC Repeaters: K6BJ 146.790- PL 94.8 Santa Cruz (linked w/Watsonville full time)
KI6EH 147.945- PL 94.8 Watsonville (linked w/Santa Cruz full time)
K6BJ 440.925+ PL 123.0 Santa Cruz
- SCCARC Net Monday 7:30 PM 146.79- /147.945- /440.925+ linked
 - SCCARC 10 Meter Net 28.308 MHz USB Monday 7:00 PM
- SLVARC Repeater WR6AOK 147.120+ PL 94.8 Ben Lomond
- SLVARC Net Thursday 7:30 PM
- LPRC Repeater WR6ABD 146.640-(PL 162.2)
- LPRC Net Tuesday 8:00 PM
- NPSARC Repeater K6LY 146.97- PL 94.8 Naval Post Graduate School, Monterey
- NPSARC Net Wednesday at 8 PM on K6LY/R
- 6 Meter Local Net 52.8 MHz (PL-114.8) Sunday 8:00 PM
- ARES Nets
- SC ARES Tuesday 7:15 PM K6BJ 146.790-(PL 94.8)
 - SLV ARES Tuesday 7:00 PM W6JWS 146.745-(PL 94.8) & WR6AOK 147.120+(PL 94.8) on alternate Tuesdays
 - South County ARES Tuesday 7:15 PM K6RMW 147.00+ (PL 94.8)
 - LP ARES Tuesday 7:15 PM AE6KE 146.385- (PL 98.4) & AB6VS 440550+ (PL 94.8) linked
 - SC County ARES Tuesday 7:30 PM 146.79-/ 147.945-/ 440.925+/ 147.180+ (all PL 94.8) (linked)
 - Monterey ARES Net Wednesday 7:30 PM K6LY 146.970- (PL 94.9)

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

SCCARC Calendar of Events

SCCARC Board Meeting 6:30	Friday	Feb 18
SCCARC Meeting	Friday	Feb 18
Radio Fest	Saturday	Feb.21
Short Skip Deadline	Sunday	Mar 6
SCCARC Meeting	Friday	Mar 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.

SCCARC Website at - www.k6bj.org

CLUB E-MAIL: yourcall@k6bj.org



Art WF6P on the Seaweed



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

CLUB MEETING and SPEAKER

In February we have St. Valentine's Day and President's Day. The Friday between these two holidays is our second club meeting of 2005. This time we meet in the upstairs conference B2/B3 in the Education Building of the Dominican Hospital at 7:30 p.m. Feb. 18.

This month we continue our discussion of digital communications using amateur radio. Speaking Feb. 18 is Donald Kerns, AE6RF, of Boulder Creek. Donald will give us a demonstration of Winlink, the computer software that lets you send and receive email messages via amateur radio. By organizing what you need to know Donald makes clear how to put software to use. If you missed Donald's other demonstrations in the San Lorenzo Valley or need a refresher, then you won't want to miss our next meeting.

—Chris KG6DOZ

First Class