

DECEMBER 2005

THE MONTHLY NEWSLETTER of the SANTA CRUZ COUNTY AMATEUR RADIO CLUB

SHORT SKIP



Solid State Receivers That Glow?

When I recently got back into amateur radio 32 years after my Novice license expired, I never expected to find myself helping to foster amateur radio in Nepal. But that's exactly what happened after discovering that my old friend and first Elmer, David White (WN5Y), had designed a very unusual receiver kit. My old/new Elmer sent me a receiver nicknamed "Tokyo at Night."

David's Electroluminescent Receiver (ELR) is no mean performer. It is a dual-conversion, dual-image superhet receiver that covers four amateur radio bands, or with minor modifications can be set up for four SWL bands. The ELR uses low-noise, dual-gate MOSFETs, and to show visually how the circuits are working all the drain/source currents travel through LEDs. If a circuit is working properly, its LED will glow brightly. If the circuit is not working, the LED is dark, just as dead tubes were dark in the old days. I showed this off at the recent CAKE meeting, as you can see.



Detail of WN5Y's "Tokyo at Night" ELR Receiver

This receiver's visual appeal and ease of assembly are only some of its advantages; others include the extensive and clearly written construction and operation material. Visit David's website (<http://www.pan-tex.net/usr/r/receivers/>), and you can also see more photos of the ELR. Another nice feature of this website is the links page, with links to sites covering basic electronic construction techniques, including soldering basics, and QRP projects.

I have learned that members of the small but enthusiastic amateur radio community in Nepal are interested in getting some of these receiver kits to help promote interest in ham radio among high school students there. Wouldn't we like to see more activity from 9N land?

Anyone interested in joining the fund-raising effort to provide one of these \$90 kits for Nepalese students can contact me at KI6AIE@k6bj.org.



KI6AIE showing the ELR at the CAKE meeting

November Meeting Nets New Club Officers

Great deals (steals) were to be had by all! Wow! Lots of wondrous gear went across the tables thanks to the very generous donations by many, including David KG6IRW. Dave W8FLL did a fantastic job coaxing bids from the crowd (but had to be reminded at one point that they've been making speakers which don't require their own power supply for more than 50 years now). Bob K6XX and Kathleen KI6AIE performed logistics for the winning bidders. Good show!

The election was prior to the auction. Elected by acclamation for 2006

(term of office to begin at the December holiday meeting lunch at Marie Callender's in Capitola on December 10) were:

President Chris Angelos KG6DOZ
Vice President Pat Barthelow AA6EG
Treasurer Kathleen McQuilling KI6AIE
Board:

Bruce Hawkins AC6DN

Rich Hanset KI6EH

Mike Doern KM6IKE

Allen Fugelseth WB6RWU

Vic Linderholm AE6ID, past president

Still needed after the auction were a secretary for 2006. Step right up to help out your club. It only requires arriving at a few monthly club meetings a bit early, for the board meetings.

—73, Cap

AUDIO TESTER

Here's a neat piece of Shareware for testing audio equipment. My friend OE3ZK used it to investigate why his Tentec Omni VI SSB sounded poor. He used this as his AF sig gen and noted his RF output showed a poor response. It required a minor adjustment in his radio to correct the problem.

<http://www.audiotester.de>

— Ron, W6WO

CLUB MEETING FRIDAY JANUARY 20, 7:30 P.M.



November 12

I must apologize to anyone expecting a serious technical discourse because the mood of the group today was even more jocular than usual—entertaining it certainly was.

Good to have Don W6IBN, Art WF6P, Larry WB6MVK and Peter AB6WM join the usual cast of characters.

We congratulated Bob K6XX on his appointment as Staff Applications Engineer with Vertical Circuits, Inc and this not to imply development of any form of antenna. Good fortune Bob!

Dave W8FLL can always be relied upon for interesting items. He showed a very fine example of a QRP radio built by INDEX Labs a few years ago. This had a dense stack of PC boards. Today we see multi-layer boards and SMD components doing much the same job. Dave also gave us a tutorial on how to homebrew a mobile antenna. Lots of advice on the drilling of PVC was provided.

Read KG6RQH brought along a microwave intrusion detector that has possibilities, it had a control labelled "Range Extender" and henceforth we felt this should become our preferred term to use in place of a linear amplifier.

Vic AE6ID discussed his experience testing for short ccts between the grid and filament of what else but a vacuum tube, otherwise correctly called a "Thermionic valve"

Life after burnt-out capacitors and PIN diodes was a "hot" topic. RF pick-up via microphone cables was familiar to some and ferrite seemed to be the best solution.

Ron W6WO related a bad experience with a purchase on eBay which is now under investigation. The mystery item was a small circuit board which is designed to transfer heat to an in-situ crystal to improve its stability. The mystery really is how does this occur when one might expect the ambient temperature inside a radio is higher than the temperature of the heater.

November 26

Our 4th birthday was celebrated with some delicious German gingerbread and some of our usual light hearted banter. It was good to have Ralph W6ENE join us.

The masterpiece was Kathleen's (KI6AIE) Electroluminescent RX about which we can expect to hear more from her in the next Short Skip.

No-one guessed the mystery item provided by Peter (AB6WM) it turned out to be a temperature sensor with fractional degree sensitivity. These are used by hang gliders for finding thermals. Many local gliders are hams who operate on 147.405 while up aloft.

Man of many talents Dave (W8FLL), brought examples of his proprietary coffee cup designed to reduce caffeine consumption. They each had a 3 inch dia. hole in the side. Thanks for the copper tape Dave.

We had some discussion on modeling coax cable feeding center-fed or off-center-fed antennas with and without baluns. This needs more study but one is reminded the role of a balun is to reduce ingress and egress of undesirable RF. An extreme case is that of intercontinental submarine coax cables. The RF picked up on such long cables comes from broadcast stations all over the world. Without a very effective (> 40 dB isolation) balun at the entrance to the terminal equipment, desirable signals would be swamped.

Earthquake Prediction

In this area we are well aware of the value of predicting earthquakes where only a few minutes warning can save lives—but short-term forecasting just hasn't worked. Scientists are now focusing on strange lights in the sky and odd radio noises to determine how these are correlated with earthquakes. One sign of impending earthquakes is a disturbance in the ultra low frequency (ULF) radio band—1 hertz and below—noticed weeks, and more dramatically, in the hours before an earthquake. [yes that's 1hertz folk!]. Researchers at Stanford U. documented such signals before the 1989 Loma Prieta quake. Rocks are deformed by the slow grinding of the earth that occurs just before the dramatic slip that is an earthquake [piezo-electric effects on a grand scale]. This cracking causes tremendous electric currents in the ground with affects on the earth's magnetic field that can be observed by satellite and ground-based sensors. Our 7.1 magnitude quake in 1989 sent out strong signals fully two weeks before the quake occurred but the science was not then well enough accepted to issue a public warning. Technical and financial challenges abound but there is world-wide interest in finding a working prediction system.

This text was extracted from the Dec.2005 IEEE Spectrum Magazine. Check the following links to learn more

<http://www.quakefinder.com>

http://science.nasa.gov/headlines/y2003/11aug_earthquakes.htm

http://smc.cnes.fr/DETMER/GP_actualite.htm

—Ron W6WO

Bill Lawrence KB6QA SK

David W. "Bill" Lawrence, age 94 died peacefully at his home on Dec 2nd, 2005. He had been in failing health. Mr. Lawrence was born in San Diego December 31st, 1910. He moved to this area in the 1950's with his wife Mary (Basich). She preceded him in death in 1998.

He retired from the County Office of Education in 1973 and was active in California School Employees Assoc. He was also a member of Springfield Grange, Croatian Fraternal Union, Foothill Firefighters and Grey Bears. He was active with the Boy Scouts for many years. He was a General Class Ham operator, and many Ham operators knew him as the Cookie Man through his love of cooking, and he belonged to many Ham clubs in California and throughout the United States.

He is survived by his son Wm E. Lawrence of Coronado, Calif and daughters: June Hall and Jo Anne Snow of Texas, Frances Jakobsen of Watsonville and 12 Grandchildren, 21 Great-grandchildren and 7 Great-great-grandchildren. He was preceded in death by 4 brothers and 2 sisters.

Donations may be made in lieu of flowers to Hospice or Grey Bears. At Mr. Lawrence's request, there will be no funeral arrangements. A celebration of his life will be held on Dec. 31st, which would have been his 95th birthday."

Also, George K6TAM <k6tam@jprc.net> relays that celebration's planned at Bill's residence: 2-4 p.m. 789 Greenvalley Rd. Space 64, Watsonville.

—73, Cap KE6AFE

CAKE Alumni

QSY's fm Santa Cruz to VK land then , to KC4 Land.

CAKE vetrans may remember Jason Gedamke from UCSC Long Marine Labs who visited us at Surf City Cake meetings several years ago...

Some of those meetings far outlasted the several hours typical of ordinary CAKE meetings... I remember some with Jason that went to 16:00... Jason was the PHD candidate at UCSC who studied MinkeWhales at the time... Well, Jason got his PhD, and has been spending time on Lizard Island, at the Great Barrier Reef, NE area of Australian coast... He honed and perfected (with CAKE member's help) his 5 sonobouy radio-hydrophone array, recorded and tracked whales, learned and created totally new science discoveries about whales.

Check out his website: <http://people.ucsc.edu/~jgedamke> I recently heard from Jason, who is continuing his sonobouy-whale studies in Antarctica, who thanks us from CAKE for assistance rendered....We should encourage him to get a ham ticket... might help when he goes to Antarctica.

—Pat, AA6EG



By Art Lee WF6P

CHATTER

Received a nice email from Jeff Liebermann, AE6KS, last week. I missed seeing him at club and CAKE meetings. It is not hard to imagine that he is working hard at earning a living, nights and Saturdays included. He said that Sal Basile, N6WSR, gave him his HF rig, complete with a Bencher paddle and AEA keyer. Jeff said, "If I can find some time to throw together an antenna in the next few weekends, you might find me on HF." (Great! 80 Meters is good at night.)

A couple of decades ago, our club ran several Novice classes. We had about six club members helping. Gene Piety, KH6PP, an ex-Navy radioman, taught the code. We held the classes at various meeting places, mostly bank conference rooms, including the basement of the County Building (now a courtroom). Sal volunteered to teach antennas and put on some nice, easy-to-understand lectures.

From Rich Hanset, KI6EH, this email: "I just spoke briefly with Fran Jakobsen, Bill Lawrence's daughter, this evening. She said that Bill, KB6QAQ, passed away peacefully yesterday, December 2, 2005 at 4:45PM. She said that he was as spunky as ever, right up to the end. Fran thanks everyone in the ham community that brought so much light and life to Bill. He was proud to be a ham

New VP

A number of you asked me to take the VP slot at SCCARC, and therefore taking program Chair responsibilities. Thank you for the invitation, and I am happy to step up...I have a lot of VP/program chair experience, and know that done properly, this job can really liven club meetings, and perhaps even increase membership numbers. I ask for your help and input re possible speakers/club programs. Please e-mail me with your ideas. Left to my own devices, I historically have favored speakers on technical topics, that can be linked in some way to ham radio interests. There are quite a few extremely interesting folks in the area that would be potential speakers. Top priority of course, will be SCCARC members that want to speak on ham radio topics... Contact me... —73, DX, de Pat Barthelow AA6EG aa6eg@hotmail.com

and enjoyed talking to everyone on HF and 2-meters. She especially mentioned Clyde, AA7WC, who took the time to speak with Bill each day. And Fran said the last time Bill talked on the radio was to check into the Western Public Service System.

There will not be a funeral, but there will be a Wake on December 31, the day that Bill would have turned 95 years old. More information on the Wake will follow from Fran & I will post same to the local club reflectors."

Bill was one of my students in the Novice class at Cabrillo College. That had to be about 20 years ago. Bill was anxious to contact his pals in New Zealand and got on the air with them often. I joined him on a couple of his QSOs with the New Zealand hams. I was hoping that one of them could pass a message to our eight-year-old grand daughter, living there at the time.

Bill often surprised me by coming up on HF on various bands. "Hi Art, he'd say, and we'd reminisce about our days in Poway and San Diego. He and I shared an experience (circa 1933) when the Navy dirigible USS Akron attempted a landing at Kearny Mesa (now MCAS Miramar). A couple of sailors clung to the mooring lines and were lifted up and tragically lost when they could no longer hold on. We had driven out in my uncle's Model A truck to watch the landing as these big rigid airships were an extremely rare sight. Bill was there and we both witnessed the accident.

We had a bad scare when our son-in-law Preston Rusch, N6ODW, awoke at 0400 last week with a heart attack. Rushed to the hospital, the docs ran some tests and with the angioplasty procedure, slipped a stint into an artery. Returned home four days later, Preston says he feels better than he has in recent years. At age 60, they have put him on meds and an exercise program. He has a desk job so might have to dust off his tennis racket and whack some balls over the net. (He's an excellent tennis player and ex-Navy Explosive Ordnance Disposal (EOD) diver.)

Was talking to George Fisk, K6TAM, on the K6BJ repeater the other day. Turns out that George and I were sailors together back in the 1940s. He was a communications technician (Teleman 3rd Class) on the island of Yap. I was a PBY flight engineer, flying down to various islands south of Guam, including Yap. George had left there before I arrived on the scene but we will get together soon with pictures we each took and swap a few sea stories and lies. We chatted for about 20 minutes on the repeater, allowing for breakers between transmissions. When we signed, Ron Shannon, KD6BD, came on to say hello. He and his XYL Miggles, N6FAC, live with their daughter in their lovely home in the Soquel hills.

Contesting/Logging Program Useful for ARES/Events?

I am studying some of the finer points of the Writelog contesting program and realize that the program can be used right out of the box in a very useful way in ARES or other ham coverage of Events. Writelog has an audio record to disk function that, when used as a contesting logging program, archives to disk the continuous audio channel of the operators operations, and the audio stream on disk is indexed according to each written logged, contact made. The operator can 'replay' any contact during the 24 or 48 hour contest long after the contest is over, and if needed, correct any call signs or signal reports that he may have logged. In his electronic log book, he can see station call signs, signal reports, and any real time written comments done during the contest. By clicking on a logged contact, which is time stamped, an operator can replay the audio, and, if any questions remain, do written log corrections.

In the typical Marathon or 10K support role, the Writelog comments section could be used to note any important aspects of the event, such as incidents involving injuries, traffic accidents, lack of water at water stations, medical emergencies, etc. During the event, radio support stations could review on their laptop screens, the last (time stamped) message heard on the net right away, to confirm important details, or they can make a comment note which can be reviewed weeks later, by clicking on the comment, and replaying the audio clip that pertains (and is in time sync) to that comment. Writelog allows for user customization to new contest formats, or even to User specifications. Since your typical paper standard log form for a net control operator, or other node, of a radio net at the local marathon or 10k, looks very similar to a log entry for a contest, perhaps someone could use the customization feature of Writelog to create a log form for events, and create a real useful documentation of every second of communications on the net, indexed by time, or by comment activity, for replay at any subsequent time. Or, if during the Event, you could not remember, if that request was for 25 brown bag lunches, and 15 sweatshirts at the 22 mile marker, or vice versa, you could quickly replay the radio traffic to confirm. Debrief discussions could be VERY effective, if you can replay any incident audio during the event What say? —73, DX, Merry Christmas, de Pat Barthelow aa6eg@hotmail.com

SCCARC Board - 2005

President	Christopher Angelos	KG6DOZ	688-3562
Vice President	Pat Barthelow	AA6EG	
Secretary			
Treasurer	Kathleen McQuilling	KI6AIE	
Board	Mike Doern	KM6IKE	477-1161
	Allen Fugelseh	WB6RWU	475-8846
	Rich Hanset	KI6EH	438-0615
	Bruce Hawkins	AC6DN	
	Vic Linderholm	AE6ID	476-5567
K6BJ Trustee	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	Jan 20
SCCARC Meeting	Friday	Jan 20
Short Skip Deadline	Monday	Feb 6
SCCARC Meeting	Friday	Feb 17

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.

SHORT SKIP

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Free to members.

Santa Cruz County Amateur Radio Club, Inc.

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CLUB MEETING FRIDAY JAN 20, 7:30 P.M.

Treasurer's Report

At the November 18, 2005 Board meeting, Club Treasurer Kathleen McQuilling, KI6AIE, reported that the SCCARC treasury had \$4,699.03 in cash and bank accounts. At that time all financial obligations had been met, including the annual liability insurance premium payment.

Membership Renewals Due January 1, 2006

If you haven't already done so, it's time to renew your Club membership for 2006. Annual dues are \$25 for full members, \$6 each for each additional member at the same mailing address, and \$10 for full-time students age 18 or under. Dues may be paid in cash or check (payable to SCCARC) at regular Club meetings, or checks may be mailed to SCCARC, P.O. Box 238, Santa Cruz, CA 95061-0238.