



The Amateur Radio Club of El Cajon's

Counterpoise



Volume XLIV

November 2003

Number 11

From the President Pat Bunsold WA6MHZ



NOVEMBER!!!! Yes, only 2 months of 2003 left, Phew! What a year! November is a special month as it is the HOMEBREW CONTEST! My favorite event of the year, next to the Auction. Homebrew is an important part of Ham Radio, and in the early days, if you didn't homebrew, you were off the air! But it was easier back then; giant tubes and sockets, big transformers, capacitors, etc. Even the resistors were the size of cigarettes! To-day, a surface mount Cap or resistor is smaller than a pin head! Try soldering that! And the typical IC has hundreds of leads like eyelashes! How is today's Ham supposed to work with those? The truth is there is STILL plenty of things to build that use old fashioned Through-Hole components and Dip IC's so it is still possible to make a masterpiece without a microscope! What do you need in your Ham shack? No one is asking you to build the equivalent of a Yaesu FT1000MK2 or so. The finest Homebrewers in the world couldn't accomplish that. But how about a Keyer or PSK31 interface box? Maybe a simple wattmeter or antenna tuner? Or just a digital clock. I build things I cannot buy. Radio Shack has almost all you need, and the rest you can pick up at Gateway or California Electronics in El Cajon. Parts don't have to be new to work. In fact, I prefer used as those are cheaper. And, of course, there is the Swapmeet, land of all the parts and junk you could ever dream of. Looking around the debris, you might see something you can make something else out of. I love turning chassis's into new devices. Yes, some metalwork is usually required, but just a hand drill and a reamer will make all the holes you need. And fancy Printed Circuit boards are rarely required when making a single item. I like using wirewrap wire for point to point wiring; and the dead bug technique for mounting parts. QST and the now-defunct 73 are chock full of little projects to build. Maybe you will be inspired by what you see at the ARC of El Cajon Homebrew Contest, and will start a project for next year. Mine are usually finished the night of the contest! Don't be deterred by thinking you can't compete with the pro's. Homebrew gives one a sense of accomplishment and creativity like nothing else!! That's why I love it so much. Build what you cannot buy.

We have only the next meeting to purchase tickets for the GALA ARCEC Christmas Party on Dec 12th. The locale will be the El Cajon Elks lodge, 1400 East Washington for those without a GPS to find it. I know this place intimately, having spent most of my awaking life the past several years there. And our Caterer Ranch Catering does put out a feast! But the ticket sales cut off as of December 3, so if you want to come, buy them NOW!!! We will be having a big radio prize drawing and other exciting features as well.

For the 3rd month in a row (or is it 4th?) we have had our scheduled Program flake out on us, so at the October meeting we were treated to Field Days of Yesteryear video, thanks to Stogie KG6JCW's fine Video projector. Every club needs one of these, as trying to show a video or Powerpoint presentation to a large audience needs a big screen. The DX club has had a spectacular program each month since they sprang for one. They are pricey, but it could be a way to build up membership. Maybe a member has one they would like to donate? We do need help in the program department. Ideas, leads and suggestions are greatly appreciated!

NEW MEETING QTH!!!! Last month, we told you we were going to Renette Center for the January meeting. Well, that might have been good, but how about BETTER? A LOT better!!! Yes, we have found the perfect place to meet. It is the 1st Baptist Church of Santee Meeting Hall, located on Prospect Avenue just East of Fanita. It has a giant hall, offstreet parking for all the cars we could ever assemble in a low crime neighborhood. This is a NO SMOKING facility, so please no butts! I had my worries about Renette as that area is overrun with vagrants and hoodlums. And, we will be meeting on the 2nd THURSDAY of the month again, so those of you who had conflicts on Wednesdays can now enjoy your ARCEC! Special thanks to Bob W6RHV, our longtime Technical Chairman, for securing us this great meeting place!

Classifieds work! Members DO read the Counterpoise, as we found out who lost the Pill box and who lost the blue sweater. Now, WHO took home the blue sweater with the crocodile as a prize last month? Please bring it back as its true owner has been located. No nibbles on the "need a job" or Found glasses though.

HAM OF THE YEAR needed! Please send a nomination to Joni KF6MPB who you would like to see 2003's ARCEC H.O.T.Y. Many club members have worked tirelessly and valiantly throughout the year and it is time to commemorate them. Voting will be at the December meeting and the winner will be announced at the Christmas party. But we need a field to choose from, so please let Joni know!

General Membership Meeting



Wednesday, November 12, 7:00 PM

La Mesa Masonic Lodge - 4731 Date Avenue, La Mesa

2003 Officers

President	WA6MHZ	Pat Bunsold	593-1111
Vice-President	KG6JRM	Jeff Davis	698-1144
Secretary	KG6JCW	Mike Panger	263-4439
Treasurer	KF6WXA	Susan Kochel	445-6067
Past President	N6OPH	Mike Maston	296-9067

2003 Board of Directors

SANDARC	AE6AV	Larry Plummer	460-1818
Membership	KF6MPB	Joni Cranmore	443-6939
Social	WB6POW	Gordon Ripley	472-2492
Public Service	N6NKJ	Rich Beisigl	444-5465
Public Relations	N6IEF	Mike Lebo	8-278-5851
Welcoming	AE6CQ	Michael Martak	562-6477

2003 Standing Committee

ARRL Asst. Dir.	WA6MHZ	Pat Bunsold	593-1111
Counterpoise	NZ6T	Tuck Miller	434-4211
Education	KG6JRM	Jeff Davis	698-1144
Elmers	KD6OKR	Dan Briggs	287-0437
Estate Sales Comm.	N6JOJ	Tom Myrick	449-3547
Field Day	KG6JRM	Jeff Davis	447-6806
Finances	N6OPH	Mike Maston	296-9067
Health & Welfare			
Historian	N6WHK	Phil Pedigo	466-0590
Net Manager	N6WKB	Frito Samano	563-0514
Postmistress	N6EVE	Evelyn Miller	434-4211
Prizes	WA6PPG	Carl Ferree	265-5806
Radio Coaches	KE6BJL	Bob Spann	264-2188
SANDARC Delegate	KD6PRV	Xemi Anselmo	574-0720
Swap Meet	N6JOJ	Tom Myrick	449-3547
Technical	W6RHV	Bob Boehme	448-4728
WAMO Chairman	W6LKK	Erich Bennett	401-7332

The Counterpoise is a publication of the Amateur Radio Club of El Cajon (ARCEC). It is published once monthly and contributions are accepted from officers of the Club. We also encourage input from other Amateur Radio Club of El Cajon Members. **Opinions expressed are solely that of the author and do not necessarily reflect the opinions of the Amateur Radio Club of El Cajon (ARCEC).** Articles may be submitted either by e-mail or mail to the editor:

Tuck Miller at:

**E-mail: nz6t@arrl.org or
3122 E. 2nd St., National City, ca**

Deadline is the **Sunday after the General Meeting**. For further information, please call (619) 434-4211

WEB SITE:

<http://www.qsl.net/wa6bgs>



Minutes of the October General Meeting Wednesday, October 8, 2003

Call to Order: 7:03pm. by Pat Bunsold, WA6MHZ. After which Tuck NZ6T led us in the Pledge of Allegiance. We then commenced the business section of the meeting. At 7:53pm we broke for coffee and cookies, which were provided by Vuong Bunsold, KB6RCT. At 8:10pm videos of past Club events were run followed by the give aways.

President's Report: Pat, WA6MHZ mentioned that Fredric Taylor, K6FT who has been out of town for the past several months would like **who ever won his sweater at last months meeting drawing please return it.** He reminded us that the Christmas party is coming up that Joni was selling the ticket in the back. Pat also reported that in January the general membership meeting will be moved to The First Baptist Church of Santee at 8836 Prospect Av., Santee, CA 92071. The meetings will be held on the second Thursday at 7:00pm. This move was caused by the increase in the Hall rental fee at our current location. The new location is larger and is air conditioned. It also has parking for about 100 cars. The other advantage is that the meeting are not limited to 2 hrs. The cost is the same as we currently pay per meeting. The only possible problem for some of you is that there is no smoking on the property. We need to thank Bob Boehme for finding this location for us. Next months meeting will be the homebrew contest, so bring your project and demo it.

Secretary's Report: Stogie, KG6JCW: The General meeting Minutes were approved as corrected.

Vice President's Report: None given

Treasurer's Report: Susan, KF6WXA read the Treasurer's report into the record.

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Public Service:

- **Wide EMS Drill:** November 13, 2003 4:00pm to 8:00pm. Operator needed to man the local hospitals contact Jim Harris W6HME on 858-273-5342
- **San Diego 100 mile Ultra Run:** November 22-23, 2003. This is a 36 hour operation with 9 aid stations and the start/finish line to staffed with operators. Up to 40 operators are needed. If you can help contact Dennis Peck, KA6DUH@arrl.net

SANDARC Report: Larry, AE6AV stated the Mike, N6OPH was still looking for a Convention chairman. They are also looking for a RFI/EMI chairman. SANDARC and ARRL will be sponsoring a series of classes starting on Oct. 11, 2003 at Scripps Hospital. The class will be Tech, General upgrade and Code.

ARRL: Tuck, NZ6T Reported on poor response that the FCC had received on to very important proposals. The first is Broadband over Power lines. This is the use of the power lines for the transmission of Internet services. This operation can cause interference in the radio frequency spectrum. The second is the elimination of the code requirement. According to Tuck the FCC has received very few comment from the Amateur community on either proposal. He explained the ARRL's position on both and asked for input on the dropping of the code requirement. Almost all of the members present were against the dropping of code and wanted the requirements to remain as they currently are. Please write the FCC about your concerns about Broadband over Power lines. Tuck also explained the new **LOGBOOK OF THE WORLD** program sponsored by the ARRL.

MEMBERSHIP: Joni, KF6MPB reported that there were currently 244 active members Welcoming: Mike, AE6CQ reported that there were 34 members present and that we had one visitor present. Steve Early AD6VE-Health & Welfare: It was reported that Mary Cordle, N6KHR, a long time member of the club, is not feeling well. Cards and phone calls welcome.

Old Business: None

New Business:

Nominations committee:

The nominations committee was appointed by

vote of the general membership. Due to the lack of volunteers the general membership voted to waive the bylaw restricting the members of the committee to a maximum of two consecutive years. Mike Martak declined to serve as a member of the committee due to work commitments.

The members selected are as follows:

Earl Davis	KF6WNX	Chairman
Evelyn Miller	N6EVE	
Tom Caudle	KC6NXZ	
Bill Callier	KD6QB	

New meeting location: Pat, WA6MHZ presented a proposal to move the meeting location to The First Baptist Church of Santee at 8836 Prospect Av., Santee, CA 92071 starting in January 2004. The proposal was approved by the general membership.

A MOTION to adjourn by at about 9:50pm.
Respectfully Submitted,
Mike "Stogie" Panger, KG6JCV
Secretary, ARC of El Cajon, Inc.

Submissions Wanted!!!

I would like to thank those of you have submitted articles for your newsletter in the past, and I encourage others to do the same in the future. I do ask that some guidelines be followed, and here they are.

- **Deadline is noon on the Sunday after the general meeting.**
- **All submissions must be either by e-mail or submitted on disk.** You can mail those disks or bring them to the meeting. Sorry, but your editor does not have the extra time to retype articles that are submitted by other methods. I would love to, but just can't. 73,

Tuck Miller, NZ6T

RF GROUND v. ELECTRICAL GROUND

By Seth Collier WA6CDD

The typical home has a three wire electrical system. "White" wire is "neutral", "black, red or blue" is "hot" and "green" or bare copper is "ground".

The neutral or equipment ground and the neutral wire are both run from the breaker box direct to ground or into and through the concrete footing with 68" of a large size wire into the dirt.

The radio frequency ground needs to be easily gotten into from your transceiver. The electrical ground is generally hard to get to for an RF ground to be effective; you need a copper wire to run the shortest distance possible into the ground. A lengthy ground may become an antenna at some frequencies; that happening works against the effect of the intended antenna.

Use of the housewire(?) of an RF ground may introduce RFI/TVI through all the wiring in your home. You do not need this type of problem! To help prevent this type of interference, wrap eight turns of your equipment AC power cord(s) around a ferrite rod. The equipment is effectively decoupled from your electrical wiring by this choke. The RF ground makes a significant improvement for both transmitting and receiving.

The RF ground can go from nothing to "almost perfect". Nothing is just that: nothing. Getting to "almost perfect" depends on the number of and length of radials and soil (wetness or dryness). It pretty much depends on the season of the year. Also, where the soil and soil water freeze, the efficiency gets real poor. Conversely, a soggy soil makes the RF ground very efficient.

The Radio Club of America Bulletin in 1981 written by Arch Doty, Jr. (K8CFM) and Harry Miller (K4HW) reported that the traditional ground radial system composed of a number of buried or surface wire can be equal or better by the use of a ground screen about 6.5 feet above the ground surface.

Making the radials into a screen involves connecting the extremities with another wire all together. Even though the radials (radial screen) take a large area, make the most of what you have! A radial screen will assist with 160, 80/75 and 40-meter DX.

The vertical antenna our Club uses will do better using a radial screen rather than a ground rod. The rod does not have enough surface area nor dampness below the surface. While the use of surface radials would be easy, this may end up being a safety problem. By using chicken wire (two foot wide by the longest possible length) as a cross and putting it just under the surface (connected to coax shield), we should have a better score for those bands. We can do the same under the horizontal antenna. The result will not approach that of the vertical.

Any radials not made into a screen for safety's sake need to be taped at their extremities. (assumes the (Cont on page 5)

November Birthdays



Happy Birthday!

1480	AI6O	Ed	Felter	November	2
1019	AD6LL	Susan	Chamberlain	November	4
		Evanna	Miller	November	5
1373	K6TDS	Jack	Higginson	November	6
605	WB6EWT	Miriam	DeMers (L)	November	13
708	K6FT	Frederic	Taylor	November	13
470	KA6NFX	Ron	Jordan	November	14
881	K1CHS	Ed	Blank	November	15
152	K6BX	John	Roessler	November	17
759	WB6WSN	Ed	Price	November	17
1555	KM6EK	Joe	Utschig	November	17
1287	KE6TPL	Jack	Carter	November	19
		Ron	Royer	November	19
1286	KE6TPJ	Al	Washburn	November	20
1507	KF6YCU	Tomes	Theodorelos	November	23
1449	WA6BEN	Ben	Bunsold	November	24
1509	KC6NSI	Bobbie	Hoolihan	November	24
1263	KQ6EN	Jim	Davies	November	26
746	WB6RSG	Tom	Tennyson	November	29

Lost.....

....And....

.....Found

Were you the one who has possession of the "lost" blue sweater? If so, please bring it back to the next meeting. The owner has been located!!

HAM of the YEAR Nominations!!

It is that time of year again. Know someone who deserves the club's Ham of the Year award? All you have to do, is to send your nomination in to Joni KF6MPB at kf6mpb@hotmail.com. Please include a brief description as to why you feel your nominee deserves this coveted award. All nominees and reasons will be printed in next months paper.

(Cont from page 4)

use of insulated surface radials). The better the RF ground, the less restivity, resulting in better antenna efficiency.

The typical AM broadcast station always tries to have 120 radials spaced 3 degrees around the base with a length of 1/4 wavelength on their assigned frequency. This pattern will show near 0 restivity with resultant high antenna efficiency.

The majority of us do not own a large enough property to accommodate an RF ground like that of an AM broadcast station. Space permitting, the use of fewer radials from .1 to .2 wavelength will make a good RF ground. At .2 wavelength, the resistance is about 50 ohms. At .1 wavelength x 15 radials, there will be some added resistance. The radials do not need to be buried. However, safety dictates that, around the home, it would be best if buried.

Most any size wire will work as a radial. Surface area of the wire has a distinct effect on system resistance. No. 4 (base) wire is readily available at Home Depot type stores and is pretty easy to work with.

Please note that various lengths of radials help multi-band antennas and allow you to use the size dimension limitations of your property.

The RF ground system below an antenna plays a dual role. One function is to provide a good conducting path for earth currents. The other is to act as a reflector for the radio waves coming from the antenna, so that vertical radiation pattern will be close to that obtained if the earth beneath the antenna were perfectly conducting.

The location of your antenna will determine your ground radial location. My vertical is in a corner of my yard. I have used No. 4 bare copper (solid) into the lawn area and also have connected to the bottom wire running along the chain-link fence.

If you have a copper plumbed sprinkler system, hook your RF ground system to it. Also, if your house plumbing is copper, connect the RF ground to it and ground connect both in the front and rear of your home.

A ground screen is better than radials placed on, or just beneath, the surface of the ground. Radials are better than multiple ground rods. Longer radials are better than shorter ones. A lot of radials are better than a few. Multiple ground rods are better than a single ground rod. And a single ground rod is better than nothing. (From Vertical Antennas, Radio Publications, Inc., pg. 56.)

Safety is paramount. Do not erect any antenna that could fall onto electric power lines.

All the super-techie formulas, graphs, etc. can be found in the following references:

- Vertical Antennas** by Orr and Cowan, Pub: Radio Amateur Call Book 1993
- The ARRL Handbook**, Year 2000 Edition
- QST Magazine**, Aug. 2003, "Optimum Radial Ground Systems", Pub: American Radio Relay League

We Have Meeting Site!!!!

(not until January tho...)

First Baptist Church

8836 Prospect Av

Santee, Ca

**Starting in January, we will
once again be meeting on the
2nd Thursday of each month.**

(This announcement will re-occur each month)

Nomination of Officers!!

During the next week or so, you will probably receive a phone call from one of the nominating committee, asking if you would like to nominate someone for office, or even run yourself. Come to the next meeting as nominations will also be taken from the floor. Get involved!! It is YOUR club!!

Calendar of Events!!

November 1: Swap Meet, Santee Drive in, 6:30 am

November 1: T-Hunt 6pm, Grossmont College parking lot

November 4: Board Meeting

November 11: Veteran's Day

November 12: General Meeting (**HOME BREW CONTEST**)

November 15: Swap Meet, Santee Drive in, 6:30 am

November 15: T-Hunt 6pm, Grossmont College parking lot

November 27: Thanksgiving Day

November 29: County Wide T-Hunt



**Happy
Thanksgiving**

VEC Testing Sites

1st Saturday:	El Cajon El Cajon Central Fire Station, 160 E. Lexington Avenue (in Rear), El Cajon, 10:00 a.m.
2nd Saturday:	Carlsbad Carlsbad Safety Center, Orion Way, Carlsbad, 10:00 a.m.
3rd Saturday:	North Park Recreation Center 4044 Idaho Street San Diego, CA 92104 Testing time will start at 1000hrs
4th Saturday:	Chula Vista Salvation Army, 643 Third Avenue, Chula Vista, 9:00 a.m.
5th or last Saturday:	Escondido Escondido Chamber of Commerce, 720 North Broadway, Escondido, 10:00 a.m.
To make advance reservations or to find out more info from the site captain, please call 465-EXAM (3926)	

SANTEE DRIVE-IN SWAP MEET

10990 WOODSIDE AVE., North
FOR INFORMATION, CALL 449-SWAP
Ham Radio, Computers, Electronics
ACRES & ACRES OF BARGAINS
1st & 3rd Saturday of the Month
Gates open 6:30 AM

Want to receive E-mail reminders of club meetings? How 'bout when the latest edition of the Counterpoise is online? Join the Amateur Radio Club of El Cajon's e-mail reflector. Just send a message to:

elcajonarc-subscribe@yahoogroups.com

**Newsletters online have more color than the
mailed copy in your hand!!!**

WA6BGS NETS

WAMO NETS:

Wednesday and Saturday Nights

8:00 p.m. local time

10 Meters: 28.480

Tuesday Nite Ragchew net:

8 PM

Nets held on club repeaters.

WA6BGS REPEATERS:

Output: 147.420

Input: 146.475

PL: 107.20

224.080 — 107.20 PL

445.900 — 141.30 PL



Tom McDuffie KM6K, Manager
5375 Kearny Villa Road
San Diego, CA 92123
(858) 560-4900, 1-800-854-6046

Is your membership ready to expire?

Take a look on your mailing label. Is the expiration date in **RED**? Does it say **EXPIRED**? That means it's time to mail in your yearly dues. Please take time to fill out the membership application elsewhere in this newsletter, and mail it in, or bring it to the next meeting !!

Mark your Calendars....



Friday December 12, 2003

6 pm

El Cajon Elks Club

1400 Washington

El Cajon, Ca

Contact Susan KF6WXA

For tickets

The Counterpoise is also online in **FULL COLOR!!** Check out the newsletter and the rest of our club web site at:

www.qsl.net/wa6bgs

For any suggestions to the web site, contact the webmaster at kc6nxz@arrrl.net

Change of Address

Moving??

Do not miss an issue of **Counterpoise**. Change of address form from:

Call _____ WAMO! # _____

Name _____

Address _____

City _____ State _____ Zip _____

New Address:

Address _____

City _____ State _____ Zip _____

Send to Membership Chairman:

A.R.C.E.C., P.O. Box 50, El Cajon, CA 92022

ARCEC Membership Application

1. Amateur Call Sign

2. Class of License

3. First Name

4. Last Name

5. Street Address

6. City, State, Zip+4

7. Home Phone:

8. Work Phone (optional)

(May we list) ☐ Yes ☐ No

9. Date of Birth (year optional)

10. e-mail address

11. ARRL Member
☐ Yes ☐ No

12. ARES Member
☐ Yes ☐ No

12. RACES Member
☐ Yes ☐ No

13. Other Interests

14. Family Membership with:

14. **Sponsored by:**

Return this form with check made payable to the Amateur Radio Club of El Cajon or ARCEC for new or renewal membership. **Annual Dues \$12.00 for individual, \$20.00 for family. New members add \$5.00 per member.** Mail to Membership Chairman, **A.R.C.E.C., P.O. Box 50, El Cajon, CA 92022.** **Please write your call on the check**

New ☐ Renewal ☐

WAMO!! No. _____

Certificate Issued

Computer Database Updated

Paid Cash ☐

Check No. _____

Check ☐

Computer Roster Available

Want the roster sent to you via e-mail? Send an e-mail to Joni KF6MPB, and she will send you the database back as an attachment. She uses Excel, but may be able to convert to various formats if asked. Send you request to kf6mpb@hotmail.com

Amateur Radio....A National Resource

