

# ALL EARS

www.earsclub.org

Official Newsletter of the Escondido Amateur Radio Society - N6WB

July 2005

## GENERAL MEETINGS

EARS meets at 7:30 p.m. on the second Thursday of each month at the Salvation Army building at 1303 Las Villas Way, in Escondido. Come early and chat!

**Thursday, July 14th**  
**Contesting 101**

Dennis, N6KI, and Paul, WN6K, will present the basics of how to enter a contest, how to operate and a review of some of the most popular contests.

**Saturday, August 20th**  
**EARS Annual Picnic**

Mark your calendar now. The annual picnic will once again take place at Rod McLeod Park, starting at 11 a.m.

## WHAT'S NEW AT earsclub.org

There are lots of new items on the EARS website. If you haven't been lately, here's what you're missing:

- ➡ Upcoming Ham Radio classes.
- ➡ July SANDARC report (Thanks to Sam, N6SD).
- ➡ This year's Field Day pictures.
- ➡ A cool, customizable DX cluster from N5IN.
- ➡ Links to news, propagation, weather, downloads, more...

Check out this and more now at [www.earsclub.org](http://www.earsclub.org)!

## INSIDE THIS ISSUE

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## EVENT CALENDAR

<b>Jul 14</b>	<b>EARS General Meeting, 7:30 p.m.</b>
Jul 16	EARS Monthly Breakfast, 8:30 a.m.
Jul 26	EARS Board Meeting 7 p.m. at Harry's
Jul 30	VE Testing, 9 a.m.
Aug 20	EARS Monthly Breakfast, 8:30 a.m.
<b>Aug 20</b>	<b>EARS Annual Picnic</b>
Aug 23	EARS Board Meeting 7 p.m.
Aug 27	VE Testing, 9 a.m.
<b>Sept 9-11</b>	<b>SW Division Convention, Riverside</b>



EARS takes to Dixon Lake once again for Field Day 2005! Here, John, W9EN, and Steve, W6/G0TAN, pose by the VHF/UHF station. Complete report and photos on page 4  
*photo courtesy of Alan, KE6SQS*

## PRESIDENT'S CORNER

by John, W9EN

### A Review of "Q"

In the quest for a high-performance portable HF antenna system for my QTH, I was forced to examine the delicate balance between size, cost and "Q" of each antenna system. You might ask, "Why aren't you considering things like bandwidth, radiation efficiency and loss?" The answer is I am; these are parameters that make up the "Q" or "Quality Factor" of the antenna.

If you were to run right out and look up the definition of "Q" or "Quality Factor" you would probably find several equations describing it.

For a series resonant circuit ...  $Q = wL / R$   
(where  $w$  is the resonant frequency)

For a parallel resonant circuit ...  $Q = R / wL$   
(where  $w$  is the resonant frequency)

"Q" is also expressed as ...  $Q = 1 / BW$   
(where  $BW$  is the 3dB bandwidth)

"Q" can also be described as ...

$Q = \text{energy stored} / \text{energy dissipated}$

In a reactive antenna, stored energy is directly proportional to radiated energy; dissipated energy on the other hand is just that, energy dissipated in the form of heat.

Do all these equations for "Q" yield the same number? As it turns out, they do. The parameters mentioned above (bandwidth, energy, resistance, loss) are all related. How does understanding these relationships help me to choose the right HF antenna? We can see from the last equation that higher "Q" means more energy is radiated than is dissipated in heat; that's a good thing (unless you are trying to heat your shack). We can also see that high "Q" means a smaller bandwidth. Hmm, I smell a design tradeoff here.

In my particular situation, I need something portable (put it up when I'm using it, take it down when I'm finished). In order for this to be physically manageable, the antenna needs to be shorter than full length; this means loading coils (the series resonant equation above applies here). In an inductively loaded antenna, a larger inductance will result in a shorter overall length. However, added inductance will cost added resistance. The amount of added resistance will depend on the construction techniques (which can be expensive) used in the manu

*(continued on page 5)*

## The Escondido Amateur Radio Society

is a non-profit organization of educational and social benefit to Amateur Radio operators and others interested in Amateur Radio in the Escondido area.

Dues are very affordable. Come join the fun! See the application form on Page 6.

### EARS Club Officers for 2005

#### President

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#### Vice President

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wb6pkk@amsat.org

## AWARDS AND QSLING - PART XIV

by Harry Hodges, W6YOO

Just suppose you have been chasing DX for a number of years, you have collected all the QSLs and you are sitting at the top of the Honor Roll, which means you have confirmed all 335 of the current DX "entities". It makes you wonder "Where do I go from here?"

Well, there's hope on the horizon. There are always folks like Martti Laine, OH2BH, who studies the world, measures the distance of obscure islands from their parent entity, makes sure there is no intervening land mass, checks to be sure that the island is above water 24/7, and then submits the paperwork to get a new entity declared. Is he always successful? No, but he has probably accounted for more new entities than any other DXer currently active.

Now comes another possible new one. According to "The Daily DX", a DXer from Australia has identified the self-proclaimed "Principality of the Hutt River Province", or PHRP, established by a farmer back in 1970 who claimed secession from Australia. They claim that the Ivory Coast has granted recognition and that PHRP has requested that the ITU grant them the H5 prefix. Bizarre as this may seem, it has been tried before, most recently with a Native American tribal group in the US state of Washington. Will this one succeed when the state of Washington remained intact? Who knows? But if you hear someone calling CQ DX this is H5XYZ, work them first and worry about it later, or *WFWL*.

For more information see [http://en.wikipedia.org/wiki/Hutt\\_River\\_Province](http://en.wikipedia.org/wiki/Hutt_River_Province) or [huttriverprovince.com](http://huttriverprovince.com)

### ALL EARS

The official bulletin of the  
Escondido Amateur Radio Society

An e-mail subscription to All Ears is FREE! You don't need to be a member. Just drop a note to:

John Musselman, WB6UHF, Editor  
[wb6uhf@arri.net](mailto:wb6uhf@arri.net)

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The deadline to submit material for the bulletin is by the previous month's Board meeting.

Now let's get on to the subject of QSLs. As some of you might know, I am QSL manager for a number of calls, including W6PT (San Diego DX Club) and N6WB (EARS). Following Field Day and other operating events, I receive a number of QSL requests from other Hams who worked W6PT or N6WB. Now here's the rub. Neither W6PT nor N6WB needs your card. As manager I collect them, check the log, and if the information is correct, send out one of ours in reply. The problem is that not everyone sends a SASE or self-addressed stamped envelope to get our card back. This Field Day, W6PT made well over 2,000 QSOs and N6WB (as the GOTA Station) made over 280. Suppose everyone sent in a card with no return postage. At the cheapest postage rate, that's 23 cents times 2,000 = \$460.00, which is equivalent to five annual memberships, and for EARS \$66.00.

The point here is: If you want the other guy's card, send yours, an envelope with your address AND sufficient postage to get his card to you. The only time you can avoid this is when you both agree to exchange cards as mementos of a memorable QSO. Now, all this pertains to QSLs from U.S. call signs. For DX cards, that's a horse of a different color. Unless you go through the bureau, you must provide postage for the foreign station. Airmail to the U.S. from many places in the world is approaching \$2.00 and for a semi-rare DX station to bear those costs would dry up the flow of QSLs very quickly.

I have been writing this article for almost a year and a half and hopefully, I'll be able to double that before I run out of gas. If you ever have a question about Awards, DXing, QSLs, IOTA or whatever thereto related, see me at a club meeting or email me at [w6yoo@amsat.org](mailto:w6yoo@amsat.org).

73, Harry, W6YOO



For those who didn't get to the fair this year, this is the booth that Sam, N6SD, built  
*photo courtesy of Harry, W6YOO*



## FIELD DAY WRAPUP

by John, WB6UHF

Thanks to everyone who helped make this year's Field Day such an enjoyable time!

Konrad, Sam and all the setup/teardown crew did a great job of getting the antennas set up. Although we learned some things we will have to address next year, we still made it work.

John, thanks for taking care of all the grub. The Friday dinner was super and the breakfasts really hit the spot.

Band captains, way to go. Dirk, Steve A., Tony/Tom and Steve V/John B. made sure the rigs were up and running and that there were operators covering the



Dick, NB6R, shows "KC", daughter of Tom, KG6RCW, how to operate the GOTA station  
*photo courtesy of Marvin, WB6PKK*

timeslots. Steve and John, great going on the satellite contact. Tony and Tom did an absolutely wonderful job on the GOTA station, bringing ham radio alive for many youngsters who may not have even heard of radio before. Great job, Dick, helping make sure the kids had a good introduction to radio.

Thanks to all the operators who were able to rack up the QSOs. We made a good effort on both CW and phone.

Nice to see some some rare club members and friends. It was good as always to talk to Gary and his wife and Chris Bille. Some of you, I don't really know - sorry if I've left out names.

Thanks, Harry, for filling up a couple of time slots

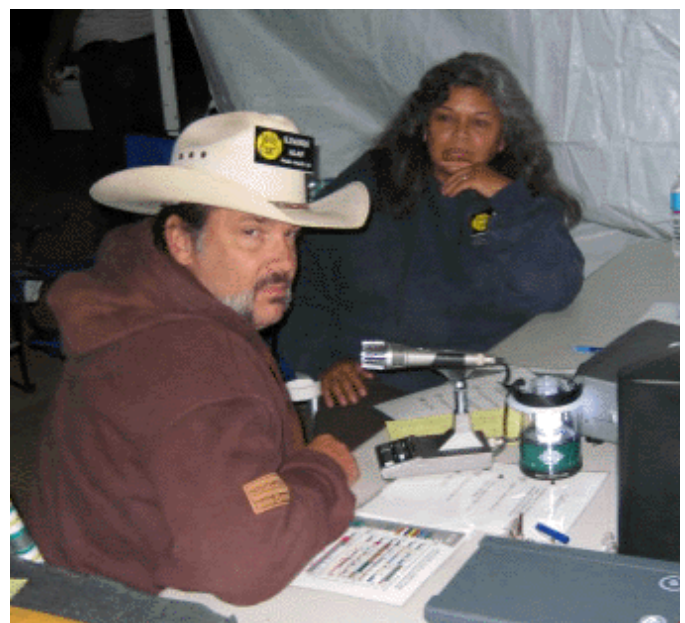
and for helping with publicity and copying the official FD message from W1AW.

Thanks, Jo, for the loan of the generator. It was needed.



Dennis, WA6IQY, operates inside the "Pinzgauer" while Dirk, N6SUN, logs  
*photo courtesy of Marvin, WB6PKK*

Thanks, Roger and Danny for filling in some of the time slots, and for helping with chores. Good to see Dennis back out there, and he promised to come to some club meetings, too. Bill M., good job on the radio again. Also to Ron.



New members Alan, KE6SQS, and Celia, KE6SQT, learn a Field Day tradition - working the late night shift!  
*photo courtesy of Tony, KG6SXY*

Thanks to new faces Alan and Celia, too. They worked the GOTA into the night and finally learned what FD is.

Also, thanks this year to the XYLs and YFs who



Steve, KE6PY, operates 20 CW  
photo courtesy of Pat, WA6MHZ

made it to the Saturday pot luck. That was a pleasant surprise.



Fixing a little oops on the GOTA tower. Ultimately, a different tower entirely had to be used.  
photo courtesy of Alan, KE6SQS

I've left out many names, but you know it was a success because everyone pitched in and worked together to make this another enjoyable EARS Field Day.

See you again next year! John, WB6UHF

## PRESIDENT'S CORNER

(cont'd from page 2)

facture of the loading coils. From the first equation we see that increased resistance means decreased "Q". Decreased "Q" results in decreased radiation efficiency. As an extreme, a 50 ohm resistor might present a very low SWR and be very broad banded, but it radiates poorly if at all (maybe that's where the term "Dummy" comes from in dummy load).

What this means is antennas that use high "Q" elements will have higher radiation efficiencies but smaller 3 dB bandwidths (2:1 SWR bandwidths) than those with low "Q" elements. Comparing some commonly available commercial antennas, the Outbacker, Buddy Pole and Ham Stick designs have a "Q" around 75. On the other end of the scale, the W6HIQ designs have "Q" values that range from 450 to 550 while the MFJ Loops range from 150 to 600 depending on the band and height above ground. Regarding the bandwidth of these antennas, note that the lower "Q" antennas often cover the entire band with a single jumper setting while the higher "Q" antennas require retuning every 75 KHz or so. The "Q" of a trap in a multi-band antenna (wire or beam) means much the same thing when considering performance. Traps, as opposed to loading coils, are parallel resonant devices. A trap will ideally provide infinite impedance at resonance and zero impedance everywhere else. The design tradeoffs are similar to loading coil design tradeoffs. However, bandwidth may get more consideration since trap tuning may not be practical. Power dissipation in the form of heat is still something to be minimized.

Antennas aren't the only devices where "Q" is meaningful. Filters, amplifiers and transmission lines can be evaluated and compared by examining their "Q".

My hope was to refresh everyone's memory on the basics while thinking out loud in my attempt to make a decision. I'll let you know next month how it goes.

73, John

### FIELD DAY 2005 PRELIMINARY RESULTS

	QSOs	Points
Station One	899	2,940
Station Two	809	1,780
VHF/UHF	74	150
GOTA	286	572
Bonus		1,250
		-----
Total		<b>6,692</b>

## BOARD MEETING SUMMARY

information provided by Sam, N6SD

1. Konrad, N6UKO, reported \$1814.45 in the checking account and \$537.44 in savings and at least \$300 in unpaid bills for Field Day. The value of the CD is \$1005.33. Two people joined the club during Field Day with a total membership of 97.

2. Marvin, WB6PKK, reported problems with the Echolink laptop power supply so Sam, N6SD, will loan the club a laptop to use. Marvin also reported that he has an 8-bay VHF antenna that he will donate to the club for the repeater. A work party will be organized after the Picnic to check if it will be suitable. Recent intermod problems were most likely caused by outside interference.

3. Harry, W6YOO, reported there is an ARES meeting the 2<sup>nd</sup> Saturday of the month. ARES now has the call sign of W6SDG. The July 4<sup>th</sup> Red Flag Patrol is looking for communicator volunteers. There will be a 100 mile endurance run in October which will need communicators.

4. The board will solicit help with membership while John, KG6DVE, is unavailable.

5. John, W9EN, reported there will be no resolution about the San Pasqual building for the next 4 months. We will try to get a key and inspect the building to see if we are still interested in using it.

6. John, WB6UHF, reported the Field Day went well and the log is in work. Sam, N6SD, raised several items of concern on safety while raising and lowering the towers.

7. The club will replace the SD-20 pole that was damaged in 2004 and belongs to Nick, KK6TV.

8. A new policy was adopted on access to the Club database:

There will be only one database.

The data will not be available to the public.

The data will be available to all club members.

Each member will decide how much of his information will be available to other members.

Board members will have full unrestricted access to all information.

8. John, W9EN announced an upcoming tech class by Skip, KD6RFQ.

## Escondido Amateur Radio Society Membership Application and Renewal Form

Name \_\_\_\_\_

Call \_\_\_\_\_ Class \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Phone No \_\_\_\_\_ Date of Birth \_\_\_\_\_

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Interests \_\_\_\_\_

\_\_\_\_\_

Other \_\_\_\_\_

\_\_\_\_\_

### Membership Rates

One year ..... \$13.00

Family membership ..... \$3.00

Lifetime membership ..... \$130.00

Lifetime membership (family) ..... \$20.00

Mail this form with payment to EARS, PO Box 3243, Escondido, CA 92033, or give it to the treasurer or any other club officer at a regular club meeting.

Membership is from January 1 to December 31. After July 1, membership to the end of the year is ½ the annual fee. Special rates apply for family membership for each additional licensed amateur radio operator in your immediate family and for lifetime membership.

For membership confirmation, include a self-addressed stamped envelope with this form.



## GENERAL INFORMATION

**CLUB REPEATERS** - EARS operates two repeaters in Escondido. The two meter EARS repeater is on 146.88 MHz with a PL of 107.2. The 440 EARS repeater is on 449.240 MHz with a PL of 127.3. Both repeaters are local in nature and primarily serve the immediate Escondido area.

**ECHO-LINK** - The two meter repeater is tied to the Echo-Link system as node 2846. See the Club website, [www.earsclub.org](http://www.earsclub.org), for information on Echo-Link. There is also a listing of local Echo-Link codes in the members section of the website.

**EARS WEB PAGE** - EARS is on the Internet. You can read about upcoming activities, get links to other ham radio sites, read back issues of All Ears, or update your call or address. The site is updated regularly. Check it out at [www.earsclub.org](http://www.earsclub.org).

**EARS REFLECTOR** – is a free service that keeps members up-to-date via e-mail. To get on the reflector, go to the EARS website and click on Yahoo Groups in the site map. If you have any questions, suggestions or comments, e-mail Nick, [kk6tv@arrl.net](mailto:kk6tv@arrl.net).

**CLUB BADGES** - Let everyone know that you are a member of EARS and avoid having them guess what your name is. See Harry, W6YOO, to obtain a badge.

**CHANGE OF ADDRESS OR CALLSIGN** - Please let us know if you change your address, callsign, telephone, license class, e-mail, etc. We want to keep our records up to date. Contact Marvin, WB6PKK, the keeper of the club database, or any club officer.

**ARRL LETTER** - The ARRL Letter, a weekly e-mailing of Amateur Radio related news, is available to ARRL members free of charge directly from ARRL HQ. To subscribe for e-mail delivery, ARRL members first must register on the Members Only Website, [www.arrl.org/members](http://www.arrl.org/members). The ARRL Letter is also available to all, free of charge, at [www.arrl.org/arrlletter](http://www.arrl.org/arrlletter), where it is posted each Friday after it is distributed via e-mail.

**SANDARC** - EARS is a member of the San Diego Amateur Radio Council, an association of San Diego area Amateur Radio clubs. Among other things, SANDARC runs the local Volunteer Examiner program (SANDARC-VEC), and manages the ARRL Southwestern Division Convention when held in San Diego every fourth year. See [www.qsl.net/n6oph](http://www.qsl.net/n6oph).

**MONTHLY BREAKFAST** - EARS members meet socially the third Saturday of each month at the Westside Cafe, on West Ninth Ave. at the corner of Redwood St. at 8:30 a.m.

**SUNDAY EVENING NET** is every Sunday at 8 p.m. local time. You can get the latest information on club activities there. Tune in to the club repeater at 146.88 MHz, negative offset and PL of 107.2, check in and say hi.

**MONTHLY ARES MEETING** – The San Diego Section ARES meets on the second Saturday of each month at 8:00 a.m. at Giovanni's Restaurant, southwest corner of Clairmont Mesa Blvd and Ruffin Road. Order your breakfast at the counter and it will be brought to your table in the meeting area. The monthly ARES training session follows the breakfast meeting and takes place at the Kearney Mesa Recreation Center, 3170 Armstrong Street (near Mesa College). Training begins at 10:00 a.m. and lasts approximately one hour.

**SECTION NEWS** – The latest happenings around San Diego are available at [www.arrl.org/sections/SDG.html](http://www.arrl.org/sections/SDG.html), the official website of the ARRL San Diego Section.

### AMATEUR RADIO LICENSE RENEWALS AND

**CHANGE OF ADDRESS** - To renew your license or supply the FCC with a change of address, use NCVEC Form 605 (obtainable from Harry, W6YOO). Attach a photocopy of your license and mail to SANDARC VEC, PO Box 2446, La Mesa, CA 91943-2446. You must include your Social Security Number. There is no charge for this service.

**HAM RADIO LICENSE PLATES** - All California hams may receive their call sign on their license plate. Use DMV Form REG17A. The cost is \$21.00 and is a one-time fee.

**VE TESTING** - is conducted in Escondido under the auspices of SANDARC at 9 a.m. on the last Saturday of every month at Fire Station One, 310 N Quince Street. Contact Harry Hodges, W6YOO, to schedule an appointment.

**MILITARY AFFILIATE RADIO SYSTEM** - The US Army, the US Air Force, and the US Navy/Marine Corps Military Affiliate Radio System (MARS) are looking for a few good men/women. If you would like to get on HF regardless of license, now's the time. See Harry Hodges, W6YOO/AAR9LX for details.

ESCONDIDO AMATEUR RADIO SOCIETY  
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