RF

ORANGE COUNTY AMATEUR RADIO CLUB, INC.

VOL. XLVII NO. 5 P.O. BOX 3454, TUSTIN, CA 92781-3454 MAY 2006

THE PREZ SEZ:

Hello OCARC!

Summer is just around the corner. With summer comes Field Day and the Orange County Fair. I am looking forward to participating in both events. Our Los Alamitos Field Day site is secured. I am looking for one more station captain to manage our third HF setup. [Larry - K6VDP has volunteered - ed.] Last month was the big DX convention in Visalia. OCARC was well represented. We all had an exceptional time. Who knows, someone might be persuaded into telling a Visalia story or two?

I recently learned more about Icom's new digital radio equipment. D-STAR is an open standard for Voice over IP (VoIP). Digital repeaters can be connected all over the world using D-STAR. I am interested in getting a few members together to get some D-STAR equipment to give it a try. The radios will also work alongside regular analog FM VHF/UHF equipment on normal repeaters.

73,

Willie
N8WP

Field Day is Coming:

Field Day is always held on the 4th full weekend in June. This year it will be on June 24th and 25th. The OCARC will be holding its Field Day at the Joint Services Training Facility in Los Alamitos; the same location as last year. This site offers lots of open space for wire antennas to be spaced to minimize inter-band QRM.

This year's FD rules are available on the ARRL web site. The changes are briefly discussed in the May issue of ***QST***. There have some rule changes. Major ones involve the GOTA (Get On The Air) station. This year the GOTA station can get credit for up to 500 contacts.

See **Field Day** on Page 11

MAY PROGRAM:

Larry McDavid - W6FUB will be our guest speaker for May. He will talk on *The Science and Beauty of Sundials* Larry, first licensed in 1956, is a member of the Orange County Astronomy Club. Learn how sundials are made, and what affects them; learn about an elegant analemmic equatorial sundial that is located nearby in Claremont, California. Can sundials be accurate? How are they affected by the motion of the Earth? Be at the meeting to learn the answers!

The next general meeting is:

Friday, May 19th 2006 @ 7:00 PM

We will be meeting on the 2nd floor in the east bldg.

In This Issue: ***Page***

Next Club Breakfast & Open Board Meeting Sat. Jun. 3rd 2006

THE ORANGE COUNTY AMATEUR RADIO CLUB, INC.
P.O. Box 3454, Tustin, CA 92781

2006 Board of Directors:

President:
Willie Peloquin, N8WP
(714) 318-4047
n8wp@arrl.net

Vice President:
Kristin Dankert, K6PEQ
(714) 544-9846
kdankert@comcast.net

Secretary:
Steve Brody, N1AB
(714) 974-0338
stevebrody@sbcglobal.net

Treasurer:
Cheryl Peloquin, KG6KTT
(714) 318-4042
chercool@escapees.com

Membership:
Bob Eckweiler, AF6C
(714) 639-5074
af6c@arrl.net

Activities:
Dan Dankert, N6PEQ
(714) 544-9846
n6peq@comcast.net

Publicity:
Tom Weed, K6CCD
(714) 838-9672
tvweed@aol.net

Technical:
Kenan Reilly, N6CCE
(714) 543-5073
n6cce@yahoo.com

Members At Large:
Ken Konechy, W6HHC
(714) 744-0217
kkonechy@pacbell.net

Lowell Burnett, KQ6JD
(714) 997-0999
kq6jd@aol.com

2006 Club Appointments:

W6ZE Trustee:
Bob Eckweiler, AF6C
(714) 639-5074
af6c@arrl.net

Club Historian:
Bob Evans, WB6IXN
(714) 543-9111
bobev@netzero.net

***RF* Editor for May:**
Bob Eckweiler, AF6C
(714) 639-5074
af6c@arrl.net

WEB Master:
Ken Konechy, W6HHC
(714) 744-0217
kkonechy@pacbell.net

ARRL Assistant Director:
Ken Konechy, W6HHC
(714) 744-0217
kkonechy@pacbell.net

ARRL Awards Appointee:
Larry Beilin, K6VDP
(714) 557-7217
k6vdp@aol.com

OCCARO Delegate:
Kristin Dankert, K6PEQ
(714) 544-9846
kdankert@comcast.net

Monthly Events:

General Meeting:
Third Friday of the Month
At 7:00 PM
American Red Cross
600 N. Parkcenter Dr.
(near Tustin Ave. & 4th St)
Santa Ana, CA

Club Breakfast:
First Saturday of the month at 8:00 AM at the **Jägerhaus Restaurant**
2525 E. Ball Rd.
(Ball exit west off 57-Fwy)
Anaheim, CA

Club Nets (Listen for **W6ZE):**

7.086 ± MHz CW **OCWN**
Sun - 9:00 AM - 10:00 AM
Rick KF6UEB, Net Cntl.

28.375± MHz SSB
Wed - 7:30 PM - 8:30 PM
Bob AF6C, Net Control

146.55 MHz Simplex FM
Wed - 8:30 PM - 9:30 PM
Bob, WB6IXN, Net Control

VISIT OUR WEB SITE
http://www.w6ze.org
for up-to-the-minute club information, the latest membership rosters, special activities, back issues of ***RF***, links to ham-related sites, vendors and manufacturers, pictures of club events and much much more.

Club Dues:
Regular Members $20
Family Members* $10
Teenage Members $10
Club Badge** $3

Dues run from January thru December & are prorated for new members.

*Additional members in the family of a regular member pay the family rate up to $30 per family.

**There is a $1 charge if you'd like to have your badge mailed to you.

Tech Talk #51

by: Kenan Reilly, N6CCE

Ladder Line Myths

Ladder line is great - extremely low loss, even at high SWR. However, many hams refuse to use it because they are afflicted by common misconceptions:

1. *"Ladder line radiates!"* Ladder line does not radiate any more than does coax, if terminated in a balanced antenna.
2. *"I tried it once, and it messed up my TV, my computer, and filled the shack with RF!"* The trick here is simply to make sure you use a length of ladder line that is **not** a multiple of a half-wavelength on any band. Lengths like 43 and 86 feet work well. A resonant length of ladder line, just like the shield of coax, will pick up RF from the antenna and conduct it into the shack. The only difference is that the shield of the coax is grounded, and the ladder line is not, so it acts in common-mode to bring in and radiate induced RF. Again, simply avoid those resonant lengths.
3. *"It's too hard to work with! You have to keep it away from metal!"* Well, yes, a couple inches or so. The general rule is twice the width of the line. It's easy to make standoffs from half-inch PVC pipe.
4. *"It's too hard to bring into the shack!"* Actually, there are many waterproof ways to bring ladder line into any shack. One is shown below.
5. *"I can't buy a lightning arrestor for ladder line!"* You can actually make them yourself, as shown below.
6. *"It flops around in the wind, and it breaks too easily!"* (a) Windowed line should be twisted about a turn every two feet to prevent wind-induced oscillations. (b) Make a good feedpoint connection, with proper strain-relief. It doesn't hurt to wrap it over the top of your feedpoint insulator and then secure it to itself with cable ties. Also, the 14-gage stranded stuff is **much** more reliable than the old, cheap 18-gage solid stuff.

If you run an all-band dipole (with a tuner in the shack), you need ladder line. Coax is **very** lossy when operated at high SWR. It's easy to lose 90% of your power in your coax when operating on bands where the non-resonant dipole presents a high feedpoint impedance to the feedline.

Ladder Line Types

No one seems to know what to call it: ladder line, windowed ladder line, windowed twin-lead, "true" ladder line, open ladder line, open feeders, etc. etc.

Twin-lead is the 300-ohm TV antenna line. This type is not recommended for most ham radio work.

- Ladder line is any kind of parallel feedline except twin-lead.
- Windowed ladder line is just that: 1-inch twin-lead with windows punched in it. Some call it window-line. Most just call it ladder line.
- The "true" ladder line is best called "open wire feed-line," to distinguish it from window line. This is the type made from two parallel wires, separated by spreaders.

What to Get

Get the 14-gage stranded window line from Cable-Xperts or Wireman. Don't get that solid-wire type that many ham stores sell. It is not as flexible and difficult to work with.

Make Your Own

The one problem with window line is that it tends to change characteristics when wet, and the longer the run, the more tinkering you'll have to do with your tuner as the weather changes. The solution for long runs is to make your own open-wire feeders. It isn't hard or complicated. Here's how:

1. Get a 500-foot roll of #14 THHN or THWN insulated stranded ($20 at builder's supply). Pick a color that blends with the background. Get some pressure-treated 2x4s, 10-12 feet long, and plant them in the ground every 100 feet or so. To change directions, use a 4x4 in cement.
2. For spreaders, all you need is some kind of small, UV-resistant plastic tubing. Cut them 4 inches long, and make enough to put one every 5 feet or so. Use your table saw or table router to cut a notch in each end of each spreader, about 1/8th by 1/8th.
3. String up two strands of the wire of the appropriate length between trees. Pull them even. Insert a notched spreader every few feet. Inject a dab of hot-melt glue in each end of each one to secure it to the wires.
4. Congratulations - you just made modern, high-quality "true" open-wire ladder line, and you didn't even have to boil a bunch of wood dowels in paraffin!
5. Now attach it to your 2x4s with wire staples or electric fence insulators.

Note: Purists think you have to use "bare" wire - **baloney.** Why mess with wind static, rain static, and corrosion? The same holds true for all wire antennas. **Never use uninsulated wire.**

One more thing to consider: Bending ladder line at sharp angles can cause problems on the higher bands. This is because the magnetic field around the line will interfere with itself at the bend. Or so say the technical experts. I have never had any problems bending window line at 90-degree angles - and I've even fed a 2-meter beam with window line, bent 90 degrees, and it worked great!

Spacing and Impedance

There's really nothing to worry about here. A non-reso-

nant antenna will present a feed point impedance of 10 to 5,000 ohms, with plus and minus reactance, at various frequencies - so who cares about the exact feed line impedance. Matching the antenna to the feed line simply has nothing to do with efficiency (unless you are using coax).

Anything from 1 to 6 inches is acceptable spacing. 1-inch #14 line is 370 ohms. 1-inch #18 line is 450. 6-inch #12 is about 600. It just isn't at all critical - and don't let any geezer or guru tell you differently! ***The spacing should not be over 1 percent of the wavelength***, and that's the only real consideration with ladder line.

Length

As mentioned above, parallel feeders can pick up RF from the antenna and transport it into the shack as common-mode current (this simply means the two wires acting as one). The way to avoid this is to simply avoid resonant lengths of ladder line, and, if possible, bring the line away from the feedpoint perpendicular to the antenna (90 degrees) for as far as practical. Setting your bend-point will also help you take up slack when using a non-resonant length, without having to cut off the excess.

In other words, measure your total run, then increase that to the next available "good" (non-resonant) number, then route the line to take up the slack. A 300-foot open-reel tape measure is handy, and Harbor Freight has them for well under $30.

Lengths to avoid (in feet): 32, 65, 96, 130, and 260 - and multiples of any of those. Don't let them make you buy 100 feet when you know that'll be too close to 96! Make them sell you 110 feet, for example.

Good lengths: Somewhere around 40, 80, 110, etc. Say you saw it here. If in doubt, consult the ARRL Antenna Book.

Feed-Throughs and Lightning Arrestors

How to make your own spark-gap shunt ("lightning impulse arrestor"), waterproof ladder line feed-through, and quick-disconnect for (hopefully) improved lightning safety, using common hardware. Or, how to possibly avoid the "billion-amp arc in the shack" scenario.

Disclaimer: All disclaimers apply. No guarantees. I am not an engineer nor expert in the field of lightning protection. I assume absolutely no liability for your use of this material. These ideas have not been tested. Use at your own risk! The actual effectiveness of these measures cannot be quantified. Lightning is dangerous, destructive, deadly, and unpredictable, due to rapid release of incredible power, and extremely wide range of variability.

In figure 1, notice the PVC standoff (one of two), made of half-inch PVC, about six inches long attached to the trailer with aluminum angle. The ladder line proceeds down to the arc-shunt assembly, which is mounted directly on the ground rod. It then proceeds up to brass feed-through assemblies (Fig. 2). Once inside, it plugs into the tuner with banana jacks (Fig. 3), for quick disconnection.

Figure 1 – Note the use of spark plugs as lightning protection

The ladder line is kept separate from all the other cables, which enter via a 1-inch PVC nipple and coupling (inside) through the floor. The coupling is packed with paper towels (and a little boric acid powder) to keep out bugs. The arrangement provides a good seal that can be easily removed and replaced to allow passage of PL-259s intact.

Ladder-Line Arc-Shunts

You can construct the shunts as follows: Using a piece of 1/8 x 1 inch aluminum flat or angle stock, cut to about four inches long, drill three holes. Enlarge the two outer holes until you can force-thread two spark plugs into them. Use new, non-resistor-type plugs. Run a 1/4 x 4-inch bolt down through the center hole and place a nut underneath. Now grind a couple of flats on the last inch of the bolt, so it will clamp easily in your ground rod clamp.

Attach the ladder line as follows: Measure and strip the incoming line and jumper lead. Crimp and solder uninsulated ring lugs. Apply a little grease and then place them under the spark plugs' caps. Tighten securely with pliers, but be careful not to twist off the small stud on the plugs! Seal the tops off with silicone caulk or Coax-Seal. Be sure to insulate all connections, particularly if you have curious children around, to prevent RF burns.

Note:: A gap of .025 will not arc RF at 100 watts on any band. Higher power may require a wider gap, so watch your SWR meter carefully the first time you QRO on each band.

If you want the lightning arrestors to arc at a lower voltage, you'll need to obtain a couple of gas-filled arc shunts (commonly used in coaxial arrestors), or obtain commercial MOVs rated for RF service.

NOTE: No arrestor will protect your radio! All are meant to arc at a much higher voltage than your radio can stand. Always disconnect during storms! The arrestors shown here are meant to keep the disconnected jumper from arcing inside the house - **not** to protect the radio!

Figure 2 – Window feedthroughs.

Watertight Entry Assemblies

This assumes your rig is near a window, and you know how to replace a window pane with plastic. I used a window because my trailer-home has metal siding. If your walls are nonmetallic, you can, of course, go through with long threaded brass rods. This may be easier than replacing a windowpane with polycarbonate.

Remove and disassemble the windowpane. Measure the glass, then discard and replace with polycarbonate of the same thickness. Many hardware stores carry small pieces, and one shouldn't cost over a few dollars. Cut the new plastic pane to the exact dimensions of the removed glass. Reassemble the window.

Plastic sheet is best cut with a circular, table, or radial-arm saw, using an 80-tooth finish blade (hollow-ground or carbide -- do not use a "set-tooth" blade) and cool with a little trickle of water. Don't use a jigsaw, as they just make too much heat. Apply masking tape to avoid scratches during cutting. You may be able to find a store with a commercial panel cutter that will do this for you, and save all the mess and trouble. Take exact dimensions.

Fabricate the feed-through assemblies using 10-32 brass hardware as shown in Figure 2. You'll need (2) 10-32 x 1” screws, (10) #10 nuts, (4) brass washers, and (4) flat rubber sink faucet washers (as seals). Drill the two holes through the window, spaced the same width as your ladder line. Attach the ladder line on each end using soldered ring lugs. Split the rings open with wire cutters, place over the outside end of screws, then close the rings and tighten the nuts. Cover outside connections with Coax-Seal.

If you'd rather go through a wall (nonmetallic houses), get the appropriate lengths of small brass all-thread rod, and the same length of Tygon tubing (the thick-walled variety) to slip over and insulate the rods. Then get the appropriate extra-long drill bit (carbide-tipped for brick, if needed). Don't drill into a pipe or electrical wire! Drill the holes through the wall and insert the Tygon-insulated rods. Put double nuts and washers on each end. Caulk the outside entry points. Apply ring-lugs to the feedline and jumper. Grease the rings. Install and tighten. Waterproof the outside ends with silicone caulk or Coax-Seal. You'll then have a permanent ladder line entry that'll last as long as your house.

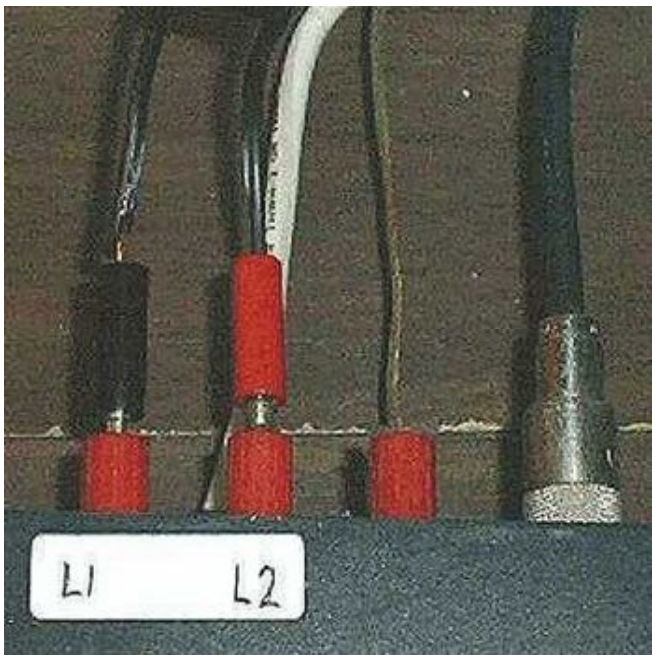

Figure 3 – Banana plugs used for easy removal.

The short jumper on the inside goes from the feed-through bolts to the balanced output of the antenna tuner. Solder banana jacks (See figure 3) onto the line and just plug them in. When thunder is heard, jerk them out and bend the line well away from equipment. This is a lot faster and neater than using the cross-bores in the binding posts, and will encourage you to disconnect at every sound of thunder. However, the bananas might not handle the high current of QRO operation. Since I run barefoot, this is not a problem. A good old-fashioned double-pole knife switch is an even better option - and they look so cool!

de Kenan N6CCE

Visalia DX Convention 2006

The Southern California DX Club organized the 2006 International DX Convention this year. It is held every year in Visalia, and is held by the Southern California DX club and the Northern California DX club on rotating years. The theme for this year's DX weekend was *"Casino Nights"... "What happens in Visalia stays in Visalia".*

Attendees traveled from all corners of the globe to meet fellow DXer's, listen to forums, see vendors and have fun! DX'ers traveled from South Africa, Russia, New Zealand, Japan, Russia, as well as many other countries. For many it was a chance to put a face to the name of hams they had spoken to over the air, but never had a chance to meet face to face.

The convention was crowded and full of activity. The convention was held at the Holiday Inn. The hotel was overflowing, and many of the other surrounding hotels were also packed full of DX'ers. When walking through the hotel lobby, you were overwhelmed with the discussions of DX and laughter. Many hams arrived to the convention on Thursday, the day before the convention began, to get the party started early!

Ray Novak N9JA from Icom America, Dan N6PEQ, Edwin ZS5BBO, and Dale KB7UB are sitting around discussing DX and other important issues.

There were numerous vendors present in the convention exhibit hall. Vendors included Alpha Radio Products, ICOM, Yaesu, Elecraft, M2, U.S. Tower and many more. Some vendors sold personalized badges, radio related books and coffee cups. The vendor room was packed with hams learning about the latest high-tech equipment on the market. Several new products were presented at the convention, including new HF amplifiers from Alpha Radio Products and Elecraft.

Saturday evening featured the DX banquet. This year's banquet included award presentations and a talk on the 2005 DXpedition to Peter 1 Island (3Y0X). Casino style decorations filled the banquet hall, and Marilyn Monroe (Kristin K6PEQ) even showed up to help present the awards

Dan N6PEQ, from the ICOM booth and Molly - WØMOM from Alpha take a moment from the busy crowds to have their picture taken.

The International DX Convention is one of the highlights of amateur radio. You have the opportunity to meet other operators who are different stages of the hobby. You also have the chance to meet DXer's who have been on multiple DXpeditions. Both well-seasoned DX'ers, who have worked nearly every DXCC entity, and novice DX'ers, who are just beginning to work toward their DXCC, are able to discuss propagation, strategy and the latest DXpeditions.

See **DX** on Page 9

Time To Order Your "Field Day" Polo Shirt

Name_____ **Phone #** _____

Order_____ **Men's (#K455) Polo Shirt, Seafoam Green with OCARC Logo with "Field Day" above logo (Cost $26.00) (See photo below)**

Order _____ **Ladies (#L455) Sport Shirt, Seafoam Green with OCARC Logo with "Field Day" above logo (Cost $26.00) (See photo below)**

Add my call sign_____ **and First name**_____
To the right side of shirt front. (Add $3.00 cost)

Order size _____ **Men's Sizes: XS-6XL, LT-4XLT (Beginning with XXL, add $2.00 for each added X)**
Ladies Sizes: LS-XXL, plus X1 and X2

TOTAL COST:

Shirt ($26.00)	**$28.00 including tax**
Added Call Sign and first name	**$3.23 including tax**
Cost for larger sizes ($2.16 per X)	_____

TOTAL ENCLOSED: ---------- $_____****

****** Make checks payable to OCARC and mail to:**

Beverly Helmick
1315 N. Tustin St., I-380
Orange, CA 92867
or bring to March, May Meetings

Questions? Call Beverly Helmick (KI6APH) at (714) 343-4277

DEADLINE FOR ORDERS: Friday, May 19, 2006 . (at OCARC May Meeting)

Ladies ←

Mens →

ON the W6ZE Web Site

If you design and/or build ham equipment and accessories, or if you are just learning electronics, you will find yourself digging out the Handbook or another reference to find an electronic formula. These include the many electronic equations you were introduced to when you studied for your license. You've probably forgotten the ones you haven't used regularly.

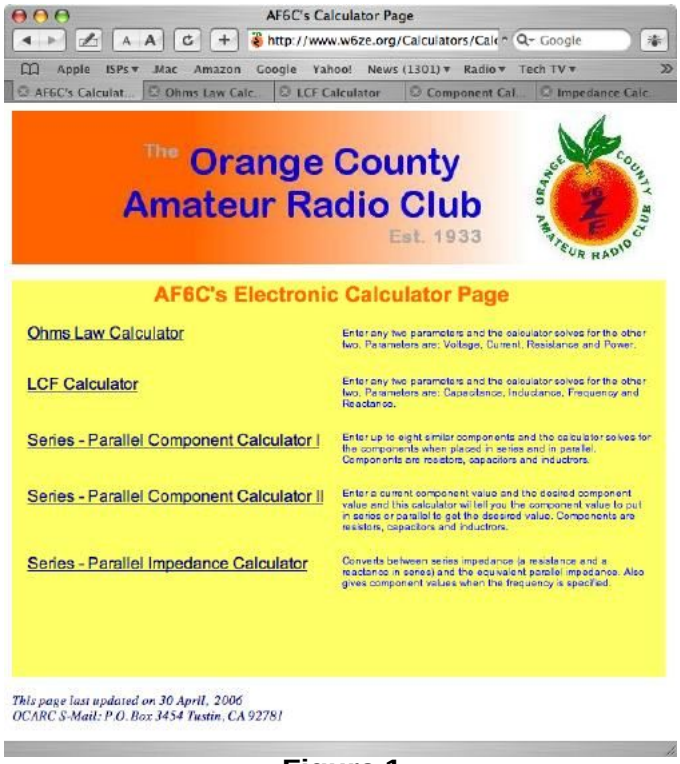

Figure 1

The solution to solving many of those equations exists on our web site, Since these sites are still under development they aren't linked to directly from the front page. However you can access them in your web browser by going to:

http://www.w6ze.org/calculators/calculators.html/

You will see the page shown in figure 1. Currently there are five calculators to choose from but more will be added in the future.

These calculators are written in JavaScript and to use them your browser must be able to handle JavaScript and html 4.0. Most recent browsers will. I know it works with Safari 2.0.3 and Firefox 1.5.0.2 for the Macintosh. You can help me out by reporting any errors you find or by reporting any browser that don't work properly.

Let's look at the first calculator. It solve all those Ohm's law problems. Figure two shows calculator's page. There are four values commonly associated with Ohm's law: Voltage, Current Resistance and (by extension) Power (Can you name a fifth?) If you know any two of these values you can solve for the other two. Lets say you have a 13.8 volt power supply and want to test to see if it can supply 100 watts of power without the voltage dropping. In the first row of knows 'Voltage' is already selected on the first pop-up menu so tab to the second window and enter 13.8. The multiplier menu lets you choose your value in different ranges such as kilovolts, millivolts and even microvolts. Since volts is what we want we'll leave it at 'V' for volts. In the second row of knowns select 'Power' from the pop-up menu, enter 100 as the value and leave the the multiplier as 'Power'. Finally click on the 'Calculate' button. The four values (including the ones you entered above appear in the yellow framed boxes below. You'd need a 1.9Ω resistor capable of more than 100 watts as a load to test your power supply. The power supply will be supplying about 7.25 amps.

Figure 2

The second calculator is quite similar to the first in operation. However it is an LCR Calculator and solves for reactance, inductance, capacitance and frequency. It also solves for resonance. Figure three shows the solution the reactance for a 0.047 µF capacitor at 60 KHz. The answer is 56.4Ω. Also to resonate this capacitor at 60 KHz requires an inductance of 149.7 µH.

Currently there are three additional calculators. Two share a page; the top one solve for resistors, capacitors or inductors in series and parallel, and the bottom one calculates the series or parallel component you must add in parallel with a known component to get the desired component value. The last calculator converts an impedance between its series and parallel equivalent.

JavaScript can return three special values. ± Infinity and NaN, which stands for "Not a Number". You'll see NaN if you just enter Calculate on the Ohm's law calculator with the two knowns at zero volts and zero

amps. You get NaN for the resistance because R cannot be solved for. Any value of R will work.

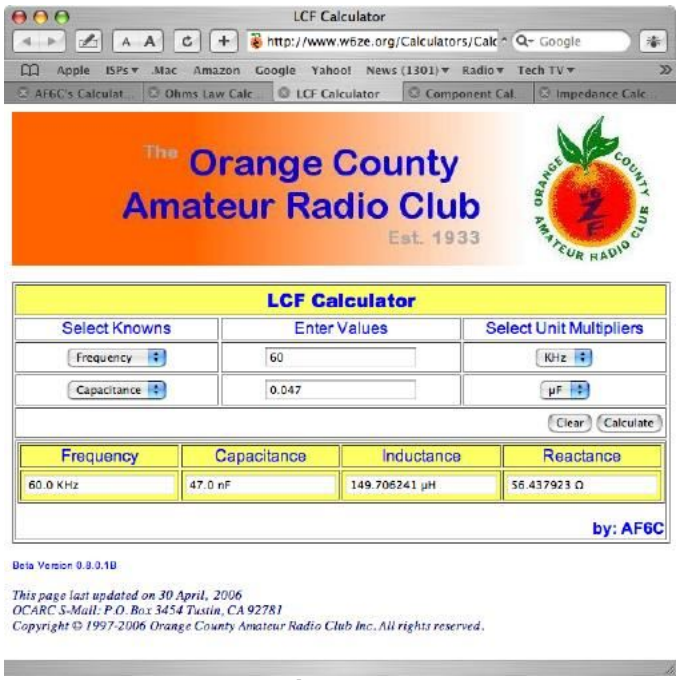

Figure 3

Please play with these calculators and let me know of any blunders and which browsers work and don't work with them. (Be sure you have JavaScript enabled.) Submit your ideas for other calculators. My email address is on page two.

de Bob, AF6C

DX from Page 6

The Orange County Amateur Radio Club, W6ZE, was well represented at the convention. OCARC members in attendance included, Willie – N8WP, Cheryl – KG6KTT, Dan – N6PEQ, Kristin – K6PEQ, Dale – KB7UB, and Jim – N6DHZ accompanied by his wife Linda. We had a great time and are looking forward to next year!

We even had a W6ZE hospitality suite on Sunday morning around 2 a.m. N8WP, N6PEQ, KG6KTT, K6PEQ and N6DHZ were present with guest ZL3TE.

de Kristin K6PEQ

Board Meeting Minutes
May 6, 2006

Attendees:

Loran, KB6LRD	John, KE6JYD	Bob, AF6C
Dan, N6PEQ	Kristin, K6PEQ	Willie, N8WP
Cheryl, KG6KTT	Rich, KE6WWK	Bev, KI6APH
Ken, W6HHC	and his XYL Diane	

Meeting was called to order at 8:35 a.m.

REPORTS:

President – He is going to continue to work on getting paypal up and running.

Vice President – Larry McDavid, W6FUB, is speaking in May on sundials. Bill Scholtz, W1HIJ, will be speaking in June on Marine communication. Catherine Deaton is going to be rescheduled for later in the year.

Secretary – Absent, no report

Treasurer – Bank signature cards are taken care of.

Activities – OCARC potluck is being planned for the end of August. More details to follow later.

Membership – He has the new list of hams in the area and will be mailing letters out to them. The membership page has been redone and the new form can be downloaded.

Publicity – Absent, no report

Member at Large – Absent, no report.

Member at Large – Nothing to report at this time

OLD BUSINESS:

- Newsletter editor is Bob, AF6C this month and Willie, N8WP volunteered for June.
- Brochures – Dan, N6PEQ, will be taking care of finding the best deal to print more brochures needed for the fair and to hand out.
- Field Day shirts – deadline to order is May 15th. Make sure you get yours today!
- Traveler mugs - $15 each and will be sold at Field Day.

FIELD DAY:

- Checking Dayton for better deals on towers for field day. Interested in a military mast system that may work better for what we need.
- Generators – Willie, N8WP, is taking care of the generators for field day. He needs them to be dropped off at this home.

See **Board Minutes** on Page 11

Museum Ships Weekend Event

A radio special event will be held on the weekend of June 3rd. During a 48 hour period starting at 0000Z work as many museum ships as you can. If you are able to work 15 ships you will be awarded a special certificate.

Suggested frequencies are shown in the table. However, some of the ships will also be operating AM on 3880 - 3885 KHz and 7290 KHz and 14,296 KHz - some using original shipboard equipment. For more information, checkout this link:

http://users.tellurian.com/freddie/nj2bb/ship-event.html

Here's a list of ships that will be active during the contest. Additional ships may be added to the list.

NAME	TYPE OF SHIP	LOCATION	CALLSIGN
USS Hornet	Aircraft Carrier	Alameda Point, CA	NB6GC
USS Lexington	Aircraft Carrier	Corpus Christi, TX	W5LEX
USS Alabama	Battleship	Mobile, Alabama	W4BPR
USS Missouri	Battleship	Pearl Harbor, HI	KH6BB
USS New Jersey	Battleship	Camden, New Jersey	NJ2BB
USS North Carolina	Battleship	North Carolina	NI4BK
USS Texas	Battleship	Houston, Texas	NA5DV
USS Wisconsin	Battleship	Norfolk, Virginia	N4WIS
H.M.S. Belfast	Cruiser	London, England	GB2RN
USS Littlerock	Cruiser	Buffalo,New York	W2PE
USS Cassin Young	Destroyer	Boston, MA.	WW2DD
USS Olympia	Cruiser	Philadelphia, PA	WA3BAT
USS Orleck	Destroyer	Texas	KD5ULS
Maillé Brézé	Destroyer	Nantes Harbor, France	TBA
USS The Sullivans	Destroyer	Buffalo, NY	W2TU/2
HMS Smaland	Destroyer	Gothenberg, Sweden	SK6SL
HMAS Diamantina	Frigate	Brisbane, Australia	VK4RAN
SS City of Milwaukee	RR Car Ferry	Manistee, MI	K8GWW
USS Batfish	Submarine	Muskogee, OK	WW2SUB
USS Becuna	Submarine	Philadelphia, PA	W2RM
USS Cobia	Submarine	Manitowoc, Wisconsin	N9BQV
USS Cod	Submarine	Cleveland, Ohio	W8COD
USS Croaker	Submarine	Buffalo, NY	WA2FKV
USS Drum	Submarine	Mobile, Alabama	W4BPR
S637 Espadon	Submarine	Saint-Nazaire France	F6KBG
USS Lionfish	Submarine	Fall River, MA	W2SUB**
USS Pampanito	Submarine	San Francisco, CA	NJ6VT
USS Razorback	Submarine	N. Little Rock, AR	W0OOG
USS Silversides	Submarine	Muskegon, Michigan	K8ROH
USS Torsk	Submarine	Baltimore, MD	NK3ST
U-5075 Seehund	Submarine	Quincy, MA.	WW2MAN
U9	Submarine	Speyer, Germany	DK0SP
B143	Submarine	Zeebrugge, Belgium	OR0OST/SUB
USS Potomac	C G Cutter and Presidental Yacht	Oakland, CA.	W6P
USCGC McLane W-146	C G Cutter	Muskegon, MI.	W8BXS
SS American Victory	Victory Ship	Tampa, Florida	W4AVM
SS Lane Victory	Victory Ship	Los Angeles, CA	W6LV
SS Red Oak Victory	Victory Ship	Richmond, California	K6YVM/NY6CI

NAME	TYPE OF SHIP	LOCATION	CALLSIGN
HNLMS Abraham Crijnssen	Minesweeper	Den Helder NL	PI4MRC
MS Deneb	Minesweeper	Frankfurt, Germany	DL0MFF
HNMS Mercuur	Minesweeper	Scheveningen NL	PI9MER
MV Pluto	Minesweeper	Hameln, Germany	DF0MV
Atlantis	Minehunter	Dresden, Germany	DL0FHD/MS
LS Columbia	Lightship	Astoria, Oregon	W7BU
LV Elbe 1	Lightship	Cuxhaven, Germany	DL0CUX
LS Huron	Lightship	Port Huron. MI	K8HLM
LS Westhinder 2	Lightship	Zeebrugge, Belgium	ON4BRN/LGT
SS Sankt Erik	Icebreaker	Stockholm, Sweden	8S0HRA
MV Cap San Diego	Freighter	Hamburg, Germany	DL0MFH
EX MS Dresden	Freighter	Rostock, Germany	DL0MCM
ST-695 Angels Gate	Army	Tugboat San Pedro, CA	K6AA
MV Frederic Mistral	Tugboat	Vienna, Austria	OE6XMF/1
James Whalen	Tugboat	Thunder Bay Ontario	VE3JWT
MS Seefalke	Salvage	Tug Bremerhaven, Germany	DK0SN
SS Thalia	Passengership	Worthersee, Austria	OE6XMF/8
RMS Queen Mary	Passengership	Long Beach, CA	W6RO
STR Portland	Sternwheeler	Portland, Oregon	W7P
HK-1 Spruce Goose	Flying Boat	Oregon	W7G
USS LST-325	LST	Evansville, IN	WW2LST
CSS Acadia	Survey Vessel	Halifax, Nova Scotia	VE0MMA
WV2 Warning Star	(Lockheed Constellation)	Rantoul, IL	WV2AEW

Suggested Event Frequencies

Band:	SSB:	CW:
75/80 Meters:	3,860 KHz	3,539 KHz
40 Meters:	7,260 KHz	7,039 KHz
30 Meters:		10,109 KHz
20 Meters:	14,260 KHz	14,039 KHz
17 Meters:	18,160 KHz	18,079 KHz
15 Meters:	21,360 KHz	21,039 KHz
12 Meters:	24,960 KHz	24,899 KHz
10 Meters:	28,360 KHz	28,039 KHz
6 Meters:	50,160 KHz	28,039 KHz

MUSEUM SHIPS WEEKEND EVENT
sponsored by
The Battleship New Jersey
Amateur Radio Station

Board Minutes from Page 9

- $400 field day amount was approved for spending on field day food and supplies.
- We still need another team captain for field day. Any volunteers?

NEW BUSINESS:

- Ron Cade, W6ZQ, donated a mast and other equipment to the club.
- D-Star Repeater – interested in looking into it for the club. This will be discussed further as well as have a presentation on it for the club at a later date.

Meeting Adjourned at 9:30 a.m.

Respectfully Submitted,
Kristin Dankert, K6PEQ
Vice President
(Acting Secretary)

Field Day from Page 1

The GOTA station is awarded points for:

- 50 Bonus Points for ***each*** GOTA operator who makes 50 or more contacts.
- 50 Bonus Points additional for ***each*** GOTA operator who reaches 100 contacts. (Max is 500 points)

If the GOTA Station is managed ***full-time*** by a GOTA Coach, points are doubled (Max then is 1,000 points).

Another rule change this year is that PSK31 is no longer considered a demonstration mode. Instead it will be considered a full time operating mode.

Current plans are to operate in the 3A category with additional VHF and GOTA stations. Bands will be 80 M (Larry - K6VDP Team Captain), 40 M (John - WB6AJE Team Captain) and 20 M (Ken - W6HHC Team Captain). The other bands are available if conditions warrant. Of course these plans can change quickly as FD nears.

de AF6C

APRIL GENERAL MEETING MINUTES

The April 21st meeting was called to order by acting president Ken Konechy, W6HHC, at 1900. Several Board Members were attending the DX Convention being held in Visalia CA. A quorum was not present. However there were 23 members and guests present.

Bob, AF6C announced that the scheduled speaker from the FCC was ill and canceled. She would reschedule for a later date.

There was four visitors present: Allen, KD6LCL; John, KD6DTW; Matt, KI6BLY; and Steve, KI6DDE. Ken introduced them and welcomed them to the club meeting. John and Matt recommended that membership applications be downloadable on the OCARC's web site. Ken and Bob said, they would take corrective action.

Ken then started off a discussion on what he has been doing lately in HAM Radio and had each attendee tell about what they current radio related activities.

After the break club business was addressed:

OLD BUSINESS; Field Day was discussed; with Chris W6KFW announcing that somebody needs to temporarily store the club generator. Chris will be out of state during Field Day. He can deliver the generator to the temporary storage site.

GOOD OF THE CLUB: Bob AF6C will be the ***RF*** editor for May; please submit articles early as you can. Rich KE6WWK and Beverly KI6APH showed the Field Day shirt and passed out shirt order forms.

Rich made a motion to adjourn and it was seconded by Lowell.

Submitted by Lowell KQ6JD

ORANGE COUNTY AMATEUR RADIO CLUB, INC
P.O. BOX 3454
TUSTIN, CA 92781-3454

First Class Mail

Time Dated Material.
Please Expedite!!

Next RF Deadline: Jun 5th