

CLUB STATION
K6SON

Short Skip

The Newsletter of

Sonoma County Radio Amateurs, Inc.

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REPEATER STATION
W6SON

Volume 41, Number 8

August 2016

Homebrew

Doing it Old School

by
Dave, KI6UGB

"I do not think there is any thrill that can go through the human heart like that felt by the inventor as he sees some creation of the brain unfolding to success...

Such emotions make a man forget food, sleep, friends, love, everything."

--Nikola Tesla (1856 - 1943)

In the beginning there were no assembly lines or computerized soldering machines to attach surface mount components. HAMs made their own radios armed with maybe a block diagram and some tubes. If they were lucky, a schematic and a roll of solder, resin core hopefully.

If you couldn't find the component in the schematic, it was back to ohm's law to devise a suitable replacement. Each radio was unique and experimentation was expected.

After WWII, surplus components from discarded military hardware hit the field and technology advanced more rapidly through experimentation and availability of better and cheaper components.

Fast forward to today and most of us are appliance operators, as the local HAM can't compete with the high tech manufacturers for level of technology in the creation of radios.

Believe it or not, though, there are still companies and individuals out there making kits that we can keep our soldering skills honed on (soldering skills ... what

are those, you ask?). Soldering, that's where you melt some metal onto component leads hoping it will stick to the bread board (uh-oh, what's that?) and make a good connection.

Don't worry, SCRA has a great [mentor program](#) with people that know how to solder correctly. Just as with Homebrewing Beer or Wine, the secret is keeping your tools clean. Trust me on this. Keep the bacteria out of the brew kettle and the corrosion off the components and you'll do fine.

While Heathkit may be history and Radio Shack now sells cell phones instead of radios, you can still find kits and components out there such as the [Elecraft K1, a CW radio kit](#).

K1 Two Band HF Transceiver



Plugging "[HAM radio homebrew](#)" into your favorite search engine will get you tons of websites offering kits, components, schematics and instructions for more radio projects than you can imagine. For many there is no soldering iron required..





PRESIDENT'S MESSAGE AUGUST 2016



A Hot Summer Greetings from Iola
KK6HRE

MENTORING:

One of SCRA's programs is the [Mentoring program](#) under the direction of the Education Chairman. It seems to get little press and, according to John WB6FRZ, doesn't even get talked about, so I would like to talk about it. (See

John's article elsewhere in this SS)

Activities and Program Chairman, Steve KK6VMZ and I scheduled an appointment with Frank NQ6E for a Saturday afternoon session on HF & DXing. What a great 2 and a half hours! Steve and I came away loaded with information and having made a DX contact. The second contact for me, a first for Steve. Then Frank sent us lots of links for more reading material that I have barely gotten into.

"While I had the opportunity to meet with John Breckinridge, which "opened my eyes", Frank brought on a high degree of information from a different point of view! I truly value them both for what I was able to glean from them." ~ Steven Bouchard.

Another member, Kathy KK6KGW, had the opportunity to sit for three hours at Field Day and had a very meaningful discussion with Dan WA6CRB. Kathy also has Jeff KI6PBF as another mentor. Kathy says: "I've always been a person who wants to know the "why" of an answer. It helps me to learn and apply what I have learned. Mentors are so important because they can answer the "why" with a "because". The old saying "Give a man a fish, and you feed him for a day. Teach a man to fish, and you feed him for a lifetime." I want to be able to "feed" myself with the knowledge that a mentor can provide by teaching me how to become knowledgeable about Ham radio operation which can sustain myself for a lifetime."

These meetings don't have to be planned, they can be spontaneous.

At the next membership meeting, I want to have registered mentors stand and be introduced so members can see who they are and hopefully, will feel comfortable approaching a mentor with questions they have or for guidance with a problem. They are here among us. You only have to speak up and engage them in conversation or request an appointment for a mentoring session.

Have you taken advantage of the SCRA Mentoring Program? I would like to hear from you as to whom you met with and your reaction to that encounter. Email me at

K6SON@ARRL.NET.

PUBLIC SERVICE:

[Public Service](#) is another program we have that we seem to be letting down this year. This is our opportunity to volunteer our expertise and service back to the community. Charlie KZ6T is in need of licensed amateur radio personnel to cover many aspects of two more events for the year. Please go to our SCRA Website, sign in, and sign up.

CLUB VISITATIONS:

The Official Club Visitations started on July 20th with five members visiting Sonoma for the VOMARC monthly meeting. VOMARC (Valley of the Moon Amateur Radio Club) was very welcoming. My camera malfunctioned so I have no picture to share. Our next visit is to San Francisco. See Activity Chair, Steve KK6VMZ's report elsewhere in this newsletter. It is felt that visits to nearby radio clubs is a valuable way to get to know other hams that we may have to interact with following a disaster, or simply at an event. To see the face that goes with the voice/name/call sign, is actually fun, if not functional. Thanks, John WB6FRZ, Darryl KI6MSP, Steve KK6VMZ. We were greeted by dual member Ed W1EJ.

Iola KK6HRE

AUGUST MEETING PROGRAM

HOME BREW / BOAT ANCHOR / ANTENNA NIGHT

by
Pat Coyle

Click the "Boat Anchor" link above for insight into the definition, draw and value of said items.

JOIN ARRL, THE AMERICAN RADIO RELAY LEAGUE

The ARRL is the national organization of Amateur Radio. It represents Amateur Radio at International Conferences and before the FCC. Get the monthly QST magazine, insurance for your equipment and too many other benefits to mention here. Click <http://www.arrl.org/membership/>



If you are not getting the ARRL San Francisco Section news by e-mail and you are an ARRL member, be sure to subscribe under your Members Only information or go to this Web site:

<http://www.arrl.org/Groups/view/san-francisco>



2016 Club Officers

President	Iola Beckley	KK6HRE
Vice President	Brian Torr	N6IY
Secretary	Dave Harrison	W6IBC
Treasurer	Wells Wagner	KK6EXC
Director	Joe Fortuna	K6AWA
	ShelleyRae O'Connor	KK6JXM
Past President	Patrick Coyle	KG6JSL

Committee Lineup/Contacts

Activities/Programs	Steve Bouchard, KK6VMZ	sb1112@outlook.com
Community Outreach	Darryl Paule, KI6MSP	ki6msp@arrl.net
DX/Contesting	Doug Payne, KF6LMB	dougpayne1@earthlink.net
Education	Dave Harrison, W6IBC	w6ibc@arrl.net
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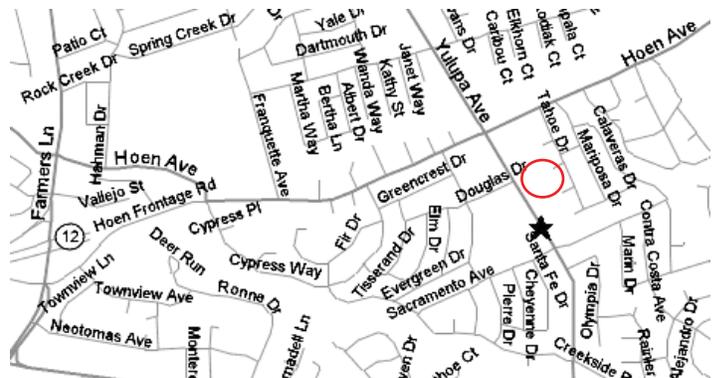
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SCRA Club Meetings

The club normally meets the first Wednesday of each month, socially at 6:30 pm, program starting at 7:15 pm. Exceptions are holidays or other big events.

Meeting location:
 Luther Burbank Art & Garden Center
 2050 Yulupa Avenue
 Santa Rosa, CA



All are welcome!

Please join us at our next meeting. Anyone interested in Amateur Radio may be eligible for membership. A membership application is included in this newsletter.

For more information, contact any SCRA officer, director or member. Hungry before the meeting?

Join us for dinner! We Meet at IHOP restaurant, 4th and Farmers Lane, Santa Rosa. People start showing up at 5:15 PM. No RSVP is required.

Board of Directors Meeting

The SCRA Board of Directors will meet monthly on the Second Wednesday at the IHOP Restaurant, Fourth Street, Santa Rosa (in the Safeway/CVS Pharmacy center). All members are welcome to attend, no reservations necessary. Arrive around 5:15- 5:30pm for dinner. Meeting starts at 6:00pm.



SCRA LOANER RADIOS

SCRA has a Yeasu 2900 VHF radio available for use by members as a loaner. Contact Charlie, KZ6T, at charliesikes@me.com

UPGRADE TO GENERAL OR AMATEUR EXTRA CLASS

Get more privileges and enjoyment from your Ham Radio Hobby. [Mentoring assistance](#) is available. Contact Dave W6IBC, SCRA Education Chair, at 707-838-8155 or w6ibc@arrl.net.

Tuesday Night Net

The Sonoma County Radio Amateurs' net meets Tuesday at 7:00 PM on the SCRA repeater, 147.315, positive offset, PL 88.5.

All members and guests are invited to check in. The Net includes updates on SCRA activities, and News-line, the amateur radio community news service.

Anyone wishing to work as net control should contact lola kk6hre, at K6SON@ARRL.NET for assignment. Script and logs are available on the Website at <http://sonomacountyradioamateurs.com/wp/resources/net-script/>



10 Meter Net

There will be a net on 10 meters hosted by Joe K6AWA at 8:30pm (new time) following the regular SCRA net Tuesday nights. Set your dial to 28,402.00 SSB, USB. Please note that all license classes (including technician) are welcome.

2016 SCHEDULE OF EVENTS

Check the [Club website](#) for details

Saturday, August 13 - Annadel XC
 Sun August 14 - Tour d'Organics
 Sunday, August 21 - Santa Rosa Marathon
 Sat, August 27 - VE Testing
 Sat/Sun Sept 24-25 - PCAM Air Show
 Sat/Sun Sept 24-25 - Waves to Wine
 Sat Oct 1 - Levi's Gran Fondo
 Sat Oct 15 - Jamboree on the Air (JOTA)
 Sat Oct 29 - North Bay Science Discovery Day
 Sat, November 12 - VE Testing

Buiding Codes for Antennas

At the Fair I had two people back to back ask about putting up antennas in their mobile home parks, with HOA's, so I thought I might look this up in the [city's building code](#).

There are several club members who have to deal with antenna issues.

I know that ARRL is working on the [Amateur Radio Parity Act](#), which will put all localities on the same playing field.

Darryl
 KI6MSP

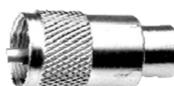
Restoration of BoatAnchor Radio Equipment



ORIGINS OF THE TERM BOATANCHOR

THREE VERSIONS -- Opinions From The Internet.

Version I -- During World War II, Military Radio Techs used the term BoatAnchor as ... [full story here](#)





CONTEST CORNER by Kevin Alt, K6BSG

Hello testers. Lots of activity this month, especially over the last weekend. Earlier in the month, check out the meteor scattering contest or the Himalayan contest. Happy DX'ing!

1 Aug – ARS Spartan Sprint – CW, 80-10 meters. See: www.arsqrp.blogspot.com.

1 Aug – ARS Flight of the Bumblebees – CW, 40-10 meters. See: www.arsqrp.blogspot.com.

4 Aug – NRAU 10 Meter Activity Contest – All Modes, 10 meters. See: www.nrau.net/activity-contests.

6 Aug - TARA Grid Dip Shindig - Digital, 160-6 meters. See: www.n2ty.org.

6 Aug - European HF Championship - CW/SSB, 160-10 meters. See: lea.hamradio.si/~scc/euhf.

6 Aug – WAB 144 MHz Low Power – Phone, 2 meters. See: wab.intermip.net.

6-7 Aug – 10-10 Intl Summer Contest – SSB, 10 meters. See: www.ten-ten.org.

6-7 Aug, North American QSO Party - CW, 160-10 meters. See: www.ncjweb.com/NAQP-Rules.pdf.

6-7 Aug, August UHF Contest, all modes, 220 MHz and above. See: www.uhfcontest.org/uhfrules.htm.

7 Aug – SARL HF Phone Contest - SSB, 80-20 meters. See: www.sarl.org.za.

10 Aug – NAQCC CW Sprint – CW, 80-20 meters. See: naqcc.info/sprint201608.html.

10 Aug – RSGB 80 Meter Club Sprint – CW, 80 meters. See: www.rsgbcc.org/hf.

11-13 Aug – 144 MHz Meteorscatter Sprint – All Modes, 2 meters. See: www.mmmonvhf.de/ctestinfo.php.

13-14 Aug – WAE DX Contest - CW, 80-10 meters. See: darc.de/referate/dx/contest/waedc/en.

13-14 Aug – SKCC Weekend Sprintathon – CW, 160-6 meters. See: www.skccgroup.com.

13-14 Aug - Maryland-DC QSO Party – All modes, 160 meters – 70 cm. See: mdcqsoparty.w3vpr.org.

13-14 Aug – 50 MHz Fall Sprint – CW/Phone, 6 meters. See: svhfs.org.

20 Aug – Feld-Hell Sprint – Digital, 160-6 meters. See: sites.google.com/site/feldhellclub.

20-21 Aug – SARTG WW RTTY Contest – RTTY, 80-10 meters. See: www.sartg.com.

20-21 Aug - ARRL 10 GHz and Up Contest – all modes. See: www.arrl.org/10-ghz-up.

20-21 Aug - Russian District Award Contest - CW/SSB, 160-10 meters. See: rdaward.org/rdac1.htm.

20-21 Aug – Himalayan Contest – CW/SSB, 80-10 meters. See: arsi.info/contests.

20-21 Aug - North American QSO Party - SSB, 160-10 meters. See: <http://www.ncjweb.com/NAQP-Rules.pdf>.

20-21 Aug – CVA DX Contest – CW, 80-10 meters. See: www.craec.org.

21 Aug – SARL HF Digital Contest - Digital, 80-20 meters. See: www.sarl.org.za.

21 Aug – ARRL Rookie Roundup – RTTY, 80-6 meters. See: <http://www.arrl.org/rookie-roundup>.

22 Aug – Run For the Bacon QRP Contest – CW, 160-10 meters. See: <http://qrptest.com/pigrun>.

24 Aug – SKCC Sprint – CW, 160-10 meters. See: www.skccgroup.com.

25 Aug – RSGB 80 Meter Club Sprint – SSB, 80 meters. See: www.rsgbcc.org/hf.

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Contest Corner continued from page 5...

27-28 Aug - ALARA Contest- CW, 80-20 meters. See: www.alara.org.au/contests.

27-28 Aug – W/VE Islands QSO Party – All modes, 160-6 meters. See: usislands.org.

27-28 Aug - SCC RTTY Championship, 80-10 meters. See: lea.hamradio.si/scc/rtty.

27-28 Aug - YO-DX HF Contest - CW/SSB, 80-10 meters. See: www.yodx.ro/en/english.

27-28 Aug - Keymen's Club of Japan Contest - CW, 160-6 meters. See: www.kcj-cw.com.

27-28 Aug – Kansas QSO Party – All modes, 80-6 meters. See: ksqsoparty.org.

27-28 Aug - Ohio QSO Party - CW/SSB, 80-10 meters. See: <http://www.ohqp.org>.

27-28 Aug – CVA DX Contest – SSB, 80-10 meters. See: www.craec.org.

27-29 Aug - Hawaii QSO Party – All modes, 160-10 meters. See: <http://www.hiqsoparty.org>.

28 Aug – SARL HF CW Contest - CW, 80-20 meters. See: www.sarl.org.za.

For additional contest calendars and resources check:

[WA7BNM Contest Calendar](#)

[ARRL Contests Page](#)

Minutes, SCRA July 6 1, 2016, Membership Meeting

The July 2016 regular Membership meeting of SCRA was called to order by President Iola KK6HRE at 7:12 PM, following a 40 minute social hour. A quorum of members was present. After introduction of officers and directors, new members and guests were introduced, including Bob KM6BJG, Loren KM6CKO, Matt KG6KSL and Marcus KG6GHW.

Net Control Assignments for July:

July 12: Jack K6ROW

July 19: Joe K6AWA

July 26: Keith AG6CI

August 2: Brian N6IYY

In light of difficulty in attracting SCRA Net control operators, president Iola conducted a brief discussion of issues preventing members from volunteering. She demonstrated an Excel spread-sheet she uses in logging members and guests who participate in the weekly net, and offered to make it available on request to any SCRA member.

This month's program was entitled: Introduction to Antennas and featured serial presentations by Joe K6AWA, Brian N6IYY and John WB6FRZ.

Joe K6AWA discussed antenna gain as the focusing of available RF power to a desired direction. He used a whiteboard, a yellow balloon and a plastic lid to a storage box to symbolize antenna gain patterns and ground. He defined an isotropic antenna as a point source, and used a resonant dipole as a reference in measuring gain. Joe discussed the logarithmic decibel scale. Joe manipulated the shape of the yellow balloon in order to demonstrate gain patterns of isotropic, dipole and directional antennas.

Brian N6IYY presented a slide show concerning effects of height above ground and conductor diameter on wave takeoff angle, resonant frequency and gain of antennas. He presented two EZNEC computer models for a 20 meter dipole of half inch tubing, and a 40 meter dipole of 12 gauge insulated wire. Takeoff patterns, antenna gain and resonant frequency graphs generated by the EZNEC program were presented and discussed. The effects of conductor diameter and insulation on dipole antenna length were also discussed.

John WB6FRZ focused on three very important aspects of high frequency ham radio systems. He covered the nature and characteristics of several types of 50 ohm coaxial cable transmission lines and discussed connectors, and the need to seal transmission lines and connectors against moisture intrusion. He explained standing wave ratio (SWR) and the use of an SWR meter between the transmitter and the transmission line-antenna.

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Minutes continued from page 6...

He then explained the need and means to match the 50 ohm HF transmitter to the antenna system using an antenna tuner, in order to counteract what he labeled as the “imaginary resistance” component of impedance (either capacitive reactance or inductive reactance). John provided a useful handout to the members in attendance.

President Iola KK6HRE began the business meeting by introducing Dave WB6FRV who is offering ham equipment for sale. The minutes of the June membership meeting were approved on motion by Ed W1EJ, second by Darryl KI6MSP. In the absence of the treasurer, Iola presented a summary of the treasury accounts and balances. Education Chair Dave W6IBC reported on the July 8-10 Technician License class at the Graton Fire District. Public Service Chair Charlie KZ6T reported on forthcoming public service events including Annadel Cross-Country, Tour d’Organics, Waves to Wine, and the Gran Fondo. He also mentioned the forthcoming mini-DX event in August. Repeater Chair Jack K6ROW reported the installation of the new 220 MHz repeater at English Hill and encouraged members to check into the SCRA Net on July 12 when Curt WA6TIP will be monitoring and reporting incoming signal quality. Brian N6IYY provided a summary of SCRA Field Day. President Iola mentioned forthcoming visitations to nearby ham clubs and noted that SCRA membership now stands at 158 members. Outreach Chair Darryl KI6MSP reported on Councilwoman Julie Combs visit to Field Day, and asked for volunteers for the Sonoma County Fair. He also mentioned speaking to State Senator Mike McGuire about ham radio. Emergency Services Chair Pat proposed setting up a SCRA disaster communications plan. He also displayed a directional noise finder as part of the RFI committee. Iola reported sale of 10 club banners at Field Day, and that 10 remain for sale at \$20.00 apiece. Darv KK6OVH announced his upgrade to General Class, Joe K6AWA mentioned an inverted Vee antenna, and Keith AG6CI reported activating Lava Bed National Monument as part of National Parks on the Air.

With no further business, the meeting was adjourned at 9:15 PM.

Respectfully Submitted,

David Harrison, W6IBC
Secretary

Minutes

SCRA Board of Directors Meeting

July 13, 2015

The July 2016 Board of Directors meeting was called to order by President Iola KK6HRE at 6:08 PM at IHOP restaurant, 2745 4th Street, Santa Rosa. SCRA Board members present included President Iola KK6HRE, Vice President Brian N6IYY, Treasurer Wells KK6EXC, Secretary Dave W6IBC, Director Joe K6AWA, and Director Shelley KK6JXM. Past President Pat KG6JSL was absent. Other SCRA members in attendance included Darryl KI6MSP, Jeff KI6PBF, Dan WA6CRB, Charlie KZ6T, and Steve KK6VMZ.

Minutes of the June 2016 Board Meeting were approved on motion by Wells KK6EXC, second by Iola KK6HRE.

Treasurer Wells KK6EXC presented a six month summary of income and expenses in relation to budget. The report was discussed and the Board voiced no objection.

The Board thanked Membership Chair Shelley KK6JXM for the latest roster. Shelley and Mary KK6OVF will continue to review and update the roster and request members to provide any changes or amendments. Shelley also discussed the website and an apparent email problem relating to membership@sonomacountyradioamateurs.com. Shelley will consult with Sutter KI6ZON and will talk to our web host CDS. Since Sutter will be heading for college, Shelley will be working on a succession plan. The website front page notation that “seating is limited” for Dr. Ed Fong’s July 30th presentation will be removed as the venue can hold up to 300 people.

Outreach Chair Darryl KI6MSP requested volunteers for SCRA’s booth at the Sonoma County Fair on July 23rd and 30th. He also suggested outreach opportunities at the Hot Air Balloon festival and the Sonoma-Marin County Fair. After a discussion the Board decided that only officers should sign official government forms, such as IRS Form 1099G relating to charitable contributions received by the club.

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BoD Minutes continued from page 7...

Activities Chair Steve KK6VMZ reported on the Antenna Presentation planned for July 30th featuring Dr. Ed Fong. 15 members are currently signed up. Iola will continue to publicize this event in the weekly blog. A visitation is planned to VOMARC for Wednesday July 20th. The Safeway parking lot at Highway 12 and Calistoga Road will be a meeting place for carpooling, leaving at about 6:20 PM.

Public Service Chair Charlie KZ6T reported that the Club had been requested to provide communications for the Michael J. Fox Charity Ride on August 27th. Since the club already has so many public service commitments, the Board declined to support this event. Charlie still needs volunteers for the Tour D'Organics, the Annadel Cross Country, the MS Society MS Waves to Wine, and the Gran Fondo. Charlie also reported that the HF Mini-DX event looked to be well supported by the membership. Field Day Chair Brian N6IYY reported that the 2016 Field Day event was a success, despite poor radio propagation conditions. The Board felt that the event was well planned and organized, and the various teams worked well together. Iola thanked Jeff KI6PBF for the Press Democrat press coverage and article reporting the event. Safety Officer Steve KK6VMZ noted that the event had too few hard hats for tower erection and disassembly. Iola moved, and Wells seconded a motion to purchase five additional hard hats, which passed unanimously.

In Unfinished Business, Iola reported that RF Interference Committee Chair Pat KG6JSL has purchased an MFJ RFI detector and an MFJ ultrasonic sound detector for \$395.00. .

Concerning the issue of sign-ups for net control operator at club sponsored public service events, Public Service Chair Charlie KZ6T is continuing to discuss the subject of the net control/comm boss selection process with Craig K6XLT.

Iola offered a supply of recently acquired Club business cards to interested members in attendance.

In New Business, Program Chair Steve KK6VMZ reported that John KE5RI would present a program

on high frequency radio at the September 2016 membership meeting. He also suggested the Board approve a January 2017 program on HF Propagation or a presentation regarding radio and astronomy by member Keith AG6CI.

Vice President Brian N6IYY will work with Membership Chair ShelleyKK6JXM in crafting a statement of responsibilities for the Membership Committee.

The Board discussed the Club's performance over the first six months of 2016 in light of the Article 2, Section 1, Objectives and Purposes of the Bylaws. The Board concluded that other than emergency services training, the club is doing well in meeting the Club's objectives.

The nominating process for 2017 Officers and Directors will commence at the August 2016 Board meeting.

With no further business, the meeting was adjourned at 7:48 PM

Respectfully submitted,
David Harrison W6IBC
Secretary



Len and Perry carefully searched for the best spot to place the "BoatAnchor" in their simulation.



The Best Kept Secret of Sonoma County Radio Amateurs

By John Breckenridge, WB6FRZ

I suppose most clubs have secrets; if that's true then SCRA is no exception.

I actually don't know why this is a secret but it seems like very few members know about it so it must be a taboo to discuss.

Nobody mentions it at our gatherings... kind of like the family closet secret that you never want anybody to know about. Before I share the secret I want to give the disclaimer that I will stand for no punishment or retribution from the SCRA board of directors, committee chairs or members for its disclosure.

This would not be fair since one should never shoot the messenger.

Okay, here it is.....

Any SCRA member wishing to know more about anything in amateur radio may contact Dave Harrison, W6IBC.

Dave is our secretary but he is also the education chairman. Dave can hook you up with a [mentor](#) (free of charge) who may work with you during mutually-agreeable times and help enlighten you.

Mentor relationships are marvelous! Get together at their shack for some on-air coaching.

Have you ever wondered how to make a good solder connection?

Do capacitor Farads and inductor Henrys make your head spin?

Have you been frustrated with that frumpelsniggot you never quite understood?

A mentor can help.

So contact Dave via email at w6ibc@arrl.net or by landline at 707-838-8155 to hook up with a mentor.

It is an excellent way to pass on some often hard-obtained lessons to the next generation of amateur radio operators. Help change SCRA mentoring from a well-guarded secret to an often talked-about benefit of the club, because it is!

Now to look into that frumpelsniggot I have sitting on my desk.....

Very 73,
John
WB6FRZ

The List of SCRA Mentors can be found on the Mentors page on the SCRA website, right [Here](#).

SCRA Website Forum

So how many of you know that the SCRA website has a forum page? Its there for all members to use.

There is a Section for Activities, Announcements and News, Public Service, and Technical Issues.

To visit the site,

Navigate to the SCRA website,

Log in as a member

Click on Member Area, then [Forums](#)

While you are on the individual Forum pages, make sure to click on SUBSCRIBE. This will send you an email when a new question gets posted.

Don't worry about your inbox getting flooded with junk emails. Only valid members can post to the site.

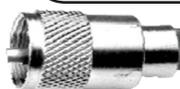
Turlock Amateur Radio Club Estate Auction

Wayne Light, a local Ham, passed away. He was a restorer of Amateur as well as Domestic radio equipment. We have inventoried, taken pictures and stored the items in this estate. Pictures and associated lists, 2 each are posted on the Club website at www.w6bxn.org/auction/. The proposed date has NOT been confirmed but we are looking at last part of October or first of November. Keep tuned to the website for date confirmation. Please forward this email to other amateur and non-amateur folks who are involved with restoring and collecting old radio equipment. There are some real gems both Amateur and Domestic in this extensive estate.

Thanks and looking forward to making this auction a success for the widow. Any questions feel free to contact me.

Grady Williams
Auctioneer, K6IXA

209-358-1166 home
209-761-1121 cell





Next Exam Session:

Our next exam session is scheduled for Saturday, August 27, from 9:00 am until noon. The location will be the Bennett Valley Grange Hall, located at 4145 Grange Rd, in Santa Rosa. Walk-ins will be accepted and all test elements will be administered.

(http://www.sonomacountyradioamateurs.com/ve_testing.html).

Please arrive by 8:45am to be signed in. Testing will begin shortly thereafter.

Directions to Bennett Valley Grange Hall:

From Hwy 101, take Highway 12 East to Farmers Lane. Turn right onto Farmers Lane and then left onto Bennett Valley Road. Stay on Bennett Valley Road approximately 4.1 miles and turn right onto Grange Road. Bennett Valley Grange Hall is 0.5 miles from Bennett Valley Road on the right.

Candidates should bring the following:

- One (1) photo ID or two (2) non-photo ID
- FCC Registration Number (FRN, if you have one) or Social Security Number (if you do not have an FRN) If you have had any FCC license assigned to you, amateur or otherwise, or had any prior business with the FCC, you probably have an FRN.
- Original and photocopy of your current amateur radio license (if licensed)
- Original and photocopy of any valid CSCEs (if applicable)
- #2 Pencil and eraser
- \$15.00 exam fee. Checks may be made payable to "ARRL-VEC"

Calculators may be used, but it must be demonstrated that all memories and programs have been erased. The calculator function in a cell phone or PDA may not be used! If you have any special needs, please contact Brian Torr, N6IYY in advance.

Good Luck!

Brian Torr, N6IYY
n6iyy@arrl.net
(707) 575-5871

The Art & Science of Amateur Radio

by Darryl KI6MSP

In the past nine years I've learned a lot about amateur radio.

For me there is a very BIG difference in HF vs. VHF & UHF.

In HF radio, it seems, that is where the science begins.

Coax type: coax quality, type, and length.

The type of antenna itself: Yagi, different configurations of dipoles; as well as the Gazillion styles for various needs. Also there is antenna height.

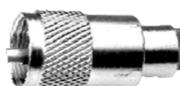
Propagation, in part, is dependent on the sun ionizing

the ionosphere. The **huge** 7.6-9.0 coronal mass ejection or CME that occurred on July 23rd, caused most of the HF bands to be dead for a while.

The radio itself: most radios have the basic functionalities. Then add other bells and whistles. The newest type of radio is the software defined radio, SDR. There is a lot more emphasis on the digital aspect of SDR.

There are the QRP (Reduced Power Radio), the various modes of digital radio, PSK31, (more info...) and many other types of digital radio.

These are some of the many components that are a part of the science in amateur radio. I'm sure that I've missed other parts, yet there is enough here to get you started in learning the science of amateur radio. Then there is the science part, putting it all together.





Mini DX 2016

Things you need to know about the DX.

1. Dates: August 4, 5, 6th, Thursday, Friday, and Saturday. Go home Sunday. It is at the A.W. Way county Park in Humboldt County.

2. Directions:

From Santa Rosa area, drive north on US101 to Garberville. Gas up, as it may be the last available gas. Drive north for approx 32 more miles to exit #663, Mattole Road. The last signage before this exit is exit #661 Weott. Continue west on Mattole Road to Honeydew. At the intersection of Mattole Road and Wilder Ridge, turn right continuing on Mattole Road west for approximately 5 miles to A.W. WAY Park. The park is on the left. Fencing covered with brush hides the entrance. Look for white sign with ham radio and graphics of an antenna. There is an elevation change from Weott at 338 feet to top of grade at 2744 feet, then down to Honeydew at 350 feet.

3. What to bring:

Camping shelter, chair, folding table for your radio, battery for the radio, and your choice of antenna. Most sites have a table, but be prepared yours may not have a table. Bring a roll of quarters for the shower which is across the field about 200 yards to the north. This is in the newer restroom, with an older restroom to the east about 100 yards away.

4. Set up area will be at the south end of the open field. There are trees for shade, and launching of antennas if necessary. Two vehicles can be in a site and the cost for the two will be \$20 payable to the ranger. So buddy up and share the cost.

5. Communication:

There is a pay phone at the park. Cell phone service if poor, but attainable in certain areas. Our call in frequency on 2 meters will be 147.55 simplex. The first person at the park should monitor the frequency. When traveling on the highway in convoys use the 147.55 simplex. Our English hill is sketchy up to Hopland.

6. Dinner will be on Friday evening. A general store is about 4 miles away at Honeydew.

I hope this will be of some help to everyone. Any questions call Doug.
707-538-1373

SCRA Mini-DX You Can Participate

By KZ6T

Mini DX is coming up soon. August 4, 5, 6, & 7. Just because you are not going, doesn't mean you can't participate. We will have a number of new to HF participants that would like very much to make a local contact.

We also will be operating SOTA (Summits on the air) from nearby mountain tops. If you don't know about SOTA, it's a great way of combining radio with the outdoors. Activators hike to the mountain tops to make contact with Chasers below. It's a points based radio sport. More information on SOTA in general can be found [here](#).

Our SOTA team will be attempting the following activations. (Although everything is subject to change.) Watch for us on [APRS.FI](#) using W6SON-3. We will send out a beacon when we reach the summit.

Friday 8/5/16:

Peak: Kings Peak,
SOTA Code: W6-CC-041
Elev: 4,088

Location: 40.1568°N (40° 9' 24.48" N), -124.1242°W
(-124° 7' 27.12" W)

Distance & Heading from Santa Rosa: 136 miles, 327d
Expected activation time: 1000 - 1100 (local)

Saturday 8/6/16:

Peak: North Slide Peak,
SOTA Code: W6-NC-078
Elev: 3500

Location: 40.1833°N (40° 10' 59.88" N), -124.1803°W
(-124° 10' 49.08" W)

Distance & Heading from Santa Rosa: 141 miles, 328d
Expected activation time: 1000 - 1100 (local)

Continued on page 12...





Mini-DX SOTA continued from page 11...

Sunday 8/7/16:

Peak: Mt Pierce,

SOTA Code: W6-CC-054

Elev: 3,185

Location: 40.4171°N (40° 25' 1.56" N), -124.1209°W

(-124° 7' 15.24" W)

Distance & Heading from Santa Rosa: 153 miles, 332d

Expected activation time: 1300 - 1400 (local)

Monday 8/8/16:

Peak: Black Lassic,

SOTA Code: W6-CC-017

Elev: 5,916

Location (lat,lon): 40.3402°N (40° 20' 24.72" N),

-123.5411°W (-123° 32' 27.96" W)

Distance & Heading from Santa Rosa: 136 miles, 342d

Expected activation time: 1000 - 1100 (local)

Bands, Modes, Frequencies:

2m, FM 146.520

6m, SSB

20m, CW, SSB

Countdown to W4DXCC

September 23-24th 2016 - MainStay Suites and Conference Center, Pigeon Forge, TN

Hello Friends and Club Officials,

I need your help in spreading the word about this years W4DXCC DX and Contest convention. Please help by forwarding this email or including the convention details in your club newsletter. I appreciate it very much.

W4DXCC DX and Contest Convention

If you have not heard about the W4DXCC DX and Contest convention, it's a yearly convention held in Pigeon Forge TN in September and this year is our 12th year. It's a gathering of Hams who come together to listen to presentations on DX and Contesting. On Friday we hold a Ham Radio BootCamp for new and older hams alike that teaches basic need to know things every ham should know. Some hams were lucky enough to have an Elmer, someone who guides them to learn the hobby. Other hams became hams because they would like to learn and know about how to operate and use amateur radio. The BootCamp can help new and older hams learn more about what amateur radio is.

It's kind of the Elmer you did not have. I suggest that all new hams attend this Friday BootCamp. Read more about it here [Ham Radio BootCamp](#)

Each year we have TOP equipment manufacturers come and set up in the lobby, right outside of the convention hall. They come to give each attendee the opportunity to speak with the representative directly, one on one. You have a chance to play with that new gear you have been wanting. These Top manufacturers come for you so come meet these fine people face to face.

Check out our presentation schedule, it's chuck full of DX and Contest presentations. It starts with BootCamp Friday morning and after dinner the Presentations start. Early Saturday morning the main convention starts and goes until the Banquet at 545pm and prizes are given out throughout the main convention. Admission includes snacks and drinks and Icom is sponsoring lunch for the attendees again this year. After the Banquet, the main prizes are given away. Overall this is a great event where you can meet new friends and see old friends. The fellowship is something that everyone enjoys. Your non ham spouse and kids will enjoy the nearby shopping and fun things to see and do. It's truly a fun weekend for all. Give Rosie a call now and get registered. [Rosie Registration](#)

You can follow us on Facebook and Twitter if you like. I hope to see all of you this year for a wonderful event.

Dave Anderson, K4SV

W4DXCC Leader

Dave@W4DXCC.com

©2016 W4DXCC DX and Contest Convention

1271 Red Fox Road

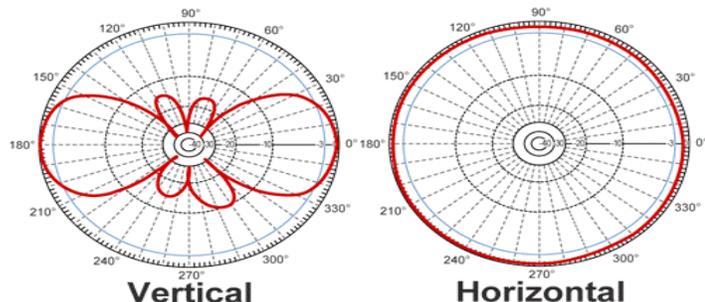
Tryon, NC 28782





Antenna Gain Explained

Many customers ask us "What is gain?" It is such a common question that we added a [Wireless Glossary](#) to explain gain and other common wireless terms.



But gain itself is a tricky term to define, so we're going to explain it here a little more in depth.

One of the major parameters used in analyzing the performance of radio frequency (RF) communications links is the amount of transmitter power directed toward an RF receiver.

This power is derived from a combination of:

1. Transmitter power
2. The ability of the antenna(s) to direct that power toward an RF receiver(s)

Directivity

The directivity of the [antenna](#) is determined by the antenna design. Directivity is the ability of an antenna to focus energy in a particular direction when transmitting or to receive energy better from a particular direction when receiving. To determine the directivity of an antenna, we need a reference antenna with which to compare our antenna's performance.

Over the years there have been several different reference antennas used; however, today an isotropic radiator is preferred as the standard antenna for comparison. As noted, the isotropic antenna (Omnidirectional) transmits equal amounts of power in all directions (like a light bulb).

To increase the directivity of a bulb's light (the antenna's energy), similar to a flash light or automobile head lamp in this example, a reflector (antenna) is added behind the bulb. At a distance, in the light beam, the light bulb now appears to be much brighter. The amount that the bulb appears brighter compared to the bulb without a reflector is the directivity of the reflec-

tor (antenna).

When the directivity is converted to decibels we call it the antenna gain relative to an isotropic source (dBi). Typically the higher the gain, the more efficient the antenna's performance, and the farther the range of the antenna will operate. For every 6 dBi in gain, you double the range of the antenna.

It should be noted that many issues need to be considered when selecting the "best" antenna for the application, and you should discuss any antenna selection with someone knowledgeable in RF radiation and antenna performance. L-com has the experts to help you make the "best" selection for performance and price, to fit your application.

Here are some helpful terms and definitions

Antenna Gain: A relative measure of an antenna's ability to direct or concentrate radio frequency energy in a particular direction or pattern. The measurement is typically measured in dBi (Decibels relative to an isotropic radiator) or in dBd (Decibels relative to a dipole radiator).

Isotropic Radiator: is a theoretical single point in space that radiates energy equally in every direction similar to the Sun radiating its light. The isotropic radiator exhibits the same magnitude or properties when measured in all directions. It has no preferred direction of radiation. It radiates uniformly in all directions over a sphere centered on the source.

Thanks to LComm Global Connectivity, <http://www.l-com.com/> Cables, connectors, etc.





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PO Box 116, Santa Rosa, CA 95402
(Please print this, fill it out, and send it in with your check.)

Name _____ Callsign _____ License Class _____
Mailing Address _____ Phone _____ Cell _____
City _____ Zip _____ New Application _____ Renewal _____
E-mail (if any) _____ Add to Roster (Yes)___ (No) ___

Please Send Short Skip & Roster to my E-mail address ()YES! () No thanks

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SCRA Dues: The renewal date for SCRA dues is January 1st. Dues are \$20/year for individual, \$30/year for families, and \$15/year for youth (under 18).

PRO-RATED DUES for new members only: Reduce standard dues rate by \$5.00 per quarter. (ie. Second Quarter, April – June \$15.00; Third Quarter – July – September \$10.00; Fourth Quarter, October – December \$5.00 to end of December of current year or \$25.00 through December of the following year)

I WOULD LIKE MORE INFORMATION ABOUT:

- () Public Service Events
- () ARES Emergency Services
- () Taking a Novice or Technician class
- () Teaching a Novice or Technician class
- () Taking an upgrade class
- () Teaching an upgrade class
- () Acting as club Net Control Station
- () Helping with VEC license exams
- () Field day, other operating
- () Helping with *Short Skip* Newsletter
- () Other _____

SCRA DUES: Individual \$20, Family \$30, Youth, under 18, \$15 + _____
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SCRA Patch \$5/ea + _____
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The radio



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FT-450D 100W HF + 6M Transceiver

- 100W HF/6M • Auto tuner built-in • DSP built-in
- 500 memories • DNR, IF Notch, IF Shift



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- 100w HF/6M, 50W 2M, 20W UHF • DSP included
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SHORT SKIP ARCHIVES AVAILABLE

Mike, AD6YB, has set up archives for past and present issues of Short Skip. They are available on the Website, log into Members Area, Short Skip, click on the first sentence. Mike has scanned in the old paper issues and it is really interesting to browse through them to see what those guys were doing. There are historical photos as well. An important record of our history and ham radio in general. Good Stuff.

[\(Click Me\)](#)

DIDN'T FIND WHAT YOU NEEDED?

If you are looking for something more on a topic or your topic of interest hasn't been covered lately, let us know. Something you'd like to see in Short Skip?

Contact the editor, shortskipeditor@gmail.com or for general questions and /or suggestions, k6son@arrl.net

SHORT SKIP NEEDS YOUR INPUT

SHORT SKIP ARTICLES WANTED

Dave, KI6UGB, our Short Skip editor is always looking for articles of interest. They can be technical, a good (or bad) experience that other members may learn from, hints or kinks that worked for you in solving a problem, or just about anything ham radio related. Send your contributions to Dave at shortskipeditor@gmail.com

