

CLUB STATION
K6SON

Short Skip

The Newsletter of

Sonoma County Radio Amateurs, Inc.

P.O. Box 116, Santa Rosa, CA 95402-0116 707-538-2931

<http://www.sonomacountyradioamateurs.com>

Repeaters:

English Hill: 147.315+ 88.5 / 224.480- 88.5 /
441.375+ 88.5



REPEATER STATION
W6SON

Volume 42, Number 4

April 2017

VALLEY OF THE MOON AMATEUR RADIO CLUB IN COOPERATION WITH THE NATIONAL PARK SERVICE WILL ACTIVATE N6P

Amateur Radio Station - N6P
Sat. & Sun. Aug. 20-21, 2016 -
1600Z - 2359Z

SSB: 14272, 7272 kHz; CW: 14040 kHz
QSLs via W6AJF w/SASE

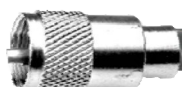
Point Reyes is the windiest place on the Pacific Coast and the second foggiest place on the North American continent. The lighthouse, built in 1870 and retired in 1975, is now under management by the National Park Service.

It is one of the few lighthouses in the United States which have the original Fresnel lens and clockwork mechanism in working order.

www.nps.gov/pore



Point Reyes Lighthouse, California





PRESIDENT'S MESSAGE APRIL 2017



Spring Madness

The SCRA Public Service Events have started. If you have not signed up to participate, please do it now. All events have Comm Bosses that are ready and waiting for their time to come. Be there for them.

WELCOME NEW MEMBERS Dan Belfe KK6WMW and Dustin Huse KK6YIX.

The *Assembling and Operating your Ham Station Class* on Saturday the 25 was well attended and went well. We even had a guest ham from Spokane, Washington who attend while visiting the area on personal business.

We have talked about opening up a Facebook account to facilitate getting out information about Field Day in particular, the club in general, and to let people know we exist and the fun we have. I have tried to open an account and the only way I can figure out how to do this is to add a group to my personal account. (Sonoma County Radio Amateurs; look it up.) I don't mind doing this but need pictures and suggestions. One picture for the banner at the top and recent photos of club activities with some verbiage about the picture; identifying individuals involved, what the activity was, etc. If you can help, email me at k6son@arrl.net. If we have a Facebook expert around, I could use their help and/or advice. Thanks, in advance, for your help.

The ARISS contact program being planned at the SRJC and in conjunction with Brook Haven School will happen sometime in the third week of April. I am told that we will get a listening frequency so we can tune in and listen to the contact. The entire event will also be video-taped. Tim Bosma from the JC has agreed to bring the video tape to our May Membership Meeting for our program. Tim will be able to answer our questions at that time, as well. This should make for an exciting program! I will send out an email blast to all members just as soon as I receive timing information. This will happen fast because we will not know what

the contact window will be until the last minute.

There has been a change to the April program. John je5ri will present a two part program:

1. Selection and application of ferrite beads to reduce RF interference.
2. The Installation and Applications of Power Poles.

The May program will be the ARISS program discussed above.

Put a 'save the date' of May 27th on your calendar for a field trip to the *Maritime Radio Historical Society in Bolinas, Ca.* Activities Chair, Laura Tighe is making final plans and we will have more information to you in the next few days. Have a great month!

Best Regards.
Iola kk6hre

APRIL PROGRAM

Selection and application of ferrite beads to reduce RF interference.
and
The Installation and Applications of Power Poles.

by
John KE5RI

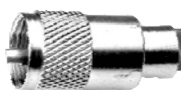
JOIN ARRL, THE AMERICAN RADIO RELAY LEAGUE

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>



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Vice President	Joe Fortuna	K6AWA
Secretary	Kathy Wells	KK6KGW
Treasurer	Aaron Marroquin	KK6ZDB
Director	John Felton	KE5RI
	Laura Tighe	AG6PE
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Short Skip Advertising Rates

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1st Quarter Column	\$13 per month
Each Additional Quarter Column	\$4 per month
Full page (one side)	\$35 per month
Pre-printed inserts (each)	\$35 per month

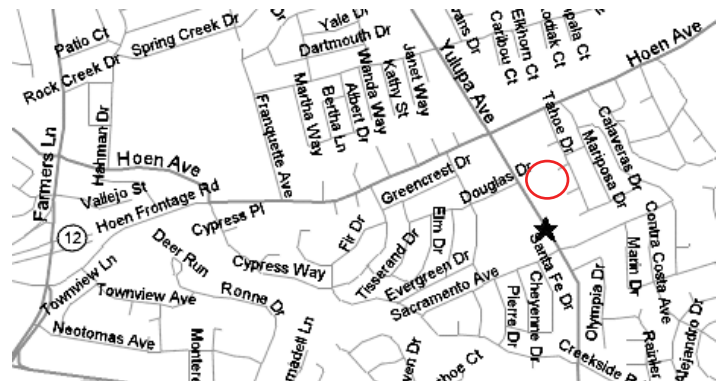
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SCRA Club Meetings

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.

LOANER RADIOS AVAILABLE

The Club has a variety of radios available to members to try out and improve their skills. We have a Kenwood T590 SG HF radio; Yeasu FT 2900 2 meter mobile; Yeasu FT1D, an analog/digital 2 meter and 440mhz HT; Yeasu FT 60, a 2 meter and 440 mhz HT; and a TYT TH-F5 VHF 2 meter HT. Trying these out is an excellent way to learn some radio and test before you buy. Contact Joe, K6AWA, at k6awa@yahoo.com with your request. Joe will forward an information form to you by return email.

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.

Technician License Class

The next SCRA-sponsored Technician licensing class will be held on Friday, July 14th, through Sunday, July 16th at the Graton Fire Protection District firehouse, just north of Sebastopol on Highway 116. Anyone interested in obtaining their Technician class amateur radio license is invited to participate. More details are under the Classes tab on the SCRA website, or interested persons should contact me directly at w6ibc@arrl.net.

73, Dave W6IBC
SCRA Education/Mentoring Chair



Weekly SBARA Youth Net New Day and Time!

- For young people 18 and under
- Licensed youth or youth with a licensed control operator are welcome to check-in
- Check-in via EchoLink, if you are outside of the area
- Adults can check-in towards the end of the Net to answer questions and mentor the youth.

Please join our new, 13-year-old net control operator, Truman Lindsey, KM6AQS, and help us grow this important Net for young hams!

- SBARA Youth Net
- Every Tuesday evening, 6:30pm (1830), PACIFIC
- N6NFI repeater, Palo Alto, CA (145.230 MHz, -600 kHz, PL 100 Hz.)
- EchoLink Station: KR6DD-R

Steve Wilson KG6HJU
South Bay Amateur Radio Association
Fremont, CA
kg6hju@arrl.net

Kids Net

Kids Net meets Thursdays at 7:30 pm on the Sonoma Mountain Repeater Society repeater at 146.910 MHz - PL 88.5 Petaluma.

Hosted by Ellen KJ6BHG and Joseph KJ6BHH for kids of all ages. It is focused on kids still in school, but all are welcome. They said to bring jokes to share.



How Good Is Audiopipe CCA Wire?

By Fred AE6SF

Need to power your 12-volt rig? You might be tempted to purchase 10 gauge red/black speaker cable (zip cord) made by Audiopipe and sold on eBay at a very attractive price. Or similarly purchase primary wire. After all, you can safely push 30 A through 10 gauge wire continuously, right? In the case of Audiopipe CCA wire, wrong!

There are various issues with Audiopipe wire:

- It is made in China, not the U.S.A.
- It is copper clad aluminum (CCA), not copper
- The "GAUGE" value is substandard vs. AWG
- The temperature rating is only 60°C or 70°C.

The following table shows, per my calculations, the ampacity for a 35°C rise, the nearest equivalent copper size in AWG (American Wire Gauge per ASTM B258), and resistance:

Audiopipe CCA	Ampacity for 35°C Rise (Note 1)	Nearest Copper Equivalent AWG (and theoretical)	Resistance at 60°C [ohm/kft]
10 GAUGE	15.5 A	14 AWG (14.2)	3.0
12 GAUGE	12.0 A	16 AWG (15.9)	4.6
14 GAUGE	6.8 A	20 AWG (19.7)	11.0
16 GAUGE	6.6 A	20 AWG (20.0)	11.6
18 GAUGE	5.0 A	22 AWG (21.9)	18.2
20 GAUGE	3.7 A	24 AWG (23.9)	29
22 GAUGE	2.9 A	26 AWG (25.6)	42
24 GAUGE	1.9 A	28 AWG (28.4)	81

Note 1: Ampacity is based on Belden Technical Information "*Table 3: Current Ratings for Belden Electronic Cables*" with cable surrounded by still air at an ambient temperature of 25°C and containing 2 or 3 loaded conductors.

Product identification

Audiopipe is a manufacturer and wholesaler of automotive and marine sound systems and is located adjacent to Highway 836 in Miami, Florida. It also sells speaker cable and primary wire in the following "Gauges": 10, 12, 14, 16, 18, 20, 22, and 24. The products are identified by their insulation inscriptions as follow (for "10 Gauge"):

AUDIOPIPE HWY 836, U.S.A. STANDARD 10 GAUGE SPEAKER CABLE

AUDIOPIPE HWY 836, U.S.A. STANDARD 10 GAUGE PRIMARY WIRE AP-10

Origin of manufacture

Audiopipe wire is manufactured in China, not the USA. The inscription is misleading. For the cost of an inscription wheel (~\$200), you, too, can have private-labeled wire.

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Conductor material

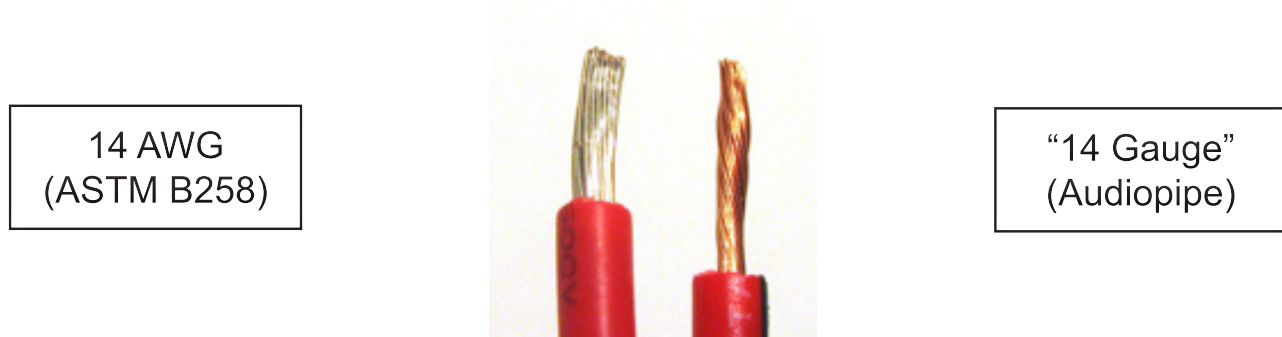
Audiopipe wire is Copper Clad Aluminum (CCA), consisting of a copper layer bonded onto an aluminum core. Its conductance, and hence ampacity, relative to copper wire will lie between 61% (aluminum wire) and 100% (copper wire). This number is not published. Its conductance relative to copper is about 66.2% according to my testing of Audiopipe "14 Gauge" speaker wire. That suggests minimal copper. (Ampacity is a wire's capacity to carry current continuously without damage.)

Any claim that it performs as well as copper due to "skin effect" is false since direct current (DC) has no skin effect.

It should be mentioned that Audiopipe also sells Marine Tin Copper Speaker Wire, which is all copper, in 10 and 18 gauges only. No further information is provided here.

Conductor size

The Audiopipe "Gauge" size has significantly less conductor cross-sectional area than the same AWG size, as shown in the following photo:



The strand count and (metric) diameter data for each Audiopipe "Gauge" was published by an eBay vendor and subsequently confirmed by Audiopipe. The data agreed with my measurements of the "14 Gauge" product. Calculation of the actual conductor areas confirmed that all "Gauge" sizes are substandard relative to AWG.

The same vendor now includes the statement "THIS IS NOT AWG AMERICAN WIRE GAUGE".

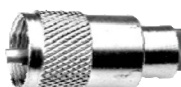
Temperature rating

Audiopipe primary wire is rated 70°C and speaker cable either 60°C or 70°C (both are stated). The PVC insulation is thermoplastic, meaning it will soften or melt when too hot. The temperature rating is the maximum temperature that the insulation can safely withstand continuously.

Automotive applications use primary wire. SAE standards typically call for 80°C or 105°C wire for general use, and 125°C wire in the engine compartment. Audiopipe wire falls short in these applications.

A wire heats up when current passes through it. The temperature rise is proportional to the square of the current, and must be limited to not exceed the temperature rating of the insulation. Consequently, the maximum allowable current (i.e., the ampacity) depends upon the conductor size, ambient

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temperature, insulation temperature rating, and the number of current-carrying conductors in the cable, conduit, or bundle. Adjustment factors are published online.

Resistance

Resistance data is included to allow calculation of voltage drop.

Calculation methodology and assumptions

The cross-sectional areas were calculated from the published strand data. It was assumed that all gauge sizes had the same relative conductivity as Gauge 14. The areas were multiplied by 66.2% to yield the equivalent copper areas and corresponding diameters. Using ASTM Standard B258, the equivalent AWG sizes were calculated from the diameters. The Belden chart provided the corresponding ampacities. Resistance values for 20°C were calculated using the copper “rho” coefficient, then adjusted to 60°C using an “alpha” coefficient specific to the copper/aluminum mix.

Contact me for further detail if desired.

Recommendations

Perform due diligence before purchasing wire. Determine the ratings for conductor material, insulation type, size in AWG, temperature in °C, voltage, the name of manufacturer, and whether it meets any recognized standards (like UL or SAE). On quality wire, this information is printed on the insulation or jacket. Beware of markings that say “gauge” and not “AWG”. If in doubt, go to the manufacturer’s website to verify ratings.

I recommend selecting copper wire. If using CCA wire, treat its ampacity as if it were all-aluminum wire, unless you know better.

Look for known insulation types. Type GPT is a common automotive primary wire, typically rated 60 VDC and 25 VAC, suitable for 12 VDC and 24 VDC voltage levels. Verify its temperature rating as I've seen 80°C and 105°C versions. Additional known primary wire types include TWP, HDT, GXL, SXL, and TXL. Look online for details.

Beware vendors selling OFC copper wire but post a photo showing it is Audiopipe wire. Audiopipe wire is CCA, not copper, and customer feedback agrees.

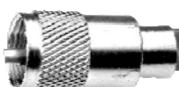
Audiopipe CCA-type wire may be adequate for temporary and portable use as long as the temperature ratings and reduced ampacities are respected. It is not rated as building wire.

Use "speaker cable" with caution. Its quality and ratings are difficult to discern.

Terminals have temperature ratings, typically 60°C unless otherwise identified. Wires connected to 60°C terminals should only be loaded to the 60°C ampacity table values, even if the wire has a higher temperature rating. Fortunately for hams, Anderson Powerpole PP15-45 connectors are rated -20°C to 105°C.

Other vendors may be catching on to private-labeling wire. Distrust and verify ratings before purchasing.

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A new buzz word is word is OFC, meaning Oxygen-Free Copper, a type of all-copper wire. Beware vendors that use it indiscriminately.

If your 12-volt cables under load are too hot to touch (say above 45°C), then the insulation next to the conductor may be exceeding its rating. Consider reducing the load or using larger conductors.

And lastly, avoid “magic smoke”.

The SCRA Book Lending Library ~ Don't Buy it, Borrow it!

The list is growing. Thank to members who have donated their excess reading material. The list as of this month:

Antenna Physics: An Introduction, Robert J. Zavrel, Jr. W7SXj

Adventures in DXing, Nifty E-Z Guide to, Jeffrey A. Cantor, K1ZN

Eliminating Electronic Noise,

EXTRA MANUAL

EXTRA Q&A, Upgrade to Extra Class

The ARRL GENERAL MANUAL

GENERAL Q&A, Upgrade to a General Class

The ARRL Handbook for Radio Communication

The ARRL 2010 edition Handbook for Radio Communication

The ARRL 2016 edition Operating Manual for radio amateurs

The ARRL x2 Propagation and Radio Science, Eric R. Nichols, KL7AJ

The ARRL RFI Book, 3rd Edition

Sonoma County Radio Amateurs ARRL Technician Video Course Companion Notes and Study Course

Work the World With JT65 and JT9, Digital Communication via Amateur Radio, Steve Ford, WB8IMY

Small Antennas for Small Spaces; Project and Advice for Limited-Space Stations

Basic Antennas; Understanding Practical Antennas and Designs, Joel RI Hallas, W1ZR

The Library is available at all SCRA General Meetings, the first Wednesday of each month. Contact Iola KK6HRE,

Next Exam Session: Saturday, April 8, 9:00 am

Our next exam session is scheduled for Saturday, April 8, from 9:00 am until noon. The location will be the Bennett Valley Hall, 4145 Grange Road, 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: 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 Hall is 0.5 miles from Bennett Valley Road on the right

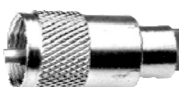
Candidates should bring the following:

- 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, N6IY in advance.

Good Luck!

Brian Torr, N6IY
n6iyy@arrl.net
(707) 575-5871





CONTEST CORNER by Kevin Alt, K6BSG

Hello testers. Lots of contest activity in April. Check out the Japan DX contest or the Worked All Provinces of China contest for high intensity DX, or for something different try the Texas State Parks contest. Happy DX'ing!

1 Apr – LZ Open 40 Meter Contest – CW. See: www.lzopen.com/lzoc40/indexF.htm.

1-2 Apr – PODXS 31 Flavors Contest – Digital, 20 meters. See: www.podxs070.com.

1-2 Apr – Missouri QSO Party – All modes, 80 meters-70 cm. See: www.w0ma.org.

1-2 Apr – Mississippi QSO Party – All modes, 80 meters-70 cm. See: www.arlmiss.org.

1-2 Apr – SP DX Contest – SSB/CW, 160-10 meters. See: spdxcontest.pzk.org.pl.

1-2 Apr – EA RTTY Contest – RTTY, 80-10 meters. See: concurso.ure.es/en/eartty/.

2 Apr – North American SSB Sprint Contest – SSB, 80-20 meters. See: sbsprint.com/rules/.

2 Apr – RSGB RoLo SSB Contest – SSB, 80 meters. See: www.rsgbcc.org/hf/rules/2017/rolo.shtml.

3 Apr – RSGB 80 Meter CW Club Championship – CW, 80 meters. See: www.rsgbcc.org/hf.

4-6 Apr – ARS Spartan Sprint – CW, 80-10 meters. See: arsqrp.blogspot.com/2009/02.

5 Apr – UKEICC 80 Meter Contest – SSB, 80 meters. See: www.ukeicc.com.

6 Apr – NRAU 10 Meter Activity Contest – All modes, 10 meters. See: www.nrau.net/activity-contests.

6 Apr – SARL 80 Meter QSO Party – SSB, 80 meters. See: www.sarl.org.za.

8-9 Apr – JIDX Contest – CW, 160-10 meters. See: www.jidx.org/jidxrule-e.html.

8-9 Apr – OK/OM DX Contest – SSB, 160-10 meters. See: okomdx.crk.cz.

8-9 Apr – QRP ARCI Spring QSO Party – CW, 160-10 meters. See: qrparci.org/.

8-9 Apr – Texas State Parks on the Air – All modes, all bands. See: www.tspota.org/.

8-9 Apr – New Mexico QSO Party – All modes, 160-6 meters. See: www.newmexicoqsoparty.org.

8-9 Apr – Georgia QSO Party – All modes, 160-6 meters. See: www.georgiaqsoparty.org.

8-9 Apr – Yuri Gagarin International DX Contest – CW, 160-10 meters. See: gc.qst.ru/en/section/32.

9 Apr – International Vintage Contest – SSB/CW, 80-40 meters. See: www.contestvintage.beepworld.it/rules-2012.htm.

9 Apr – Hungarian Straight Key Contest – CW, 80 meters. See: hskc.ha8kux.com.

12 Apr – RSGB 80 Meter Club Championship – SSB, 80 meters. See: www.rsgbcc.org/hf.

14-15 Apr – Holyland DX Contest – All modes, 160-10 meters. See: www.iarc.org/iarc/#HolylandContest.

15 Apr – ES Open HF Championship – SSB/CW, 80-40 meters. See: www.erau.ee.

15-16 Apr – Worked All Provinces of China – SSB/CW, 80-10 meters. See: www.mulandxc.org/331.

15-16 Apr – YU DX Contest – CW, 160-10 meters. See: www.yudx.yu1srs.org.rs/2017/INTERNATIONAL_YUDX_HF_CONTEST.pdf.

15-16 Apr – CQ Manchester Mineira DX Test – CW, 80-10 meters. See: www.cqmmdx.com/rules.

15-16 Apr – Michigan QSO Party – SSB/CW, 80-10 meters. See: www.miqp.org/Rules.htm.

15-16 Apr – EA-QRP CW Contest – 80-10 meters. See: www.eaqrp.com/index.php/actividades/concurso?id=195.

15-16 Apr – Ontario QSO Party – Phone/CW, 160-2 meters. See: www.va3cco.com/oqp/rules.htm.

15-16 Apr – North Dakota QSO Party – All modes, 160-2 meters. See: w0nd.com/.

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...Contest Corner continued from page 6

16 Apr – WAB 3.5/7/14 MHz Data Modes – Digital, 80-20 meters. See: wab.intermip.net/Contests.php.

16 Apr – ARRL Rookie Roundup – SSB, 80-6 meters. See: www.arrl.org/rookie-roundup.

17 Apr – Run For the Bacon QRP Contest – CW, 160-10 meters. See: qrptest.com/pigrun/.





17 Apr – **Low Power Spring Sprint** – CW, 160-10 meters. See: www.hornucopia.com/contestcal/lowpowerspringsprint2016.pdf.

17 Apr – **144 MHz Spring Sprint** – All modes, 2 meters. See: sites.google.com/site/springvhfupsprints/home/2017-information.

22 Apr – **QRP to the Field** – SSB/CW, 80-10 meters See: www.zianet.com/qrp/.

22-23 Apr – **UK/EI DX Contest** – CW, 80-10 meters. See: www.ukeicc.com/which-contest/uk-ei-dx-contest-rules.

22-23 Apr – **SP DX RTTY Contest** – 80-10 meters. See: pkrv.org/strona,spdxrttyen.html.

22-23 Apr – **Nebraska QSO Party** – All modes, all bands. See: www.qcwa.org/chapter025-rules-ne-qso-party-2017.pdf.

23 Apr – **BARTG Sprint 75** – Digital, 80-10 meters. See: www.bartg.org.uk.

25 Apr – **222 MHz Spring Sprint** – All modes, 1.4 meters. See: sites.google.com/site/springvhfupsprints.

26 Apr – **UKEICC 80 Meter Contest** – CW, 80 meters. See: www.ukeicc.com.

27 Apr – **RSGB 80 Meter Club Championship** – Digital, 80 meters See: www.rsgbcc.org/hf.

29 Apr – **Feld-Hell Sprint** – Digital, 160-6 meters. See: sites.google.com/site/feldhellclub.

29-30 Apr – **Ten-Ten International Spring Contest** – Digital, 10 meters. See: www.ten-ten.org.

29-30 Apr – **Helvetia Contest** – All modes, 160-10 meters. See: www.uska.ch/wp-content/uploads/2016/11/02-HF_Contest_Rules_2017_English_20161107czf.pdf.

29-30 – **Florida QSO Party** – SSB/CW, 40-10 meters. See: www.floridaqsoparty.org/rules.html.

For additional contest calendars and resources check: WA7BNM Contest Calendar
ARRL Contests Page

HAM HUMOR

I was walking past the mental hospital the other day with my trusty HT by my side, and all the patients were shouting, '13....13....13'... Could it be that they were trying to get me on CB channel 13?

The fence was too high to see over, but being the typical curious ham, I saw a little gap in the planks and looked through to see what was going on....

Some one poked me in the eye with a stick.
Then they all started shouting '14....14....14'...

Duane N6DMR

International DX Convention 2017

Dear DXers,

I would like to extend a personal invitation to you and Members of your Club to attend the International DX Convention 2017 in Visalia, California on April 21-22-23, 2017.

IDXC 2017 will be our 68th annual International DX Convention. DXers from around the world will gather once again to meet their fellow DXers, attend interesting and informative programs, see the latest in new products from the top vendors – and have a chance to win some great raffle prizes! This year Friday, April 21, 2017 will be a full day of training, presentations and vendor exhibits.

Full details of IDXC 2017 are at this website: <http://www.dxconvention.com/>

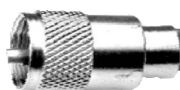
You can download the IDXC 2017 PR Kit here: <http://www.dxconvention.com/files/idxc2017-prkit.zip>

The IDXC 2017 PR Kit contains:

- An IDXC 2017 Flyer that you can include in your Club newsletter and post at your DX gathering place.
- A short IDXC 2017 PPT slide show you can use for your Club meeting
- An IDXC 2017 color advertisement that you can include in your Club newsletter
- A Visalia Vacation Options brochure - Visalia is just a few hours from world-class California vacation destinations, and we encourage all our DXing friends to combine their visit to IDXC with a vacation.

Thank you, and I hope to see you and many of your Club members at our International DX Convention next April!

- 73 and good DX de Mike, K6MKF, IDXC 2017 Committee





December 15, 2016

Dear Amateur Radio & DX Enthusiast,

Are you waiting to see how Dayton does in its new home, but still want to meet and mingle with all your DX friends? Are you saving money for yet another tower, rig or amp? Then Join us next year for a fun event: The 68th International DX Convention in Visalia, CA., April 21 – 23, 2017!

IDXC 2017 is sponsored by the Northern California DX Club at the beautiful Visalia Convention Center in downtown Visalia, CA. IDXC is the premier DX Convention in the United States, and is attended by hundreds of serious DXers and Contesters looking to improve their skills, upgrade their stations and spend some quality hands-on time with the vendors' latest equipment offerings. If you're interested in getting involved in DXing, this a great place to start!

Convention Highlights:

- We've added a day!
- Onsite Registration begins on Thursday afternoon, April 20, 2017 at 3:00 PM local time
- Convention is now a full 2.5 Days: Friday (April 21); Saturday (April 22); 1/2 day Sunday (April 23)
- 15-20 DX & Technical Seminars now on both Friday & Saturday
- Excellent Keynote Speakers
- 35-40 Exhibitors in large Exhibit Hall offering all the latest gear Friday and Saturday
- ARRL QSL Card Checking
- Great Raffle Prizes
- Open DX Forum; Contest Forum; ARRL Forum; YL Forum
- Optional training on Friday : Contest Academy - Basic & Advanced Contesting Techniques
- Eyeball QSOs with your DXing friends, or make some new ones!
- Optional Friday Dinners: Top Band Banquet or IOTA Banquet or Contest Banquet
- Optional Saturday Visalia Tour
- IDXC Registration is now open!
- For more information and to register, visit our website at: dxconvention.org

IDXC 2017 will be the biggest and the best International DX Convention yet, and we hope you'll be able to join us to enjoy it all!

73,

John Miller, K6MM
 Rich Seifert, KE1B
 Kevin Rowett, K6TD
 IDXC 2017 Co-Chairmen





SONOMA COUNTY RADIO AMATEURS CLUB
Membership Meeting Minutes

March 1, 2017

The March 2017 regular Membership meeting of SCRA was called to order by President Iola Beckley KK6HRE at 7:15 PM.

A quorum of members was present. After introduction of officers and directors, four guests were introduced: Gabriel KJ6AZU, Alan KE6IDU, Jeff KM6Y, Tom K6TJP.

The minutes of the February 2017 membership meeting were discussed. Charlie KZ6T, indicated his name and call sign needs to be corrected. The minutes were approved with corrections on motion by Dave W6IBC, seconded by John KE5RI.

Net Control Assignments for March 2017:

March 7: Matt, KJ6LJI
March 14: Joe, K6AWA
March 21: John, KE5RI
March 28: Brian, N6IYY
April 4: Iola, KK6HRE

Program Chair John KE5RI, made a suggestion to conduct the weekly net by the roll call method. Each Net Control Operator will have the prerogative to conduct the roll call as they like as long as the Net Script is followed as written.

This month's program was entitled: **Solar Battery and DC Emergency Power presented** by Joe K6AWA and Aaron KK6ZDB. Joe K6AWA discussed the composition of the lithium iron phosphate battery. It is the safest battery to use. He recommended to use a minimum of 35 amp hour battery for an event. Research what the minimum amp hour voltage is required by your ham radio. The trick is to *always* use the least amount of power. You should have your main fuse next to the positive battery terminal. You should fuse to your wire size and amperage with good quality wire. You use 156% wire size for solar panels. Shorai has the best battery. Learn how to make and use power poles. The best solar panel to buy is a polycrystalline panel. DX Engineering and Mighty Fine Junk magazines have a lot of good information.

President Iola KK6HRE began the business meeting. **Treasurer Aaron KK6ZDB** reported gain of \$342.36 as a result of membership renewals and sold merchandise. **Activity Chair, Laura AG6PE**, is planning a club trip to the Maritime Museum. Laura suggested two dates for this

Activity and asked members to sign up and indicate which date they would prefer.

Education Chair Dave W6IBC, passed around a signup sheet for the class "Assembling and Operating Your Ham Station" to be held from 9am-12pm, Mar 25, 2017 at the American Red Cross, Santa Rosa CA.

Repeater Committee Jack K6ROW, reported that the WINLINK and the IRLP systems are not functioning at this time.

Emergency Services Chair Pat KG6JSL reported that the "Basics of Emergency Class on Messaging" class held in February 2017 was a great success. He hopes to present Phase II of the class sometime in April 2017. The class will be put in the Short Skip and the SCRA Weekly Blog.

Membership Chair Karen KK6GJW reported we have 132 current members and 44 non-renewals.

DX Team Doug KF6LMB reminded the club about Ocean Cove DX Expedition from Aug 18-20, 2017.

VE Testing Chair Brian N6IYY reported the next open testing session will be April 8, 2017.

Community Outreach Chair Darryl KI6MSP had no report.

Field Day Brian N6IYY reports: We would like a 3A station with an emphasis on having a digital station.

Radio Loaner Program Chair Joe K6AWA as a top of the line HF radio to loan out. A member inquired about having a DMR radio to loan out. It was recommended that individuals interested in DMR should get together and work out the details. Additionally, the Radio Loaner program now has an Antenna Analyzer to loan.

Unfinished Business:

Treasurer Aaron KK6ZDB presented the 2017 Proposed Budget for approval. Dave W6IBC made the motion, Darryl KI6msp seconded to approve the budget. Motion carried.

With no further business, the meeting was adjourned at 9:13 PM.

Respectfully Submitted,

Kathy Wells, K6KDW

Secretary





Minutes SCRA Board of Directors Meeting March 8, 2017

The March 8 2017 Board of Directors regular meeting was called to order by President Iola KK6HRE at 6:00 PM at IHOP restaurant, 2745 4th Street, Santa Rosa CA. SCRA Board members present included President Iola KK6HRE, Vice President Joe K6AWA, Treasurer Aaron KK6ZDB, Secretary Kathy K6KDW, Director John KE5RI, and Past President Pat KG6JSL. A quorum of Officers and Directors were present. Other SCRA members in attendance included, Brian N6IYY, Doug KF6LMB, Steve KK6VMZ, Jeff KI6PBF, Bill KM6BYD, Charlie KZ6T, David K6DWR, Dan KK6VIQ, Darryl K6MSP, and Mike AD6YB. Absent was Director Laura AG6PE.

Minutes of the February 2017 Board Meeting were approved as corrected on motion by John KE5RI, and seconded by Pat KG6JSL. Motion carried.

Under Officer and Director Reports, Aaron KK6ZDB reported we are well within our budget for this year.

Committee Reports and Business:

Education Committee Chair Dave W6IBC submitted his comments that 4 students have signed up for the March 17-19, 2017 Technician License class and 10 members signed up for Assembling and Operating Your Ham Station on Saturday, March 25, 2017 from 9am to 12 pm at the American Red Cross building.

Emergency Services Chair Pat KG6SL will present a follow-up Interactive Messaging Class from 9AM to 12 PM on April 22, 2017 at the Santa Rosa EOC.

Merchandise Committee Chair Dan KK6VIQ presented samples of new embroidered t-shirts for club members. The cost would be approximately \$12.00 per shirt. It was suggested that the shirts should be available in two colors, blue and khaki. It was also suggested that the old t-shirts be sold at a discount. The cost of the shirts was within the \$1,200 budget.

Community Outreach Chair Darryl presented that Cedar Creek Ham Radio Club is providing "Ham Radio for Dummies" book to schools and libraries. He would like the club to purchase two books to be provided to libraries at Brookhaven and Geyserville Middle schools. It was suggested the librarians track the use of the books. Charlie KZ6T will donate his book. A Pilot Program will be developed to check the feasibility of providing this book to the schools and library's that will accept them.

Programs Committee John KE5RI reported that Darryl K6MSB will present a program on ARISS (Amateur Radio and International Space Station) for the April 2017 Club meeting. Brian N6IYY will present a program for the May

2017 Club meeting.

Roster Editor Bill KM6BYD, solicited comments concerning the revised membership listing.

Website Chair Dave KI6UGB, submitted his comments that he is trimming the website users to only include 2017 club members. He is getting assistance from GoDaddy to get the officer forwarding address working. He is looking into the change requests for the PayPal items. He solicited input on changes for the website home page.

Refreshment Chair John WB6FRZ purchased a 1.7 liter warming pitcher to replace the broken pitcher. He will submit a receipt of \$20 for reimbursement.

Radio Loanout Program Manager Joe K6AWA reported the Antenna Analyzer and HF radio are loaned out. Joe requested that someone donate a simple HF radio. He also requested that a signal report be provided for each Net Control check-in.

Field Day Committee Chair Brian N6IYY reported the Club is in the final stages of our Field Day application. He was required to pay a non-refundable \$25 registration and he will give a receipt to the Treasurer. There is also a \$100 deposit and \$305 rental fee due in March 2017. There will be a Field Day Planning Meeting 7 – 11am on March 11, 2017 at the Youth Community Park. The \$100 deposit is refundable.

Unfinished Business: Mike AD6YB has received several inventory reports and has prepared a consolidated inventory listing.

President Iola KK6HRE has set up a Book Lending Library. Anyone can donate HAM related books to the library. She received a 2010 and a 2016 ARRL Handbook along with the ARRL Operating Manual for Radio Amateurs.

Treasurer Aaron KK6ZDB received information from Exchange Bank concerning online access.

Program Chair John KE5RI, would like to use a standardized list for Net Control that could be passed onto the next Net Control. The Net Control will decide which method to use.

New Business: President Iola KK6HRE signed the Luther Burbank contract.

With no further business, the meeting was adjourned at 7:40 PM.

Respectfully submitted,

Kathy Wells K6KDW
Secretary





Field Day – It's More Than Just a Good Idea

When the ARRL proclaimed the first "International Field Day" in 1933, the purpose given was: "Besides offering an opportunity to get out in the open in this fine spring weather, the real object of this contest is to test "portables" wherever they may be available. If successful we want to make it an annual affair."

Since the first Field Day was held the weekend of June 10 & 11, it was technically spring. Nowadays, it is always the fourth full weekend in June, which guarantees it will be summer. It doesn't always guarantee dry weather, as we discovered a few years ago, but it IS summer.

As a means of testing "portables", it certainly did. A great deal was learned about the typical robustness (or lack thereof) of "portable" equipment of the day.

And as for making it an annual affair, mission accomplished!

In the subsequent Field Days, hams have continued to learn how well their portable equipment (which thankfully is now far more portable than the rigs used back in 1933) operates in emergency-like conditions, away from a power grid and all the comforts of home.

Which brings us to Field Day 2017, which this year will be the weekend of June 24 and 25. We've had our first Field Day Planning Meeting and our next will be Saturday, April 8th, at 1pm, at the Field Day site, Youth Community Park, 1725 Fulton Road, Santa Rosa (across the road from Piner High School). If you are interested in any aspect of Field Day, please join us. Bring your own chair.

We still have several volunteer positions that need to get filled. Check out the Field Day website for details (<http://sonomacountyradioamateurs.com/wp/events/field-day/>). You don't have to be a seasoned ham to be eligible. This is an event for all hams, regardless of skill level, to learn how to setup and operate HF and VHF stations in the field.

There will also be an Educational Activity on Saturday, June 25, at 2pm. We have not yet settled on what this activity will be, so if you have any suggestions, please let me know.

This year, we will be dedicating one station to operating digital modes. We will also have one station each dedicated to CW, SSB, VHF/UHF, and GOTA.

What's "GOTA"? GOTA stands for "Get OnThe Air". It is an opportunity to introduce new hams, or even non-hams, to operating on the HF bands. Hams that have been licensed for several years, but have been generally inactive on HF are also eligible to participate.

There will also be a barbeque dinner Saturday evening, starting around 5:30pm,

This year we are also hoping to staff a "Tech Bench" where hams can come and get some help on things such as how to install Anderson Power Poles, simple radio checks, and mobile antenna installation checks. If you think you could help in this area, please let me know.

We will also be attempting to power at least two stations from solar power.

This will be a pretty packed weekend. If you are looking to learn something, anything, about amateur radio, this will be the weekend to do it.

If you can make it to our next planning meeting on Saturday, April 8 at 1pm, wonderful. If you can't make it, please send me an e-mail with any suggestions you may have or how you think you can help.

Let's make Field Day 2017 even better than last year!

Brian Torr, N6IY
Tel: (707) 575-5871
n6iyy@arrl.net

2017 SCHEDULE OF EVENTS

Check the [Club website](#) for details

Sat Apr 8 - VE Testing
Sat Apr 15 - Lake Sonoma 50
Apr 17-23? - ARISS Contact
Sat Apr 22 - Advanced Disaster Messaging Class
Sat Apr 29 - VOMARC Hamfest - Non-SCRA event
Sat May 6 - Wine Country Century
Sat May 6 - Human Race
Sat May 13 - IRONMAN 70.3 Half Triathlon
Sun Jun 4 - Monte Rio Vineman
Sat Jun 10 - VE Testing
Sat Jun 17 - Terrible Two
Sat/Sun Jun 17/18? - Hot Air Balloon Classic
Sun Jun 18 - ARRL Kids Day
F/S/S Jun 23-25 FIELD DAY
F/S/S Jul 14-16 - Technician Licensing Class
Sat Jul 29 - IRONMAN Full Triathlon
Sat Aug 5 - Sonoma County Fair Demonstrations
Sat Aug 12 - Sonoma County Fair Demonstrations
Sun Aug 13 - Tour D'Organics
F/S/S Aug 18-20 DXing Campout/North Am QSO Party
Sat Aug 26 - VE Testing
F/S/S Sep 1-3 - SOCO Homage Day (?)
Sat/Sun Sept 23-24 - Waves to Wine
Sat Sep 30 - Levi's Gran Fondo
Sat Oct 14 - VE Testing
Oct 16-20? School Roundup
Sat Oct 21 - Jamboree on the Air (JOTA)
Sat Oct 28 - North Bay Science Discovery Day
F/S/S Nov 17-19 - Technician Licensing Class
Sat Dec 2 - VE Testing



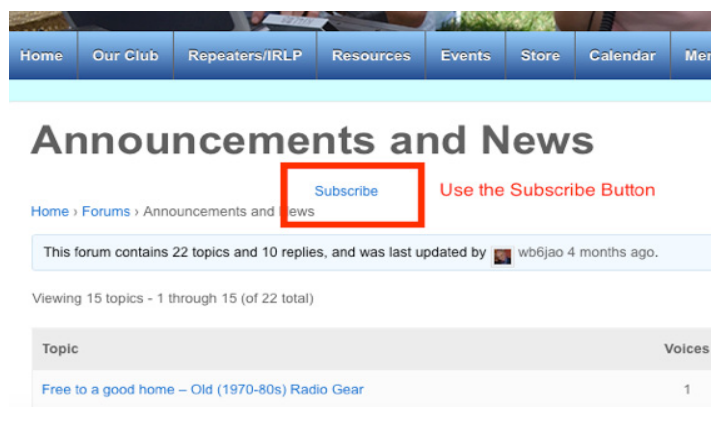


SCRA Website Forum

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,

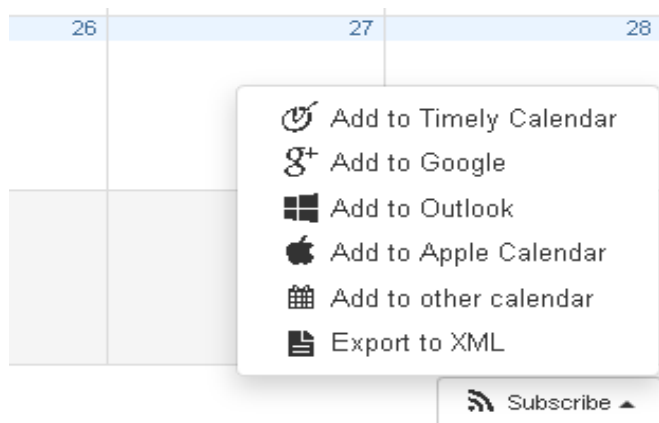
- Navigate to the SCRA website,
- Log in as a member
- Click on Member Area, then [Forums](#)

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.



How to Subscribe to the SCRA Calendar

Subscribe to the SCRA calendar and automatically import event dates into your electronic calendar(s). Go to the calendar page on the SCRA website and click the Subscribe button in the corner. Select the type of calendar you want to subscribe to. You will be taken to your sign-in page to finish adding the subscription.



If You Can't Stick it Through the Wall, You Can Put it Through the Window

In one of his lectures on antennas, Joe K6AWA described how to build an insert for a window sill to pass through antenna bulkhead connections without drilling holes in the wall.

Now MFJ Enterprises is marketing several versions of this insert for those who can't or don't want to build their own. The MFJ-4601 is pictured below. The [MFJ-460x](#) series offers several versions of this device with a variety of connectors. It sits in the window sill either horizontally or vertically to seal the window from the weather while providing connection to your outside antennae. Distributors can be found [here](#).



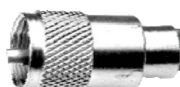
MFJ-4601



MFJ-4602

<iframe width="560" height="315" src="https://www.youtube.com/embed/qzXfcpVI7Og" frameborder="0" allowfullscreen></iframe>

Click the link above for YouTube demo of the installation process.



Driving and Radio Operation

Many of us have not been clear regarding California's driving and talking on the radio.

This is an article from the ARRL on the current information, on the issue.

Darryl
KI6MSP

From article on arrrl.org...

ARRL Weighs In on New California 'Driving While Wireless' Statute 03/14/2017

ARRL is recommending that Amateur Radio be specifically excluded from a California statute prohibiting the use of "wireless communication devices" while driving. ARRL Southwestern Division Vice Director Marty Woll, N6VI, is taking point on the effort to revise the statute, known by its legislative bill number AB 1785. It was signed into law last September, and it took effect on January 1, amending §23123.5 of the state's Vehicle Code.

"ARRL has received a huge volume of inquiries and complaints about this statute in particular, since its enactment," ARRL General Counsel Chris Imlay, W3KD, wrote in a letter to Woll to provide guidance in amending the California statute. "I would urge that you present this letter at any meetings you have with California State legislators on this topic, thus to bring the issues contained herein to their attention." [...more...](#)

AN ARDUINO BASED "HAM CLOCK"

I have started experimenting with microprocessors and microcontrollers, the most popular being Raspberry Pi (a single board computer) and Arduino (a microcontroller). I decided to tackle a small project that would help me learn how they work and what they might do for ham radio (and other) uses.

I have an engineering background, both hardware and software, so I figured I could tackle this. I spent some time searching the web

and reading a few books about these two micro devices.

I first built a Raspberry Pi project that would measure the amount of moisture in the ground, a request from my son so he could track how much water his avocado tree needed. (He is in Burbank so he has ideal growing conditions for avocados.) Then I tackled a video monitor project so I could see how our cat is doing while we are on vacation. I can now monitor his comings and goings through our cat door using the Internet and Dropbox while we are out in our RV.

I have also been studying what I might do that would be ham related. After hearing a club meeting discussion about the importance of identifying your call sign every ten minutes, even on a cross band repeater, I decided to work on a project related to that. First, I decided to make a clock and timer. I wanted a clock that would display both Pacific and Universal time, and would also have a 10 minute timer. This project is Arduino based and includes a "Real Time Clock" (RTC) which maintains the time whether or not the power to the Arduino is on or off, thanks to its crystal controlled timer and battery.



My Ham Clock shows the UTC (GMT) and Pacific times on the first two lines of an LCD display and the clock automatically adjusts for Daylight Savings Time. And when we recently went to PDT, I verified that the programming works!

Continued on page 17...

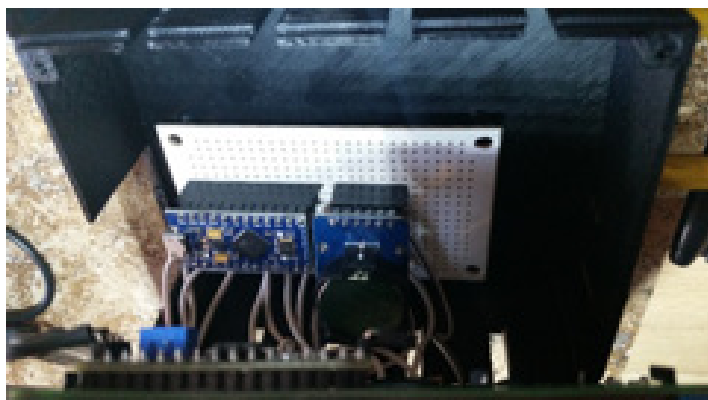


...Ham Clock continued from page 16

The Ham Clock also includes a way to set the time and date if that becomes needed, like when the RTC battery is changed. Two buttons allow you to select which digit of the time or date you want to change and to advance the digits. A third button allows you to start the ten minute timer. When there is one minute left, a red LED lights up. You can see in this photo that there is 9:16 left in the ten minute timed period.

I learned that there is a large and growing library of program modules that do much of the work for you, and I “only” needed to use a small bit of software to “wire” the functions together. I developed the program on my laptop and downloaded it to the Arduino, and worked through the inevitable bugs until I had a working system. (The Raspberry Pi runs a full blown operating system, a Linux variation, so no other computer is needed.)

My son has access to a 3D printer, so I found a case for a similar project that I modified to hold my Ham Clock, as you can see in the photo above, and got him to print it for me.



Here is a photo of the inside of the case, including the Arduino Pro Micro and the RTC. The Ham Clock is powered by 5 volts from the common phone or tablet charger or power source.

Next, I will tackle the project to build a timer that will identify my transmitter via Morse Code when used by my cross band repeater. I would also like to explore using a Raspberry Pi or Arduino for digital modes and for encoding and decoding Morse Code.

Let me know if you are interested in hearing

more about Raspberry Pi and Arduino projects or perhaps having a workshop about them.

--Bill Dornbush KM6BYD

LAKE SONOMA 50

The next event on the Public Service line-up is the Lake Sonoma 50 race for runners. For more information on the radio side of things and to sign-up, visit the SCRA website [here](#).

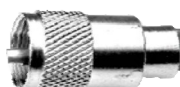
From the event website:

Welcome to the Lake Sonoma 50! The race will start at 6:30 a.m. on Saturday, April 15.

The race is held on the rugged trails at Lake Sonoma, about 10 miles northwest of Healdsburg. The course is 86% single track and 9% dirt roads, with the first 2.4 miles on a paved country road.

There will be a pre-race dinner at Spoonbar Restaurant in Healdsburg on Friday, April 14 and a post-race private wine tasting at Wilson Winery on Sunday, April 16. Runners will receive details via an evite a couple of weeks prior to the race.

Bib numbers have now been assigned. You will be able to pick up your bib number at Healdsburg Running Company, 333 Center Street, on Thursday or Friday; at the pre-race dinner; or at the start from 5:30 a.m. on Saturday. [More...](#)



MEET DAVID HARRISON W6IBC



I was brought into amateur radio by my Explorer Scout Leader, Oscar Lund K6ACD (sk) in 1956, and also by my uncle, Paul Harrison K6EMR (sk). My first 'ticket' was obtained in January 1957. I joined SCRA in December 2002 upon permanently relocating from the SF Peninsula to Sonoma County.

My special interests in amateur radio have become teaching others, and designing and home brewing ham gear. My wife, Joy KI6ASJ is also a licensed ham radio operator and a member of SCRA. We enjoy participating in public service events together as a team.

My radio shack contains an ICOM IC-756PRO III and IC-7200. VHF/UHF: Yaesu FTM400D Fusion plus a number of handhelds; QRP: Elecraft KX3, Yaesu FT-819; and a Tentec Argonaut VI.

SCRA provides a community of like-minded people who find personal satisfaction by volunteering their time and efforts to serve the public interest and to advance ham radio and their own radio skills. There is something in Amateur Radio for everyone at SCRA.

Submitted by Iola kk6hre



MEET AARON KK6ZDB



I've always been interested in RF, ever since my father exposed me to what a spectrum analyzer can do, at a young age. Not to say I understood it, but the seed was planted. Also, I became interested in Morse code after reading various books that discussed CW (not the main topic). However, it wasn't until recently that I could invest time into pursuit of this hobby.

I was first licensed in late 2015. I took the Tech class that Dave (W6IBC) chairs the teaching efforts for. I joined SCRA in December of 2015, right after the FCC posted my call sign. And now I am on the teaching staff with Dave and others.

My interest is mostly in portable operations and CW. However, I've invested most of my time in setting up more-permanent equipment at my shack. It is all to learn and gain experience for portable operations. With regards to CW, that is going to be a journey not a destination.

My wife, Kelly, is not a HAM, although I am trying to convince her that she should at least get her Tech license.

My shack consists of Three antennas, 40-20-10m fan dipole, 84' mostly horizontal random wire, and a 60 – 6m QRP portable loop. A replacement for my fan dipole is in the works. For the transceiver I have an Elecraft KX3 (160 – 2m) and a 100W amplifier. I also have a mobile radio in my vehicle and a HT.

What do I most enjoy about SCRA? I enjoy the diversity of interests expressed within the hobby. We have CW mentors and classes, teaching to help people get their tech-ticket (I am a teacher), camping that I can expose my children to the hobby outdoors, and Field Day. The hard part for me is picking a few areas to focus on.

NOTE: Aaron now serves on the Board of Directors as the Treasurer.



Sonoma County Radio Amateurs, Inc.
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

FAMILY MEMBERS, CALL SIGNS & EMAIL ADDRESSES:

1. Name _____ Callsign _____ License Class _____ Add to Roster (Yes)___ (No) ___
E-mail _____ Short Skip & Roster to my E-mail address ()YES! () NO
2. Name _____ Callsign _____ License Class _____ Add to Roster (Yes)___ (No) ___
E-mail _____ Short Skip & Roster to my E-mail address ()YES! () NO
3. Name _____ Callsign _____ License Class _____ Add to Roster (Yes)___ (No) ___
E-mail _____ Short Skip & Roster to my E-mail address ()YES! () NO
4. Name _____ Callsign _____ License Class _____ Add to Roster (Yes)___ (No) ___
E-mail _____ Short Skip & Roster to my E-mail address ()YES! () NO

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

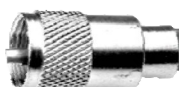
SCRA DUES: Individual \$20, Family \$30, Youth, under 18, \$15 + _____
Name Badge (complete info below) \$10 each Circle: Magnet or Clip attachment + _____

Name Badge Information Fill in exactly as you want it to appear on your badge.
Callsign _____ First Name _____ City _____
Callsign _____ First Name _____ City _____
Callsign _____ First Name _____ City _____

SCRA Patch \$5/ea + _____
SCRA T-Shirt \$11.50/ea Size: s m l xl xxl + _____

Total: \$ _____

(Please make checks payable to SCRA. Send to SCRA, Box 116, Santa Rosa, 95402)





HAM RADIO OUTLET

WWW.HAMRADIO.COM

MULTI-STORE BUYING POWER!

ICOM



IC-7600
All Mode Transceiver



IC-7200
HF Transceiver



IC-7100
All Mode Transceiver



ID-5100A Deluxe
VHF/UHF Dual Band Digital Transceiver



ID-51A Plus
VHF/UHF Dual Band Transceiver

KENWOOD



TS-590SG
HF/50MHz Transceiver



TM-D710G
2M/440 Dualband



TM-V71A
2M/440 DualBand



TM-281A
2 Mtr Mobile



TH-D74A
2M/220/440 HT

YAESU
The radio



FT-991A
HF/VHF/UHF Transceiver



FTDX1200
100W HF + 6M Transceiver



FT-450D
A100W HF + 6M Transceiver



FTM-400XD
2M/440 Mobile



FT-60R
2M/440 5W HT



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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.

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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

