

Volume 40, Number 5 PRESIDENT'S MESSAGE MAY 2

PRESIDENT'S MESSAGE, MAY 2015



Public Service season got off to a good start with two events around Lake Sonoma in April. Bikers and runners seem to like torturing themselves on that course and our radio support enabled the event directors to follow and manage both events as well as provide medical assistance when necessary. Ham radio at its finest and a good time was had by all.

May is a busy month with 3 Public Service events. Wine Country Century is the first weekend in May and we again provide management and safety support. This is a big event by our major benefactor and is worthy of all we can do. The Human Race fundraiser is May 9 with Sutter, KI6ZON, as Comm Boss. This is an excellent entry level event with minimal equipment requirements for anyone interested in getting involved in Public Service. The Vineman Triathalon, featuring Darryl, KI6MSP, as Comm Boss, is the 31st starting in Monte Rio with various radio challenges and is good fun.

The Yaesu digital repeater has arrived and the Repeater Committee is working on it. They will be installing and testing the assembly over the next few weeks in various configurations. The Committee will be keeping the membership informed of what is happening through the Weekly Blog so there are no surprises and you do not think something is wrong if things have changed.

We have also received the two FT1DR digital/analog HTs for Committee and member use. If anyone wants to try digital to see if they want to spend the money, the HTs can be loaned to members to try out. Contact Charlie, KZ6T, kz6t@arrl.net Besides our system, the AECS repeater, 146.79, negative offset, PL 88.5, is running on dual mode, digital and analog, on VHF. The Repeater Committee would like to hear about your experiences on digital to help them find the best set up for our system.

With radio summer fast upon us, there should be something fun for everyone. Keep in touch by visiting the

Club website at http://sonomacountyradioamateurs.com

The Committees are also going to begin giving notice of their meetings, either in Short Skip or the Weekly Blog. Everyone is invited to attend committee meetings and is an excellent way to get involved in your area of interest. It really is the Committees that get things done for the Club and they have our thanks for all they do and deserve your support.

Pat, KG6JSL

## This Month's Meeting Program: EmComm Opportunities and Go-Kits

One of the key values amateurs provide is our ability to provide communications in times of emergency. We have several organizations in our area that are specifically for that purpose. Learn a little about the focus of each of these organizations. While their basic missions are (not surprisingly) almost identical, their differences may cause you to prefer to join one or the other.

One common thread you will see throughout all EmComm organizations is the emphasis on being prepared for an emergency. One of the elements of this preparedness is to keep a "Go-Kit" handy to be able to respond to an emergency. We'll discuss what should a Go-Kit include.

I will show you my Go-Kit (admittedly, still a work-in-progress). If you've started your Go-Kit, bring it and show us what it contains. Seeing what others have done will help you identify where you might improve yours. And hopefully this will inspire those that do not yet have a Go-Kit to start putting one together.

See you at the May meeting!

73, Brian Torr, N6IIY

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

# 2015 Club Officers

President	Patrick Coyle coylaw@sonic.net	KG6JSL
Vice President Treasurer Secretary Director	Brian Torr Mike Von der Porten Iola Beckley Joe Fortuna Jeff Tonelli	N6IIY AD6YB KK6HRE K6AWA KI6PBF
Past President	Charlie Sikes	KZ6T

# **Committee Lineup/Contacts**

Activities ARES Liaison DX/Contest Education Emergency Services	Darryl Paule, KI6MSP Brian Torr, N6IIY Kevin Alt, K6BSG Dave Harrison, W6IBC Brian Torr, N6IIY	ki6msp@arrl.net n6iiy@arrl.net kalt@ieee.org w6ibc@arrl.net n6iiy@arrl.net
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Refreshments	Robert Jones, WA6NIV	wa6niv@arrl.net
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# **Tuesday Night Net**

Remember to check in to the SCRA net each Tuesday evening on the 147.315+(PL 88.5) repeater at 7:00 PM. Announcements are made of upcoming SCRA and other amateur radio activities in the broadcast.

# Short Skip Advertising Rates

Business Cards 1st Quarter Column Each Additional Quarter Column Full page (one side) Pre-printed inserts (each) \$12 per month \$13 per month \$4 per month \$35 per month \$35 per month

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The club normally meets the first Wednesday of each month at 7:00 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**

Second Wednesday of the month, 6:00 PM at IHOP Restaurant 2745 4th Street Flamingo One Stop Shopping Center Santa Rosa, CA 95405 No Host Dinner begins at 5:30 PM. Members get a 15% discount on meals.

# **Commitee Meetings**

May meetings are TBA. Check SCRA blogs for announcements.



May 2015 📕

# 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

# **Education Report**

SCRA will hold its second Technician Licensing class on July 11th and 12th in Santa Rosa. Anyone interested in obtaining the entry level amateur radio license should contact me directly for more information. If you know of anyone who might be interested in obtaining a license, please provide me with their contact information or refer them to the SCRA website (select "Classes" under the "Events" tab).

We continue to offer mentoring on an individual basis for anyone interested in upgrading their license class. Let us know you are interested in upgrading.

## **Build Day Report**

Education and Activities committees hosted a very successful build day on Saturday April 11th in my garage in Windsor. Participants included Iola KK6HRE, John WB6FRZ, Darryl KI6MSP, Doug KF6LMB, Brian N6IIY, Henry KI6VKL, Arlen Thienes, Fred AE6SF, Pat KG6JSL, Keith KK6TAX, Charlie KZ6T. A variety of very interesting antenna, radio, and power supply testing, repair, and construction projects were addressed. Charlie KZ6T demonstrated the Club's computerized satellite tracking antenna positioner system presently undergoing construction and check-out.

Many thanks to mentors John WB6FRZ and Brian N6IIY for helping make this a successful club activity. We plan to hold a second SCRA Build Day later this year.

Dave W6IBC SCRA Education Chair w6ibc@arrl.net 707-838-8155 **2015 MINI-DX** By Doug Payne, KF6LMB

Darryl Paule, KI6MSP, Activities Chairman, has asked me to assist him in setting up the Mini DX for this year. Preliminary groundwork has been put in place. The event will be August 13, 14, 15, and leave on the 16th, at the A.W. Way county park west of Garberville. That will be Thursday, Friday, Saturday and leave on Sunday, but come anytime that works for you.

In past years this seems to meet our requirements for group camping, and setting up remote radio stations. This will be in conjunction with the North American QSO party, and will enhance the contact probability. A positive response to this event has been received from many club members and their significant others. It just doesn't get better than friends, food, and HF Radio in the wild. All are invited, and your involvement is encouraged.

Contact Doug, KF6LMB, at dougpayne1@earthlink.net for information and signup.

## **Times LMR 400 Cable**

We just had a group buy of 1000 feet of this for \$.50/foot delivered to some happy hams. The best I found on-line was \$.89/foot BEFORE taxes and shipping. I've gotten requests for more, but I can only buy 1000 foot reels and I don't have 1000 feet of orders. If there's interest I'll try to get another reel. I'm not sure I can get \$.50/foot again and I'll try, but certainly no more than \$.70/foot. If you are interested, send me an email (K6ROW@sonic.net) with your requested amount (100 foot intervals only) and maximum price you're willing to pay.

Jack, K6ROW



# **CONTEST CORNER by Kevin Alt, K6BSG**

Hello contesters. Usual assortment of CW sprints and state QSO parties this month. Big contest is the CQ WW CW contest over the last weekend of the month. Happy DX'ing!

1 May and weekly – NCCC RTTY Sprint – RTTY, 160-20 meters. See: <u>www.ncccsprint.</u> <u>com/rttyns.html.</u>

1 May and weekly – NCCC Sprint Ladder – CW, 160-6 meters. See: <u>www.ncccsprint.com/</u> <u>rules.html</u>.

1 May – AGCW QRP Party – CW, 80-40 meters. See: <u>www.agcw.org</u>.

2 May – Microwave Spring Sprint – all modes, 902 MHz and above. See: <u>http://sites.google.</u> <u>com/site/springvhfupsprints/home/2015-in-</u> <u>formation</u>.

2-3 May – 2GHz and Up Contest – all modes, 2.4 GHz and up. See: <u>www.ham-radio.com/</u><u>sbms</u>.

2-3 May – 10-10 International Spring Contest – CW, 10 meters. See: <u>www.ten-ten.org</u>.

2-3 May – SBMS 2.3 GHz and Up Contest – All modes, 2.3 GHz+. See: <u>www.n6nb.com/sbms-</u> <u>rules.htm</u>.

2-3 May – ARI International DX Contest – all modes, 160-10 meters. See: <u>www.ari.it</u>.

2-3 May – 7th Area QSO Party – all modes, 160-2 meters. See: <u>http://ws7n.net/7QP/new/</u> <u>Page.asp?content=rules</u>. 2-3 May – Indiana QSO Party – Phone/CW, 160-10 meters. See: <u>www.hdxcc.org/inqp/</u> <u>rules.html</u>.

2-3 May – Delaware QSO Party – all modes, 160-2 meters. See: <u>www.fsarc.org/qsoparty/</u> <u>rules.htm</u>.

2-3 May – New England QSO Party – all modes, 80-10 meters. See: <u>www.neqp.org/</u><u>rules.html</u>.

4 May – RSGB 80m Club Championship – SSB, 80 meters. See: <u>www.rsgbcc.org/hf/rules/2015/</u> <u>r80mcc.shtml</u>.

4-5 May – MIE 33 Contest – SSB/CW, all bands. See: <u>www.ztv.ne.jp/isoda/33/</u> <u>annual/38/38rule-e.html</u>.

5 May – ARS Spartan Sprint – CW, 80-10 meters. See: <u>www.arsqrp.blogspot.com</u>.

6-7 May and weekly – CWops Mini-CWT Test – CW, 160-10 meters. See: <u>www.cwops.org/</u> <u>cwt.html</u>.

7 May – NRAU 10m Activity Contest – all modes, 10 meters. See: <u>www.nrau.net</u>.

9 May – FISTS Spring Sprint – CW, 80-10 meters. See: <u>http://fistsna.org/operating.</u> <u>html#sprints</u>.

9-10 May – Volta WW RTTY Contest – RTTY, 80-10 meters. See: <u>www.contestvolta.com</u>.

9-10 May – CQ-M International DX Contest – SSB/CW, 160-10 meters. See: <u>www.cq-m.ru/</u> <u>en/rules.html</u>. *continued on page 5...* 



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Contest Corner, continued from page 4...

9-10 May – F9AA Cup – PSK, 80-2 meters. See: <u>www.site.urc.asso.fr/urchaut-6/om-6</u>.

9-10 May – SKCC Weekend Sprintathon – CW, 160-6 meters. See: <u>www.skccgroup.com</u>.

9-10 May – 50 MHz Spring Sprint – all modes, 6 meters. See: <u>http://sites.google.com/site/</u> <u>springvhfupsprints/home/2015-information</u>.

9-10 May – Portuguese Navy Day – SSB/CW, 80-10 meters. See: <u>www.nra.pt</u>.

13 May – RSGB 80m Club Championship – Digital, 80 meters. See: <u>www.rsgbcc.org/hf/</u> <u>rules/2015/r80mcc.shtml</u>.

16-17 May – His Majesty King of Spain Contest – CW, 160-10 meters. See: <u>http://concursos.ure.es/en/</u>.

16-17 May – Feld Hell Sprint – Digital, 160-6 meters. See: <u>http://sites.google.com/site/feld-hellclub/Home/contests/sprints</u>.

17 May – WAB 7 MHz Phone – SSB, 40 meters. See: <u>http://wab.intermip.net/Contests.php</u>.

18 May – Run for the Bacon QRP Contest – CW, 160-10 meters. See: <u>http://fpqrp.org/pig-run/</u>.

21 May – RSGB 80m Club Championship – CW, 80 meters. See: <u>www.rsgbcc.org/hf/</u> <u>rules/2015/r80mcc.shtml</u>.

23-24 May – EU PSK DX Contest – PSK, 80-10 meters. See: <u>www.eupsk.com/eupskdx</u>.

16-17 May – Baltic Contest – Phone/CW, 80 meters. See: <u>http://www.lrsf.lt/bcontest/eng-</u> <u>lish/rules\_html.htm</u>.

27 May – UKEICC 80m Contest – SSB, 80 meters. See: <u>www.ukeicc.com</u>.

30-31 May – CQ WW WPX Contest – CW, 160-10 meters. See: <u>www.cqwpx.com/rules.</u> <u>htm</u>.

31 May – SARL Digital Contest – Digital, 80-20 meters. See: <u>www.sarl.org.za</u>.

31 May – QRP ARCI Hootowl Sprint – CW, 80-10 meters. See: <u>www.qrparci.org</u>.

# **BAOFENG USERS**

The Inland Empire Radio Amateurs of Spokane, WA, has excellent instructions on how to manually program your Baofeng UV5RA dual band radio. Their site is http://www.vhfclub.org/ Click banner to download the instructions in .pdf format.





# **2015 SCHEDULE OF EVENTS**

Check the **Club website** for details

May 9: Human Race May 16: VE Open Session May 31: Vineman Triathalon June 20: Terrible Two June 27: Field Day July18-19: Mendocino Rally July 25: County Fair Radio Demonstration August 1: County Fair Radio Demonstration August 8: Annadel Cross Country August 9: Tour d' Organics August 13-16: Mini-DX August 14-16: Technician License Class August 22: Hot August Build Class August 23: Santa Rosa Marathon September 12: VE Open Session September 19: SCRA Pi September 26-27: Wave to Wine Wings over Wine Country Air Show October 3: Levi's Gran Fondo October 17: Jamboree on the Air October 24: North Bay Science Fair November 20-22: Technician License Class December 2: Club Holiday Party December 5: VE Open Session



Yaesu System Fusion Introduction On YouTube: https://youtu.be/tNjgHUhhMmA

Repeaters

Mav 2015

As authorized by the members, the Repeater Committee is upgrading English Hill to include a Yaesu DR-1X Fusion Digital repeater which operates in either FM or C4FM digital format. When the project is completed, the repeater will operate on UHF and offer WIRES-X as an option. IRLP will continue to be offered, but we are not certain whether it will be permanently on UHF, VHF, or perhaps a remote base.

On Sunday, 4/25, the DR-1X repeater was installed and is operating on UHF. The SCRA UHF frequencies and PL are unchanged. For digital communication, the DCS code is 023. The DR-1X will automatically respond in either FM or digital depending on the format used by the connecting radio, so radios that access the current UHF repeater can access the DR-1X with no change. If the repeater is operating in the digital mode, the digital sound on an FM radio sounds like noise. If you are using a FM only radio to access the UHF digital repeater, you may wish to enable both tone encode and tone decode with a PL of 88.5 to eliminate this.

We have also received the two FT1DR digital/analog HTs for Committee and member use. If a member wants to try digital to see if they want to invest in a digital radio, an HT can be loaned to a member to try out. Contact Charlie, KZ6T, kz6t@arrl.net. In addition to our digital system, the AECS DR-1X Fusion repeater on 146.79, negative offset, PL 88.5, is running dual mode, C4FM digital and analog and is open for use. The Repeater Committee would like to hear about your experiences on digital and with the new repeater to help find the best set up for our system. Send your comments to K6ROW@arrl.net.

At the current time IRLP and WIRES-X are not operating. Repeater status will be updated on President Pat's weekly blog.

Jack, K6ROW



# **REPEATER PROCEDURES**

Many operators are not waiting for the Repeater to "drop" before beginning their transmission.

When an operator's transmission ends, the repeater will be quiet for a second and then "beep." It is transmitting a carrier signal during this time. The "beep" (courtesy tone) is the signal that the Repeater has finished transmitting and the next transmission should not begin until the "beep" is heard. You can also watch the S meter and/or the Rx light on your radio to see if the Repeater has stopped transmitting. If a transmission begins before the "beep" the Repeater's automatic Time Out Timer (TOT) is activated and may shut down the repeater if too many transmissions are made without a break. Doing so also increases the Repeater's duty cycle and heating.

Please remember to pause a second after keying your transmitter before you begin speaking to allow the Repeater to begin transmitting. If you begin speaking immediately on your key up, the repeater will miss the first few syllables spoken and they will not be heard by the receiving station.

Also do not "kerchunk" the repeater, that is, keying and unkeying your rig without speaking. If you just want to check that you are reaching the repeater by listening for the courtesy tone, just say your call sign and "Radio Check." If you want to check the quality of your signal, say your call sign and "Signal Check Please." Repeat the request a couple of times if at first no one replies. Failure to identify may indicate interference, willful or otherwise, from some source, and is poor amateur practice.



# Next VE Session: Saturday, May 16, 9:00 am

Our next VE exam session is scheduled for Saturday, May 16, from 9:00 am until noon. The location will be the Bennett Valley Grange 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 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, N6IIY in advance.

Good Luck!

Brian Torr, N6IIY n6iiy@arrl.net (707) 575-5871



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# S.C.R.A GENERAL MEMBERSHIP MEET-ING April 1, 2015

The April 1, 2015 regular meeting of the Sonoma County Radio Amateur Club was called to order at 7:01pm by President, Pat Coyle KG6JSL. All Board Members were present. Bill Hart, son of member John Hart, KG6BHI was a guest of his dad. There were no new members present.

**PROGRAM:** Craig, K6XLT, Public Service Chairman presented a power point presentation on what public service involves. "An opportunity to have some fun, provide communications for non-profit and other public benefit groups, and practice using your radio. Most groups use bicycles that go where cell phones don't. We work foot races through off-road car races and fundraisers to competitive events; all of which can range from simple to complex. We provide communications at a reasonable cost (free!) We bring good communications. We work foot races through off-road car races and fund-raisers to competitive events; all of which can range from simple to complex.

What do you get out of it? We get a chance to help community groups; practice forming sentences and passing verbal messages with fellow hams. We also get to practice handling emergency traffic; opportunities to test equipment in real world conditions, in the field, off the grid and get to see some of the most beautiful parts of Sonoma County.

What makes a good operator? Learn what you can about the event before you volunteer. Read the Comm Boss's Operation Plan. Don't be afraid to make a mistake. Think about what you're going to say before you hit the PTT. Know how to program your radio. Bring what you will need!

Upcoming events = SoNoMas, Lake Sonoma; Wine Country Century; Human Race; Terrible Two; Levi's Gran Fondo – 7500 riders, 40 hams on two nets. **BREAK** - 7:50 – 8:10pm

# **BUSINESS MEETING:**

**APPROVAL OF MINUTES:** Corrections to minutes or the March, 2015 meeting: AD6JB AD6YB; KB6FRZ WB6FRZ; Bryan, N7IIY Brian, N6IIY; qualifing qualifying; Fision Fusion; Jeff KI6PBF Jack, K6ROW; April. March; AD6JB AD6YB. General question pool tests on March 28th and ALL level tests was corrected to read "On March 28th all levels of exams will be administered at the VE session at the First American Title company. Be aware that the General class question pool questions change on July 1st." Jack K6ROW moved to correct a discrepancy in the minutes that omitted a recommendation the Repeater Committee had made. After some discussion, Jack K6ROW withdrew his motion with the intent to bring the topic up under New Business.

Motion moved and seconded to approve the minutes as corrected.

ANNOUNCEMENTS, NEW CALLS AND UP-GRADES, LIES AND BRAGS

- Doug KF6LMB was able to reach Serbia, Italy. The Italian station had \$10,000 worth of antennas and I have a little wire.
- Kathy KK6KGW BRAG. Brought several pieces of equipment and might be calling one of you to mentor her on how to use the new equipment.
- VOMARC, Valley of the Moon Amateur Radio Club, will hold an amateur radio swap meet, breakfast on April 25th at the Sonoma Vet's Building, across from the Sonoma Police Department. Details on website.
- Salvation Army is buying a new emergency vehicle and will be displaying it at Manly Motors – Wayne KK6WRR

# **COMMITTEE REPORTS:**

Short Skip - Show Us Your Shack pictures. Send to Dave, SS Editor. Dave@kraybill.org
Repeater. Jack reports that they Lost IP addresses.
Should have IRLP. Repeater is in the mail.
Activities – Darryl KI6MSP, still has not gotten hold of the guy for the trip to USS Hornet. Radio demonstration for Family Life Expo. Sign up on the website. Dave is opening up his garage for a Work Day. There are a couple of spots open.

**Education:** Successful Tech Class 9 out of 10 passed. Encourages Extra class to volunteer to help teach these classes. Consider moving up in class; encourage members to be mentors; there are questions on line and study materials. Be careful about buying books on line as they may be out of date. **Build Day on April 18th at 9am.** 

**Volunteer Examiners** – Brian N6IIY. Another upcoming session on May 16th and is open to all walk-ins. Field Day. Brian N6IIY. The Field Day Committee had its first meeting last Saturday (March 28th. Decisions were made about what and how many stations. More



volunteers are needed for Band Coordinator and Volunteer Coordinator. Most everything else pretty much covered. He will make sure that the sprinklers are off for the weekend, 4th full weekend in June.

# **OLD BUSINESS**

1. John WB6FRZ had some really old, old business. Years ago SCRA & REDX Petaluma club held competitions with a plaque that was passed back and forth. Discussion of where this plaque might be. John KE5RI will look around but thinks it is long gone!

2. Jack K6ROW moved, Craig K6XLT seconded, that "the SCRA membership directs the Board of Directors to authorize the Repeater Committee to move IRLP between SCRA repeaters as the Repeater Committee determines to be in the best interest of SCRA, providing the Repeater Committee gives the Board of Directors and the membership advance notice of its decision to move IRLP between repeaters and the reason underlying the Committee decision". Extensive discussion was held.

John KE5RI called point of order to stop the discussion and call for the vote. (32 members present – 20 votes for – motion failed for lack of a 2/3 vote).

Mike AD6YB acknowledged the Repeater Committee's work on several difficult disciplines. He thanked the Committee for coming forth to clarify that IRLP adjustments are under the Committee's purview. Mike recommended a yes vote on the motion.

John KE5RI called for the vote on the original motion. Motion passed.

NEW BUSINESS: None.

TECH Q AND A: None.

**NET CONTROL:** April 7: Iola KK6HRE; April 14: Joe K6AWA; April 21: Fred AE6SF; April 28: Keith AG6CI; May 5: Brian N6IIY.

**ADJOURN:** Iola KK6HRE motioned, Darryl KI6MSP seconded. Meeting was adjourned at 9:15 pm.

Respectfully submitted:

Iola Beckley, Secretary KK6HRE HF Tuner Kit---Review

By Dave Harrison W6IBC SCRA Mentoring Chair

Time was when ham radio kits were a "dime a dozen" and offered a virtually unlimited range of choices and capabilities to the aspiring kit builder. (I grew up in ham radio by constructing at least a dozen Heathkit amateur radio appliances, including receivers and the ubiquitous DX-40 HF transmitter (it was tube-based, crystal controlled, and used grid modulation for its AM phone mode).

Times have changed, and today the ham radio kit builder has more of a challenge in finding suitable kit offerings that actually require stuffing components into printed circuit boards and soldering, etc. Micro-power CW transmitters are available, but kits for rigs and accessories for higher power operation are sparse.

One kit I recently built is the MFJ 941-EK Versatuner II. This is a full kit with only several assembled subassemblies including two pre-wound toroid transformers. All of the individual components arrived in several plastic bags inside the clamshell tuner housing. The first order of business was to download and print out the Tuner Kit Instruction Manual from the MFJ website www.mfj.com. With the instruction manual in hand I verified that all of the components listed in the manual actually arrived. I use cupcake baking pans to separate parts to aid in the inventory, and then later provide ready access during assembly.

The first order of business is to assemble the printed circuit board (PCB), and that process is well explained and went forward readily, taking about an hour. Photo 1 is a picture of the completed PCB before installation into the lower half of the tuner housing ("chassis"). (You'll appreciate that the PCB includes legends and holes for additional components that are not installed. MFJ uses this board for several of its HF Versatuner models, and the 941-EK has most but not all of the features associated with the Versatuner II product line.)





Photo 1 (Completed PCB before mounting to chassis)

The next series of tasks include mounting the PCB to the chassis floor. Rear panel components, such as the four SO-239 coax connectors, the grounding post, and three terminals needed for long-wire and balanced feedline antenna system arrangements are installed and connected to the large bus wires already mounted to the PCB. (The power jack to power the Power/SWR meter lamp was previously installed on the PCB, and is accessible via an opening in the rear panel).

The toroidal balun transformer is then mounted to the floor of the chassis and connected to the two upper red terminals on the real panel. The Power/SWR meter is then installed with a wedge-shaped plastic bracket mounted to the floor of the chassis. The bracket effectively pushes against, and thereby holds, the meter in place in its opening in the front panel of the tuner. Six small wires extending from the assembled PCB are then connected to the Power/SWR meter terminals, along with three small ceramic RF bypass capacitors.

The pre-made tuning inductor coil sub-assembly includes a big air-wound inductor and a 12-position tap switch, with wires already connected between switch contact terminals and tap locations on the coil. Two ground lugs soldered to the lowest winding of the coil align with holes in the chassis floor and enable the coil to be mounted securely in place after the switch is fitted with insulated washers and positioned in its designated opening of the front panel. An outer fiber washer and hardware then secures the switch to the front panel. The two tuning capacitors are then mounted to the front panel, using the same arrangement of fiber insulation washers and hex nuts.

With the coil subassembly and tuning capacitors in place, bus wires are connected to complete the construction of the tuner. Knobs and buttons are then installed on the capacitors, coil tap switch and pushbutton switches. Positioning of the PCB relative to the chassis may be adjusted to eliminate any binding or sticking of the two plastic switch buttons. Photo 2 is a picture of the completed tuner kit.



Photo 2 (Completion of tuner kit assembly)

All of the wiring connections are now verified with an Ohm meter. Then, the Power/SWR meter is calibrated on the 300 watt and 30 watt switchable power settings, I used my Icom IC-756ProIII transceiver operating at selected CW power levels on 14.200 MHz, a Bird Wattmeter with a HF slug, and a dry dummy load as seen in Photo 3. This procedure involved adjusting the four potentiometers mounted on the PCB for both forward power, and reflected SWR readings for each tuner power range (0-30 watts and 0-300 watts).



The STEM Program



Photo 3 (Calibration of Power/SWR meter)

The calibration setup shown in Photo 3 is only one of several possible calibration setups that the kit builder can employ. By the time I reached the calibration steps, I had invested about 5 hours over several days in kit assembly and checkout. Calibration and checkout of all features proceeded in short order. The kit is relatively simple and very straightforward to assemble. The components appear to be of high quality and are backed by the MFJ 12 month warranty of material and workmanship.

The MFJ Versatuner II is a very well known and widely used manual antenna tuner for high frequency operations throughout the world. It has worked very well in my station. If you would like to build this \$129.95 kit, I strongly suggest you download and study the 941-EK Tuner Kit Instruction Manual from MFJ's website before you decide to purchase this product. If you decide to build this versatile tuner, and find you need help with assembly or calibration, please contact the SCRA mentoring committee and we'll be more than happy to help you with your project. The final result should be very satisfying and add a modern and versatile HF tuner accessory to your ham shack. Another part of amateur radio is the STEM program. STEM, what is that and how does it tie into amateur radio? STEM: is Science Technology Engineering Math.

I got interested in the STEM program after watching this video. This video is about a 16year old young lady in high school in Vancouver BC. She developed a new way to power a flashlight. She did the entire STEM program in developing this flashlight.

From there I realized that here is an opportunity to have this type of program for the students of the schools, here in Sonoma County.

I started researching the STEM program on the ARRL website, Amateur radio in the classroom. In doing further research, and talking with Debra Johnson K1DMJ, ARRL education manager I found a lot of information the Teachers Institute on Wireless technology. http://www.arrl.org/ education-technology-program, as well as other information on the ARRL website.

I'm now teaching at Santa Rosa Middle school; Brook Haven, in Sebastopol, La Tercera, in Petaluma, and a program at The Children's Museum.

I teach learning about circuit components, beginning soldering, building LED kits, radio telescopes, crystal radios and electric motors.

I've had donations from: SCRA, Cheap Smog, and Sebastopol Hardware for tools and parts projects.

Aaron Shreve, the teacher I work with at Brook Haven, took the technician class a month ago and is KK6TAQ. Debbie Hanks, principal at Brook Haven will probably be in the July Technician class. I also have student and his mom from the Children's Museum that are looking at the July class also.

An additional program that is being considered adding to the STEM classes is: British Astronaut Tim Peake <u>http:// www.nationalstemcentre.org.uk/timpeake</u>. This link is to Tim's blog. Of the many links in Tim's blog here is a link Mission X. Train to be an astronaut. <u>http://www.nationalstemcentre.org.uk/elibrary/resource/7111/mission-x-trainlike-an-astronaut</u>

If you want to know more about the STEM program or to work with me my email is ki6msp@arrl.net or call me at 707-544-8874

73 Darryl KI6MSP



# **SHOW US YOUR SHACK**







Pat. KG6JSL. From left, Icom 746 Pro with Yaesu 8800 on top, Icom 8500.



I have an Icom IC-718 on the bottom which I use on hf for ssb and psk31. On top of that is an Icom IC-706 which I use for 2 meters. On the right is a Yaesu FT-60 ht.

Cornell, WA6HMN



I have a Yaesu FT7800 on top and an ICOM 706G for HF. There are also 2 Baofeng hts. The operators were extra (KK6HQX and KK6HQY). Dave KI6UGB



# Field Day is Just Around the Corner!!

ALERT!! Field Day is just under two months away and there is still a lot to be done! The big event begins at around 5pm on Friday, June 26 and ending around 3pm on Sunday, June 28. The location will be the same as last year, Youth Community Park (aka Skateboard Park) at 1725 Fulton Rd, in Santa Rosa, across the road from Piner High School.

We've only managed to squeeze in one planning session so far, but we did make some good decisions at that meeting. For example:

• Station locations will be slightly different from last year. The new locations will reduce "audio interference" from the other stations.

• We are planning for two SSB stations, not just one – But we need operators for these stations!

• We have added some new key positions that need to be filled. See below for more details

• Station captains have been assigned

• We will attempt to network the logging computers

## **Station Captains**

Our Station Captains this year are as follows:

• SSB – Dennis Colthurst, KI6REO

• CW – Frank Oddy, NQ6E and John Breckenridge, WB6FRZ

- Get-On-The-Air (GOTA) Joe Fortuna, K6AWA
- VHF/UHF/Satellite Bob Arthur, KG6ZDN

Please contact the appropriate station captains if you would like to reserve an operating spot.

## **Two New Positions Need Filling:**

To help expedite operations, we have added two new positions which still need filling:

• Band Coordinator – This person will recommend the best bands to operate at various times during the event. This person should be familiar with current propagation conditions.

• Volunteers Coordinator – This person will be given lists of tasks to be performed during setup and teardown and will assign volunteers to those tasks. Most tasks will take less than 15 minutes to complete.

# **Educational Activity**

The Educational Activity will take place at 2pm on Saturday, June 27. The activity will be building a 2m

ground plane antenna. It's designed for quick deployment, so it is a good choice for public service and emergency work. Compact enough for a go-kit. Prototypes have been built and look good. Thanks to John Breckenridge, WB6FRZ, for his ingenuity and energy in putting this together!

So, I want to hear from YOU if one or more of the following apply:

• You are interested in being the Band Coordinator or Volunteers Coordinator

• You would like to volunteer for Field Day. Even if it's only for an hour or two, every little bit helps.

• You have suggestions, any suggestions, regarding Field Day.

• You are curious to know more about Field Day

• You have equipment or ideas that could be put to use on Field Day

## **Next Planning Meeting**

I had hoped to have another planning meeting before the end of April, but due to a family emergency, that did not happen. Please look for our next meeting in May.

# TH-6 Antenna Maintenance and Assembly Practice Session

On Saturday, June 13, at 9am, we will meet at Doug Payne, KF6LMB's QTH to perform some maintenance to our venerable TH-6 tri-band beam. We will also practice assembling and disassembling the antenna, so that we can learn how to do this quickly and efficiently on Field Day.

Let's make Field Day 2015 the best one yet!

Brian Torr, N6IIY Tel: (707) 575-5871 n6iiy@arrl.net



May 2015

#### R Ε B N G $\bigcirc$

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**BURBANK, CA** 1525 W. Magnolia Bl., 91506 (818) 842-1786 (877) 892-1748 Eric, K6EJC, Mgr. Magnolia between S. Victory & Buena Vista burbank@hamradio.com

OAKLAND, CA 2210 Livingston St., 94606 (510) 534-5757 (877) 892-1745 Nick, AK6DX, Mgr. I-880 at 23rd Ave. ramp oakland@hamradio.com

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SUNNYVALE. CA 510 Lawrence Exp. #102 94085 (408) 736-9496 (877) 892-1749 Jon, K6WV, Mgr So. from Hwy. 101 sunnyvale@hamradio.com

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• 100W HF. 6M. 2M • 50W 70CM • 10W 1.2GHz w/ opt UT-20 module • Built-in TNC, DX packet cluster • IF Stage DSP • Backlit front key panel



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· Digital voice recorder

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• 100W HF/6m Transceiver, gen cov. receiver • Dual DSP 32 bit • Three roofing filters- 3. 6. 15khz • 5.8 in WQVGA TFT display • Hi-res real time spectrum scope



#### IC-V8000 2M Mobile Transceiver

• 75 watts • Dynamic Memory Scan (DMS) • CTCSS/DCS encode/decode w/tone scan • Weather alert • Weather channel scan • 200 alphanumeric memories



• D-STAR DV mode operation • DR (D-STAR repeator) mode • Free software download • GPS A mode for easy D-PRS operation • One touch reply button (DV mode) Wideband receiver D-STAR ready





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• 100 Watt HF/6 Meters • Large and wide color LCD display • High Speed Spectrum Scope built-in • 32 bit high speed DSP /Down Conversion 1st IF



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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)

May 2015

# 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, dave@kraybill.org, or for general questions and /or suggestions, k6son@arrl.net

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