

Battery Thoughts

By Paul Christensen WA6TIL

"Providing battery power to equipment is a function of what it is used for, where it is located, and what connectors are available. Most equipment can accept external power; the down side is the need for cables with specific connectors and the correct voltage. Where you have a choice, standardize on equipment that can run from the same voltages and connectors. Consider current rating, size, and durability when selecting connectors. Which connector to use can be a subject by itself.

Rechargable batteries are economical for day-today operations, and are environmentally friendly, but consider:

1. Equipment in operation that is also charging batteries dissipates additional heat, which can degrade performance.

2. Nickel based rechargables tolerate deep discharging well. Lead based rechargables can be adversely affected by deep discharging. Auto batteries may be affected if discharged below 75% of their total capacity.

3. Battery packs that supply 12 volts may not fully charge from a car outlet even with the engine running because of diodes or other voltage drops within the pack.

4. All batteries self-discharge over time. Nickel rechargables tend to discharge faster (1 percent per day) so you can't just charge them up, and forget them.

5. Over charging is detrimental to most rechargable batteries, Some chargers prevent overcharging and some rechargable batteries are more tolerant of overcharging (NiHm). Lithium based batteries have special needs for safe recharging.

6. Remember that using a couple of rechargable packs just postpones the eventual need for external power, whether by recharging or by directly running from an alternate source. Multiple rechargable packs can compound battery maintenance issues as well as be a useful tool.

7. Batteries have internal resistance and the total amount of usable energy is less at higher current draws.

8. Low temperature typically reduces the available battery power.

9. Nickel and Lithium batteries typically can supply more current for a given size than Alkaline or Lead

10. Alkaline Rechargables seem to be able to supply less current than a comparable sized Alkaline disposable.

Equipment that can accept both rechargable and disposable AA or D batteries can be quite useful be

Continued on page 2...



# Battery Thoughts continued from page 2...

cause many agencies (private and public) stock these sizes of alkaline batteries. The Nickel based rechargables provide a slightly lower overall voltage and are used for day-to-day operation. A stock of disposables (because of their long shelf life) can be kept nearby in case an emergency runs longer than your rechargables do."

There are many possible sources of battery power. A flashlight, tape recorder, or other battery-holding piece of equipment may be modifiable to provide power. This has the added benefit of having equipment that does double duty. Broken equipment may provide the parts for a power supply..... W6WWW modified a broken electric drill handle to provide an ICOM HT with 9.6 volts from a Makita rechargable battery, while I to get power from a modified Maglite.

There is also the time honored method of building from scratch. Battery holders comes in different shapes and sizes. An eight cell AA holder makes a very compact 12 volt supply using alkalines, a ten cell AA holder is available for making 12 volts with Nickel based batteries.

Consider how to power each item of equipment based upon how you will likely be operating. A Shadow has different needs than a Mobile OR Portable station. Also consider the battery needs for personal pagers, test equipment, hearing aids, etc.

Consider the range of power each piece of equipment will tolerate. Some RF power amps shut down at about 10 volts, some will continue at lower total output when input voltage drops as low as 6 volts. An ICOM 706 mobile that I use will distort audio when powered from a car outlet if the engine is off.

In an emergency, supplies may consist of what you have 'in-hand'. When caught with limited power resources consider these aspects:

1. Keep the cell phone off and use a radio or pager to alert you when someone wishes to call in to you. Most cell phones will still transmit covertly while in standby. This is the reason they are banned in some RF sensitive environments.

2. When using packet or other forms of digital communications that require a computer having limited operational time, use a packet MAIL indicator, paging, or voice contact, to determine when the computer needs to be activated.

3. Use the minimum amount of RF power that is reasonable, perhaps even relaying through a station that is not strapped for power.

4. Use a HT rather than a mobile to monitor. The mobile can be activated for actual contact if the HT is not strong enough.

5. Be conscious of keeping transmissions short. Rather than saying the message at handwriting speed, use bursts of 3 words then drop carrier while the receiving station is writing it down. This is good practice in any event as it has the added benefit of giving more room for emergency break-in.

6. Audio uses power. Lower the volume and/or use earphones.

7. For low light conditions, LEDs can be used for lighting. A two cell mini MagLite will operate continuously for days if the bulb is replaced with a small high efficiency LED. A new "white" LED (blue tint) is available that makes the high efficiency yellow look dim.

8. Let others know of your needs. There may be a mobile passing through that is carrying more than enough power to share.

Paul Christensen, a long standing member of ARES and RACES, can be reached via wa6til@amsat.org.

# 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 <u>http://www.arrl.org/membership/</u>



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



.....

#### February 2016

#### PRESIDENT'S MESSAGE ~ February, 2016



After getting off to a slow start things picked up after the first of the year. Several things happened in January that has set the pace for the remainder of the year; The Planning Meeting on January 9th with 22 members attending. Calendars were set for 2016 Activities, Programs, Public Service Events with a few excep-

tions being held out for further review. Coffee and donuts were served in AM with lunch of pizza and salad was served by Shelley KK6JXM and Iola KK6HRE. The 2016 budget was reviewed and submitted for board discussion and approval at the January 13th Board Meeting with modification.

We have all committee chairs full, with Steve Bouchard KK6VMX filling in the Activities Chair ~ thank you, Steve! Now it is your turn to step up and offer your services on a committee of your choice. No organization will continue to grow or even exist without the help of all members.

Some of the 'Streamlining' that has been accomplished are:

~ Put Member Meeting Programs back to Activities as stated in the By Laws.

~ Combined Emergency Communications and ARES Liaison together into one committee, EmComm & ARES/ACS/AECS Liaison.

~ Combined DXing and DX Contesting into the HF Team.

~ Took Membership responsibilities from the Treasurer and put it with the new Membership Committee. New Member Letters to the President for the time being.

~ Established a new Membership Committee with a committee of three with more to come.

~ Moved all decisions and control of all Public Service Events to new chairman.

~ Rearranged Membership Meeting to allow for more social time for members to enjoy.

Not bad for the first month! If you have any comments, you can direct them to me.

One thing I keep hearing about the Club is that we are heavy on the Technician side. Not true. I took the time and went through our roster where each member's license status is listed. My informal search shows that we are very much neck and neck with all three levels. We have 47 Technicians, 49 Generals, 45 Extras, and 3 "A" classifications (Active), a class that is an old level similar to the General classification. My personal feeling is that we couldn't be more evenly distributed. That also tells me that we have to have equal levels of programs and classes to serve all the members. This will be a priority. Any suggestion??

CORRECTION: I announced at the January meeting that the membership dues are payable through the end of March. WRONG!! The membership dues are due by January 31st. Since I made this error, and I am the one doing the Roster, we expect all membership renewals by February 15th. The new roster will be sent to all members who have email addresses in pdf format. You will be able to print out as many copies as you need to tuck away in your 'to go' bags, on your desk, in your vehicle(s). A limited amount of hard copy rosters will be available for those members who do not have internet connection, or simply cannot open pdf files. We will talk about this briefly at the February meeting. 73,

Iola KK6HRE SCRA President

# FEBRUARY MEETING PROGRAM

#### **Emergency Power Services**

Joe Fortuna

## Community Outreach

First of all I want to congratulate Steve Bouchard, KK6VMZ as the new Activities Chairman. Steve will do an excellent job is thisnew assignment for him. I'm stepping back from the activities chair so I can focus on the public out reach.

The first event for February is the School Roundup http://www.arrl.org/school-club-roundup

Family life Magazine's Camp fair

<u>http://www.sonomafamilylife.com/camp-fair/camp-fair-live</u> is April 1st.

I'll post the other events on the club calendar. Also check the weekly blog and net for updates. If you'd like to work any of these events with me, or have questions, you can reach me at: ki6msp@gmail.com

Darryl KI6MSP ki6msp@gmail.com 707 544-8874



F

Februarv 2016

# 2015 Club Officers

President	lola Beckley	KK6HRE
Vice President	Brian Torr	N6IIY
Secretary	Dave Harrison	W6IBC
Treasurer	Wells Wagner	KK6EXC
Director	Joe Fortuna	K6AWA
Past President	<u>ShelleyRae O'Connor</u> <u>Patrick Coyle</u>	KK6JXM KG6JSL

# **Committee Lineup/Contacts**

Activities	Open	
Community Outreach	Darryl Paule, KI6MSP	ki6msp@arrl.net
DX/Contesting	Doug Payne, do KF6LMB	pugpayne1@earthlink.net
Education	Dave Harrison, W6IBC	w6ibc@arrl.net
Emergency Services Liason	Pat Coyle, KG6JSL	coylaw@sonic.net
Field Day	Brian Torr, N6IIY	n6iiy@arrl.net
License Trustee	John Felton, KE5RI	jrfke5ri@aol.com
Media	Sutter Laird, KI6ZON	ki6zon@me.com
Membership	ShelleyRae O'Connor, KK6JXM	kk6jxm@cpr4biz.com
Merchandise	Kathy Wells, KK6KGW	bikeladyofconcord@gmail.com
Public Service	Charlie Sikes, KZ6T	kz6t@arrl.net
Refreshments	ShelleyRae O'Connor, KK6JXM	kk6jxm@cpr4biz.com
Repeater	Jack Christensen, K6RO	W K6ROW@sonic.net
VE Testing	Brian Torr, N6IIY	n6iiy@arrl.net

# Short Skip & Web Staff

Editor	David Kraybill, Kl6UGB	shortskipeditor@gmail.com
Webmaster Database Manager	Sutter Laird, KI6ZON Mike Von der Porten, AD6YB	ki6zon@me.com mikevpca@aim.com

SCRA E-Mail SCRA Web site

K6SON@arrl.com http://www.sonomacountyradioamateurs.com

# 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

Short Skip is published monthly and copyright 2015 by the Sonoma County Radio Amateurs, Inc. Permission to reprint articles is granted provided the source is properly credited. Items printed do not necessarily represent the views of the SCRA or its editors. Letters, photos and articles sent to Short Skip are subject to editing and may or may not be printed.



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**

Second Wednesday of the month, 6:00 PM at Union Hotel 80 Mission Blvd. Santa Rosa, CA 95405 No Host Dinner begins at 5:00 PM.

PLEASE NOTE: Venue for the Board of Directors Meeting to change periodically. Watch Short Skip, Pat's weekly Blog of Reminders, and listen to the Tuesday night nets for location, or call Iola @ 538-2931.



# SCRA LOANER RADIOS

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

# UPGRADE TO GENERAL OR AMATEUR EXTRA CLASS

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



John, WB6FRZ, has his Morse Code training net immediately following the Service Net, on the Club Repeater



# 10 Meter Net

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

# **2016 SCHEDULE OF EVENTS**

Check the Club website for details

- Feb 8-12 ARRL School Roundup Sat, March 12 - VE Testing Fri, April 1 - Family Life Magazine Camping Expo Sat, April 2 - SoNoMas Sat, April 9 - Lake Sonoma 50 Sat, May 7 - Wine Country Century Sat, May 7 - Human Race Sat, May 21 - Tour d'California. Club may not be sponsoring Sun, May 22 - Monte Rio Vineman Sat, June 4 - VE Testing Sat, June 18 - ARRL Kids Day Sat, June 18 - Terrible Two Fri, Sat, and Sun, June 25-26 - Field Day Sat/Sun July 16-17 Mendocino Rally Not a Club Sponsored Event July 22 - August 7 - County Fair Saturday, August 13 - Annadel XC Sun August 14 - Tour d'Organics
- Sunday, August 21 Santa Rosa Marathon
- Sat, August 27 VE Testing
- Sat/Sun Sept 24-25 Waves to Wine
- Sat Oct 1 Levi's Gran Fondo
- Sat Oct 15 Jamboree on the Air (JOTA)
- Sat Oct 29 North Bay Science Discovery Day
- Sat, November 12 VE Testing

PCAM dependent upon independent insurance coverage

# Items for sale.

1 Drake 2-C Rcceiver

1 Heathkit HW100 Transceiver with speaker (Heathkit SB600)

- 1 ElectroVoice microphone (model 638)
- 1 Shure microphone omnidirectional (model 533SAC)
- 1 Shure microphone unidirectional (model 585SAC)
- 6 misc Heathkit items which I don't know what they are: Electronic Keyer (model HD 1410) Power supply (model HM 2102)
  - Power supply (model HM 102)

  - Hybrid phone patch (model HD 15)
- Code oscillator (no model # listed)
- Amplifier (model HA 201A)
- 1 Hallicrafters receiver (model S-108)

Contact: allen testa <lospark2@gmail.com>



# CONTEST CORNER by Kevin Alt, K6BSG

Hello contesters. Lots of contest activity in Februrary. It is one of the busiest months of the year for contesting. Highlights include the ARRL International DX CW Contest and for a vist to the early days of ham radio, the AM QSO party. Happy DX'ing!

1 Feb – RSGB 80 Meter Club Championship – SSB, 80 meters. See: <u>www.rsgbcc.org/hf/</u>.

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

3 Feb – UKEICC 80 Meter Contest – SSB, 80 meters. See: <u>www.ukeicc.com</u>.

5-7 Feb – YLRL YL-OM Contest – all modes, all bands. See: <u>ylrl.org/index.php</u>.

6 Feb – Triathlon DX Contest – all modes, 80-10 meters. See: <u>triathlon-dx-contest.gr</u>.

6 Feb – FYBO Winter QRP Sprint – all modes, 160-10 meters. See: <u>www.azscqrpions.org</u>.

6 Feb – Minnesota QSO Party – all modes, 160-10 meters. See: <u>www.w0aa.org</u>.

6 Feb – AGCW Straight Key Party – CW, 80 meters. See: <u>www.agcw.org/index.php/en</u>.

6 Feb – FISTS Winter Slow Speed Sprint – CW, 80-10 meters. See: <u>fistsna.org</u>.

6-7 Feb – Vermont QSO Party – all modes, 160-2 meters. See: <u>www.ranv.org</u>.

6-7 Feb – Ten-Ten International Winter Contest – SSB, 10 meters. See: <u>www.ten-ten.org</u>.

6-7 Feb – F9AA Cup – CW, 80-2 meters. See: <u>www.</u> <u>site.urc.asso.fr</u>.

6-7 Feb – Black Sea Cup International – SSB/CW, 160-10 meters. See: <u>bscc.ucoz.ru/index/0-21</u>. 6-7 Feb – British Columbia QSO Challenge – all modes, 160-10 meters. See: <u>www.orcadxcc.org</u>.

6-7 Feb – Mexico RTTY International Contest – RTTY, 80-10 meters. See: <u>www.rtty.fmre.mx</u>.

7 Feb – North American Sprint – CW, 80-20 meters. See: <u>ncjweb.com/Sprint-Rules.pdf</u>.

8-12 Feb – ARRL School Club Roundup – all modes, all bands. See: <u>www.arrl.org/school-club-roundup</u>.

10 Feb – NAQCC CW Sprint – CW, 80-20 meters. See: <u>naqcc.info/sprint201602.html</u>.

10 Feb – RSGB 80 Meter Club Championship – Digital, 80 meters. See: <u>www.rsgbcc.org/hf/</u>.

13 Feb – Asia-Pacific Spring Sprint – CW, 40-20 meters. See: <u>jsfc.org/apsprint/aprule.txt</u>.

13 Feb – FISTS Winter Unlimited Sprint – CW, 80-10 meters. See: <u>fistsna.org</u>.

13 Feb – RSGB 1st 1.8 MHz Contest – CW, 160 meters. See: <u>www.rsgbcc.org/hf/</u>.

13-14 Feb – CQ WW RTTY WPX Contest – Digital, 80-10 meters. See: <u>www.cqwpxrtty.com/rules.htm</u>.

13-14 Feb – SARL Field Day Contest – all modes, 160-10 meters. See: <u>www.sarl.org.za</u>.

13-14 Feb – Dutch PACC Contest – SSB/CW, 160-10 meters. See: <u>pacc.veron.nl</u>.

13-14 Feb – KCJ Topband Contest – CW, 160 meters. See: <u>www.kcj-cw.com</u>.

13-14 Feb – SKCC Weekend Sprintathon – CW, 160-6 meters. See: <u>www.skccgroup.com</u>.

13-14 Feb – OMISS QSO Party – SSB, 160-10 meters. See: <u>omiss.net/Facelift/qsoparty.php</u>.

13-14 Feb – New Hampshire QSO Party – all modes, all bands. See: <u>www.w1wqm.org/nhqso</u>. *Continued on page 7...* 



Febr<u>uary 2016</u>

Contest Corner continued from page 6...

14 Feb – PODXS 070 Club Valentine Sprint – Digital, 160-40 meters. See: <u>www.podxcs070.com</u>.

14-17 Feb – Classic Exchange – Phone, 160-2 meters. See: <u>www.classicexchange.org</u>.

17 Feb – AGCW Semi-Automatic Key Evening – CW, 80 meters. See: <u>www.agcw.org/index.php/en</u>.

18 Feb – RSGB 80 Meter Club Championship – CW, 80 meters. See: <u>www.rsgbcc.org/hf/</u>.

20 Feb – SARL Youth Day Sprint – SSB, 40 meters. See: <u>www.sarl.org.za</u>.

20 Feb – Feld-Hell Sprint – digital, 160-10 meters. See: <u>sites.google.com/site/feldhellclub</u>.

20-21 Feb – ARRL Int'l DX Contest – CW, 160-10 meters. See: <u>www.arrl.org/arrl-dx</u>.

20-21 Feb – Russian PSK WW Contest – Digital, 160-10 meters. See: <u>www.rdrclub.ru</u>.

20-21 Feb – AM QSO Party – Phone, 80-20 meters. See: <u>www.antiquewireless.org</u>.

22 Feb – CQC Winter QSO Party – CW, 80-20 meters. See: <u>www.cqc.org/contests</u>.

22 Feb – Run For the Bacon QRP Contest – CW, 160-10 meters. See: <u>fpqrp.org/pigrun</u>.

24 Feb – SKCC Sprint – CW, 160-6 meters. See: <u>www.</u> <u>skccgroup.com</u>.

24 Feb – UKEICC 80 Meter Contest – CW, 80 meters. See: <u>www.ukeicc.com</u>.

26-28 Feb – CQ 160 Meter Contest, SSB, 160 meters. See: <u>www.cq160.com/rules.htm</u>.

27-28 Feb – REF Contest – SSB, 80-10 meters. See: <u>concours.r-e-f.org/contest</u>.

27-28 Feb – UBA DX Contest – CW, 80-10 meters. See: www.<u>uba.be/en/hf/contest-rules</u>.

27-28 Feb – South Carolina QSO Party – all modes, 160-6 meters. See: <u>scqso.com/rules</u>.

27-28 Feb – North American QSO Party – Digital, 80-10 meters. See: <u>www.ncjweb.com/NAQP-Rules.pdf</u>.

28 Feb – High Speed CW Contest – CW, 80-10 meters. See: <u>www.highspeedclub.org</u>.

28 Feb – SARL Digital Contest – Digital, 160-10 meters. See: <u>www.sarl.org.za</u>.

28-29 Feb – North Carolina QSO Party – all modes, 80-2 meters. See: <u>rars.org/ncqsoparty</u>.

For additional contest calendars and resources check:

WA7BNM Contest Calendar

ARRL Contests Page

# Public Service Committee report for February

1) The P/S committee has been formed. Members are:

- a) Charlie Sikes, KZ6T Chair
- b) Mat McGarey KJ6LJI
- c) Eric McHenry AA6EM
- d) Fred Seitel AE6SF
- e) Craig Gaevert K6XLT (Emeritus)

2) First Committee meeting scheduled for early February.

- 3) P/S calendar of events:
  - a) SONOMAS, Scheduled: Apr 2, 2016
  - b) Lake Sonoma 50, Scheduled: Apr 9, 2016
  - c) Wine Country Century, Scheduled: May 7, 2016
  - d) Human Race, Scheduled: May 7, 2016
  - e) Tour de California, Scheduled: May 21, 2016
  - f) Monte Rio Vineman, Scheduled: May 22, 2016
  - g) Terrible Two, Scheduled: Jun 18, 2016
  - h) Waves to Wine, Scheduled: Sep 24, 2016 to Sep 25, 2016
  - i) Levi's Gran Fondo, Scheduled: Oct 1, 2016
- 4) Working on a P/S procedure manual.

5) Working on a P/S membership presentation for April 6.



-

# SCRA Planning Meeting







The SCRA plannng meeting, where it all comes together. From coffee, doughnuts, pizza and, of course, salad, came this year's calendar of activities, budget and programs. Look close and you might catch a glimpse of steam, or is it smoke, expelled during processing.



Heath Kit Radio

I have a vintage Heath Kit Ham radio I'm trying to find a home for.

All parts seem to be there, radio and separate power supply with speaker model

SB-102 Radio SB-600 Power supply and speaker

I know these are worth up to \$200.00 depending on condition. This one need to two tuner "O" ring type belts replaced. All tubes in place. I haven't tried to power it up, won't due to possible damage.

It came from a friend who's elderly parents kept extremely good care o their possessions. No microphone

Contact me at 707-292-7883 Jeff Sterling <jeff.sterling@att.net>



8

# I stand corrected, yet again!!

Mike AD6YB has proven me wrong! I am not the first female President of SCRA ~ and with further investigation, I am not even the second female President. Rose Siemer, WA6CWL was President in 1975, (41 years ago) with Connie Freitas N6FYV being the second female President in 1987 (if Connie was a female. The name has been associated with the male sex from time to time). So I stand corrected! However, I am comfortable knowing that I am the first female President in 29 years!! And one of only three!

Iola

This from Mike:

# Silent Key: Rose M. Siemer WA6CWL, first woman president of SCRA

Rose Siemer, the first woman president of SCRA, became a silent key in December. Rose served as SCRA president in 1975. According to her son, Brent, Rose enjoyed identifying her call sign as "WA6 California Women's Liberation."

SCRA was founded in 1939, so it took a good number of years before a woman was elected president. I knew "Mrs. Siemer" as the mother of my K to 12 classmate, Brent, and his little brother David. She was a great Cub Scout Den Mother and we spent many afternoons in the Siemer's backyard on 4th Street near Bryden Lane making tool boxes, airplanes, scrap books and more! She took us on quite a few field trips around Santa Rosa – for which I still have the album of photos.

My first introduction to ham radio came in her car when she was taking a bunch of us on a field trip. There was a radio mounted in the car. We were all disappointed when the parties talking did a QSY (change of frequencies) and we could no longer hear them. Mrs. Siemer's husband, Silent Key Quenten C. ("Quent" in the SCRA membership list) Siemer, was WA6HSR.

I had the opportunity to exchange a few letters with Mrs. Siemer over the past few years. (She never had email.)

We will listen for her signal in the ether. - Michael Von der Porten AD6YB From The Press Democrat:

SIEMER, Rose Marie Passed away peacefully on the morning of December 19, 2015. She was 86. Rose was born on July 4, 1929 in Potter Valley, California to Tony and Marie Knighten.

She was preceded in death by Quenten Siemer, her husband of 53 years.

Rose is survived by her two sons, Brent (Debbie) Siemer of Simi Valley, CA and David Siemer (Diane Gabriel) of Longmont, CO; three grandchildren, Christin (Jason) Hunt, Jeremy (Katelyn) Siemer, and Bethany (Joshua) Weeks; and eight great-grandchildren, Kaden, Alethia and Auna Hunt, Theodore and Elenore Siemer, and Nicole, Ella and Clayton Weeks. Rose was schooled in Potter Valley and then attended Santa Rosa Junior College. It was there that she met Quent, when he returned from the war, as she was boarding at his mother's home.

After a short time in Ukiah, CA, Quent's carpentry career took them back to Santa Rosa where they moved into a house on Fourth Street and raised their two sons.

Once the boys were off to college, Rose and Quent returned to the Rose Knoll Ranch where Rose had grown up. She rode the bus into Ukiah for work every day until she finally retired in 1990.

It was then that she returned to her farming roots raising hay, roses, fruit trees, horses, cattle, sheep, cats and dogs. Rose was always a Potter Valley girl and wanted to be remembered as a hay farmer who cherished her Ford 8N tractor.

Rose had many diverse interests over the years that all had to do with family and friends: deer hunting, stay-at-home mom, Cub Scout Den Mother, nagging her two boys until they became Eagle Scouts, sewing, upholstery, gardening, drafting, amateur radio, pinochle and surf fishing.

Over the years Rose took a great interest in researching and recording the Siemer and Knighten family trees. She volunteered at the Potter Valley Cemetery and created a scrapbook of all the service men buried there.

Rose took great pains in remembering all the names of every child and grandchild of her friends and neighbors, and never forgot anything or anyone. If you

Continued on page 10...

)

Rose Siemer contnued from page 9...

ever disagreed, she would pull out her diary and prove you wrong.

The family would like to thank her friends, Ray and Stani Moore of Santa Rosa; Bruce and Sue Maclennan, and Ed and Jan Nickerman, all of Potter Valley, who helped care for Rose during her last years, months and days.

A graveside service will be held on Saturday, January 30, 2016 at 2:00 p.m. at the Potter Valley Cemetery. Arrangements under the care and direction of Anker-Lucier Mortuary, Willits. - See more at: <u>http://www. legacy.com/obituaries/pressdemocrat/obituary.</u> <u>aspx?n=rose-marie-siemer&pid=177427283&fhid=104</u> 43#sthash.gxmojQws.dpuf

# **Brain Teaser**

Think of this as a follow-on to the "How Did They Do That???" program we had at the November meeting.

Here's the background: I'm working on a project that requires me to send two control signals to the antenna from the operating position. These controls signals, one a series of TTL pulses and the other a TTL logic level, will cause a stepper motor at the base of the antenna to rotate clockwise or counterclockwise. There also needs to be an "off" state, where the stepper motor is not moving at all.

For my prototype, I pulled out a center-off DPDT switch that I had lying about. While it worked, it required too much effort to operate (not a good ergonomic solution) and it feels as though the lever is going to break at any moment.

I would have preferred a center-off rocker switch or two momentary action pushbuttons. I still have not been able to find a center-off rocker switch, but I do have two SPDT momentary-action pushbutton switches. I also have a pair of DPDT relays with 12VDC coils, or I might use some TTL logic chips (I have to check and see what's available in my junk box).

Now, if I could figure out how to make the pushbutton switches actuate one of two relays (or whatever), that

would be great.

Here's the catch: I need to ensure that both relays cannot be activated at the same time. If both relays were to activate at the same time, such as if someone pressed both pushbutton switches at the same time, the two signals would fight each other and could destroy some TTL logic circuits at the antenna. Not good.

For now, let's replace the relays (or TTL logic chips) with a low-voltage (i.e. 12V) lamp.

So, here's the desired behavior:

1. When ONLY Switch #1 is pressed, ONLY Lamp #1 should light up

2. When ONLY Switch #2 is pressed, ONLY Lamp #2 should light up

3. When BOTH Switch #1 and Switch #2 are pressed, there are two acceptable results:

a. Only one lamp should light up (most logically, the light corresponding to the first switch that was pressed, even if it was pressed only a tiny fraction of a second before the second switch)

b. Neither lamp should light up (this is the easiest behavior to implement)

4. When NO switch is pressed, neither lamp should light up (duh!)

How would you wire the switches and lamps to achieve this desired behavior? The simplest solution, which implements behavior 3b, requires only the addition of wire and a power source to the switches and lamps already present. Implementing behavior 3a would require more hardware

I'll reveal my solution at the February meeting. If you want to e-mail me your solution before that time, feel free to do so.

73, Brian Torr, N6IIY



# Minutes, SCRA January 6, 2016, Membership Meeting

The January 2016 regular Membership meeting of SCRA was called to order by President Iola KK6HRE at 7:15 PM, following a social interval featuring an abundant selection of food and soft drinks. A quorum of members was present. After introduction of officers and directors, new members and guests were introduced, including Aaron KK6ZDD, Jerry KK6ZDF, Paul WA6TIL, Cindy KK6VMY, Mike N6PHD, Jim K6JNS, John KM6XO, Garrett KK6VMU, and Dustin KK6YIX.

Minutes of the November 2016 SCRA Membership meeting were approved on motion by Mike KC6UNA, second by Darryl KI6MSP. Outgoing treasurer Mike AD6YB presented 2015 year end financial results. President Iola announced the SCRA planning meeting for Saturday January 9th at the Rincon Valley Mobile Estates Community Center from 9 AM to 3PM. She also announced that the club needs an Activities chair for 2016.

Education chair Dave W6IBC announced the next technician class would be on March 18-20th and that Aaron KK6ZDD would be taking the place of instructor Charlie KZ6T who is taking on the Public Service chair. John WB-6FRZ announced that the Morse Code class is underway on Friday evenings at the Red Cross. Joe K6AWA announced the informal 10 meter SSB net on Tuesday evenings is open to all classes of operator and begins at 8PM at 28402 KHz, simplex. Short Skip Editor Dave KI6UGB wants members to provide articles, and is particularly looking for an article from someone who has recently upgraded from Technician to General or Extra class. Incoming Treasurer Wells announced that 2016 dues are due by March 31, and that the Board of Directors would approve the 2016 budget at its January meeting. EmComm chair Pat KG6JSA announced that he will resume the Storm Net and wants four or five volunteer net control operators.

The program, presented by Iola KK6HRE and Pat KG6JSL, was entitled: "What You Need to Know to be a Successful Net Controller." Highlights of Pat's presentation included: a. If you can handle the Tuesday Evening service net, you can act as net control in most situations.

b. The net control station is in charge of the net.

c. For practice, listen to the net, see how it goes; log names and call signs of stations checking in.

d. Take check-ins in an orderly fashion, most commonly by asking for five stations at a time in an order determined by the net controller.

e. Have pencil and paper handy for manual logging, if used.

f. Acknowledge stations checking in and ask for any corrections

g. If stations "double" ask for repeats.

Accuracy in conducting the net is more important than speed. Request and use phonetics. Wait until the repeater courtesy tone drops.

During the question/comment period, members suggested that the net controller seek a signal report before the net. The net controller should learn to use the formal message format by passing messages. Experienced controllers should pair up with new operators. Practice learning the phonetic alphabet by spelling out license plates and road signs. Use the repeater ID timer to time station ID. Iola KK6HRE displayed and described two computer-generated station logging sheets. One sheet is a data base program enabling the net controller to type in two characters of a station suffix, which then logs the appropriate station. She also displayed a form listing stations by operator first name for improved manual logging.

Net Control operators for January include:

Joe K6AWA Jan 12

Cornell W6HMN Jan 19

Iola KK6HRE Jan 26

Brian N6IIY Feb 2

There was no old business. In new business, Joe K6AWA proposed that the club consider establishing a high frequency remote base station at a suitable location which would be controlled via the internet. John KE5RI suggested that a technical committee be formed. Ed W1EJ announced that he is looking for a reasonably priced HF rig.

With no further business the meeting adjourned at 8:40 PM.

Respectfully submitted,

Dave Harrison W6IBC SCRA Secretary

# Minutes SCRA Board of Directors Meeting January 13, 2015

The Meeting was called to order by President Iola KK6HRE at 6:26 PM at the Union Hotel, 280 Mission Blvd., Santa Rosa, prior notice of time and location having been duly given to the membership. All 2016 SCRA Board members were present, including President Iola KK6HRE, Vice President Brian N6IIY, Treasurer Wells KK6EXC, Secretary Dave W6IBC, Director Shelley KK6JXM, Director Joe K6AWA and Past President Pat KG6JSL. Other members in attendance included Dan WA6CRB, Charlie KZ6T, Darryl KI6M-SP, Jack K6ROW, Steve KK6VMZ, and Doug KF6LMB.

Receipt of SCRA's Conflict of Interest Statement was formally acknowledged by each board member. Minutes of the December 9, 2015 Board meeting were read and approved on motion by Dave W6IBC, second by Shelley KK6JXM. A resolution changing signatories on the SCRA bank accounts was adopted on motion by Shelley KK6JXM, second by Dave W6IBC, Attachment A hereto. The subject of Agent for Service of Process was discussed with no board action presently required or taken.

On approved motion by Dave W6IBC, second by Shelley KK6JXM, the following committee chairs were appointed for 2016:

Activities and programs:	Steve KK6VMZ	
Community outreach:	Darryl KI6MSP	
DX Field Trip, Contests:	Doug KF6LMB	
Education:	Dave W6IBC	
Emergency Communication: Pat KG6JSL		
Field Day:	Brian N6IIY	
Licenses Trustee:	John KE5RI	
Membership;	Shelley KK6JXM	
Merchandise:	Kathy KK6KGW	
Public Service:	Charlie KZ6T	
Refreshments:	Shelley KK6JXM	
Repeater:	Jack K6ROW	
VE Liaison:	Brian N6IIY	
Website: Sutter KI6ZC	ON and Shelley KK6JXM Co chairs	

On approved motion by Dave W6IbC, second by Wells KK6EXC, the Repeater Committee members were appointed: Jack K6ROW, Charlie KZ6T, Curt WA6TIP, Dave WA8YWQ, Dave W6IBC, John KE5RI, Joe K6AWA, Eric AA6EM, and John W6SB.

Meeting program subjects for 2016, public service events in 2016 and the community outreach calendar were discussed. These items will be posted to the SCRA 2016 on-line calen-

dar.

The 2016 Budget proposed at the planning meeting was discussed. The board required further information and refinement. A revised budget plan will be presented and considered at the February Board meeting. An approved motion was made by Dave W6IBC, second by Joe K6AWA, that the Board pay current bills up to its limit of \$500 per transaction until adoption of a formal budget for 2016 and approval by the members.

A proposal by Director Shelley KK6JXM to publish the 2016 club roster in PDF format as an email attachment was discussed. The Board will present this proposal to the membership.

Under Old Business, Darryl KI6MSP presented a written proposal again requesting that SCRA sponsor and contribute funds to a local STEM program that he conducts with some schools. After discussion, and note of appreciation by some board members for Darryl's activities, the Board declined to take any formal action.

Under New Business, Pat KG6JSL noted that our current insurance policy appears to offer coverage for Field Day, but not for auto rallies and air shows. Accordingly, the Mendo Rally and the Wings over Wine Country air show are currently off calendar as club activities. The Board will explore whether special insurance can be obtained for such events. Darryl KI6MSP asked if the club wished to contribute to the ARRL Spectrum Defense Fund, with no action presently taken by the Board.

With no further business, the meeting was adjourned at 8:25 PM

Respectfully submitted,

David Harrison W6IBC Secretary



12

# First Amateur Radio in Geosynchronous Orbit Will Aid Disaster Communications



Hume Center Director of Research Robert McGwier (right) and research associate Zachary Lefke are building radio antennas that will be used in the Virginia Tech Ground Station.

Researchers at the Ted and Karyn Hume Center for National Security and Technology are preparing to send an amateur radio transponder into a geosynchronous orbit in 2017.

Geosynchronous orbit has the same period as the Earth's rotation — just under 24 hours. A satellite in such an orbit is easy to locate and access. In this case, the satellite will always be within a band of longitudes over the Americas, continually accessible to any amateur radio operator there.

This would be the first amateur or "ham" radio payload in a geosynchronous orbit, and would significantly enhance communications capabilities for amateur radio operators, in particular following natural disasters or other emergency situations. The Hume Center team met with Federal Emergency Management Agency Administrator Craig Fugate in September to discuss the project.

Sending radio signals to a satellite would allow radio operators to help emergency personnel reliably access supplies, logistical support, and medical assistance. They key is to ensure that the satellite would always be accessible to the radio operators — which is why the geosynchronous orbit is critical.

The satellite itself will be operated by Millennium Space Systems on behalf of the United States Air Force; the Radio Amateur Satellite Corporation, also known as AMSAT, will operate the radio, which will be designed and built by Virginia Tech students — making this project a unique collaboration among the university, nonprofit organizations, private companies, and the federal government.

There are more than 2 million amateur radio operators around the world, and the community has a long history of assisting with emergency communications when traditional communications networks collapse, because they typically rely on cell towers and the Internet. Ham radio signals require only compact, mobile equipment that can be easily transported to an emergency site.

(Thanks to John Prouty, AG6PN, for submitting this article.)

# Next Exam Session:

#### Saturday, March 12, 9:00 am

Our next exam session is scheduled for Saturday, March 12, 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



13

February 201

# A VERY SPECIAL VISIT

On Saturday, January 23rd, Shelley KK6JXM and I travelled to Willits for the WARS' (Willits Amateur Radio Society) 1200 weekly Koffee Klotch. The day was rainy, cloudy, sunny, with rainbows over Willits, but a lot of fun. We met the small but mighty WARS members plus a lot of other guests coming from Lake Port, Laytonville, Nice, Ukiah, Fort Bragg, as well Shelley and myself from Santa Rosa and Sebastopol. We met Irma NA6I who use to live in Santa Rosa and came to SCRA meetings. We met several women (or YL's\*) with General and Extra Classifications who traveled long distances to test and qualify for upgrade.

WARS not only have their regular net, they have a YL-only net and a Technical Net. They have meetings every other month with a 3-4 hour 'educational program' with 'Elmers' on the alternate month. They have about four connected repeaters that can get them a wide range of coverage.

We promised to send WARS announcements of our special Antenna program being planned for July, for our Field Day, and any other program/class we will provide. We hope they take us up on the invitations so we can continue our contacts. If you do not know about WARS, they have a very nice website at <u>k6mhe.</u> <u>com/wars</u>.

### Iola kk6hre

\* from <u>k6mhe.com/wars/YL.html</u> - In landline railroad telegraphy, operators traditionally had referred to each other as OM ("old man"). The term YL ("young lady") was coined in 1920 by the American Radio Relay League for young ladies of all ages, as "OM will not fit and OL would certainly be most inapplicable."



# Native American Code Talkers of WWI and WWII

MULTI (D)(P)

Native American Code Talkers served in our Armed Forces during World Wars I and II by using their native language in what proved to be an unbreakable code to communicate during the war. Code Talkers from many different Tribes contributed to this effort. This historic contribution is honored on the reverse of the 2016 Native American \$1 Coin and is available now in a variety of rolls, bags and boxes. These coins are not produced for circulation, so pick up yours today!



http://catalog.usmint.gov/coin-programs/native-american-dollar-coins/

STAL COUNTY AND ON THE STALE OF		adio Amateurs, Inc ta Rosa, CA 95402 nd send it in with yo		
Name	Callsign	Licer	nse Class	
Mailing Address	Ph	one	_Cell	
City	ZipN	lew Application	Renewal	
E-mail (if any)	A	dd to Roster (Yes) (	No)	
Please Send Short Skip & Roster	t to my E-mail address ( )YES! ( ) N	o thanks		
FAMILY MEMBERS, CALL SI	GNS & EMAIL ADDRESSES:			
1. Name E-mail	CallsignSł		Add to Roster (Yes) (No) / E-mail address ()YES! () NO	)
	CallsignSł		Add to Roster (Yes) (No) 7 E-mail address ( )YES! ( ) NO	)
3. Name E-mail	CallsignSł	License Class ort Skip & Roster to my	Add to Roster (Yes) (No) / E-mail address ()YES! () NO	)
4. Name E-mail	CallsignSI		Add to Roster (Yes) (No / 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	e Events	( ) Acting as club Net ( Station	Control
<u> </u>	ices () He.		
<u> </u>	Technician class ( ) Fi r Technician class ( ) He	1.	g
-		Newsletter	
( ) Taking an upgrade c	lass () Other		
( ) Teaching an upgrade			_
Name Badge (complete inf	20, Family \$30, Youth, und o below)\$10 each Circle: M Fill in exactly as you wa:	agnet or Clip attachmen	
Callsign	First Name	City	
Callsign	First Name	_ City	
Callsign	First Name	_ City	
SCRA Patch \$5/ea SCRA T-Shirt \$11.50/ea 8	Size: s m l xl xxl	+ + Total:	\$

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

February 2016

#### R Ε B $\bigcirc$ G

ANAHEIM, CA (Near Disnevland) 933 N. Euclid St., 92801 (714) 533 - 7373(**800) 854-6046** Janet, KL7MF, Mgr. anaheim@hamradio.com

**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

SAN DIEGO, CA 5375 Kearny Villa Rd., 92123 (858) 560-4900 (877) 520-9623 Jerry, N5MCJ, Mgr. Hwy. 163 & Claremont Mesa sandiego@hamradio.com

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

**NEW CASTLE, DE** (Near Philadelphia) 1509 N. Dupont Hwy., 19720 (302) 322-7092 (800) 644-4476 Ken, N2OHD, Mgr. RT.13 1/4 mi., So. I-295 delaware@hamradio.com

**PORTLAND, OR** 11705 S.W. Pacific Hwv 97223 (503) 598-0555 (800) 765-4267 Leon, W7AD, Mgr. Tigard-99W exit from Hwy. 5 & 217 portland@hamradio.com

DENVER, CO 8400 E. Iliff Ave. #9. 80231 (303) 745-7373 (800) 444-9476 John WØIG, Mgr. denver@hamradio.com

PHOENIX, AZ 10613 N. 43rd Ave., 85029 (602) 242-3515 800) 559-7388 Gary, N7GJ, Mgr. Corner of 43rd Ave. & Peoria phoenix@hamradio.com

ATLANTA, GA 6071 Buford Hwy., 30340 (770) 263-0700 (800) 444-7927 Mark, KJ4VO, Mgr. Doraville, 1 mi. no. of I-285 atlanta@hamradio.com

WOODBRIDGE, VA (Near Washington D.C.) 14803 Build America Dr. 22191 (703) 643-1063 (703) 043-1003 (800) 444-4799 Steve, W4SHG, Mgr. Exit 161, I-95, So. to US 1 virginia@hamradio.com

SALEM, NH (Near Boston) 224 N. Broadway, 03079 (603) 898-3750 (800) 444-0047 Dave, N1EDU, Mgr. Exit 1, I-93: 28 mi. No. of Boston salem@hamradio.com



# **KENWOOD**



TS-2000 HF/VHF/UHF TCVR

• 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



#### TM-281A 2 Mtr Mobile

• 65 Watt • 200 Memories • CTCSS/DCS • Mil-Std specs . Hi-quality audio



#### TS-590S HF + 6M Transceiver

• 100W HF + 6M • 500 Hz & 2.7 KHz roofing filter · Built-in auto tuner · Best dynamic range in class 32 bit DSP

#### TH-F6A 2M/220/440

• Dual channel receive • .1 - 1300 MHz (cell blocked) RX • FM, AM, SSB • 5W 2M/220/440 TX, FM • 435 Memories Li-Ion Battery



#### TM-V71A 2M/440 Dual Band

AZ, CA, CO, GA, VA residents add sales tax. Prices specifications,

uescriptions, ubject to change rithout port

 High RF output (50W) • Multiple Scan • Dual receive on same band (VxV, UxU) • Echolink® memory (auto dialer) . Echolink® Sysop mode for node terminal ops



- 160-10M/6M/2M/70CM • 2x DSP • Digital IF filters
- · Digital voice recorder
- 2.5" color TFT display



• 5/2.5/1.0/0.5/0.1W Output • RX: 0.52-1.71, 88-174, 380-479 MHz\*\* • AM/ FM/FM-N/WFM/DV • 1304 Alphanumeric Memory Chls • Integrated GPS • D-STAR Repeater Directory • IPX7 Submersible D-STAR ready



#### IC-7600 All Mode Transceiver

• 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

191





#### FT-450D 100W HF + 6M Transceiver

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



#### FT-857D Ultra Compact HF/VHF/UHF

• 100w HF/6M, 50W 2M, 20W UHF • DSP included • 32 color display • 200 mems • Detachable front nanel (YSK-857 required)



# Sonoma County Radio Amateurs, Inc.

16



#### Memories • WIRES capability • Wideband receiver (cell blocked)

YAESU

The radio

FTDX-3000 100W HF + 6M Transceiver

high speed DSP /Down Conversion 1st IF

• 100 Watt HF/6 Meters • Large and wide color LCD

display • High Speed Spectrum Scope built-in • 32 bit

# FT-60R 2M/440 5W HT

· Wide receiver coverage · AM air band receive • 1000 memory channels w/alpha labels • Huge LCD display • Rugged die-cast, water resistant case • NOAA severe weather alert with alert scan

# SHORT SKIP ARCHIVES AVAILABLE

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

# (Click Me)

# DIDN'T FIND WHAT YOU NEEDED?

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

February 2016

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

