

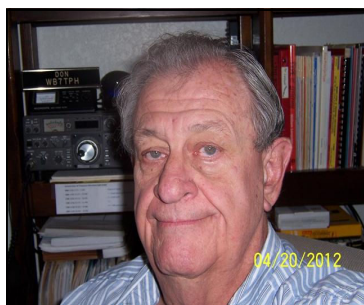


# YAVAPAI SIGNAL



The Yavapai Amateur Radio Club • Prescott, Arizona • DM-34 • Volume 28- No. 5 • May 2013

## A Message from the President...



I am looking forward to the May meeting of our Yavapai Amateur Radio Club. I hope you are as well. I would love to see more of you at the meetings. On May 2<sup>nd</sup>, Bud Semon will present, "20 Years of Voodoo Radio - Contesting in West Africa".

As you can probably tell, it is "A short history of the 20 years of the Voodoo Contest Group's operations in West Africa and a look at the 2012 operation from Liberia". As always Bud's talks are well illustrated and very interesting. Don't miss it!

On the subject of programs for club meetings, I hope that you are enjoying the presentations so far. Our committee has filled in almost all of this year and has begun work on 2014. We are trying for a variety of programs to interest as many of you as possible each month. If you have a topic you would really like to see, let us know, and we will try to add it to the list.

June is coming on fast, and so is "Field Day". The ARRL event is the biggest informal operating event in the world of amateur radio. If you are going to a mountain with your QRP gear, or joining others in a remote operation, let us know, so that we can try to connect from our base at the school. We hope to be operating at least three modes for the event. At the May meeting I would like to see how many dedicated members plan to be available to work the bands. I will have a sign-up sheet available. As of this writing, the club will be providing hot dogs and hamburgers and "fixins" for Field Day. Everything else will be pot-luck.

That is all I have for now. See you at the meeting, Thursday, May 2<sup>nd</sup>. Bring a friend!

73,  
Don Bauer, WB7TPH

## Ham Breakfast



Photo courtesy of Bob Rosevear, WB7RRQ

Hams get together for a Wednesday morning breakfast on April 3, 2013, at the Iron Horse Restaurant, on Highway 89 in Chino Valley. There were 20 participants.

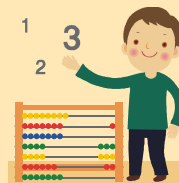
Breakfasts are held weekly at 7:00 a.m. All are invited to this informal event.

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### Membership Count:

1st Thurs. in March.....	189
Gain/Loss.....	-3
1st Thurs. in April.....	186



## Welcome to the Yavapai Amateur Radio Club

The Yavapai Amateur Radio Club (YARC) is an ARRL affiliated Special Service Club. The club participates in many activities in the tri-city area by providing communications for local events, emergency communications, and promotion of the hobby throughout the community.

Membership in the YARC is open to any interested amateur or non-amateur alike. Dues are \$20.00/year (Full-time students \$15). The YARC meets at 7:00 p.m. local time on the first Thursday of every month in the Technology Room 404, at the Granite Mountain Middle School, 1800 Williamson Valley Road in Prescott. It is about ½ mile north of Iron Springs road, and all amateurs and non-amateurs as well are invited. Programs of interest are included as part of the meeting.

The weekly Net is held every Wednesday at 7:00 p.m. local time on 146.880- repeater. All amateurs are invited to participate, and visitors are always welcome.

The Yavapai County ARES/RACES Net is held on Monday nights approximately at 7:00 p.m. local time on the 145.290- repeater on Mingus Mountain. A PL of 127.3 is required.

### Club Repeater

The YARC 146.880- repeater is located on the hill above Willow Creek road and requires a PL of 100.0 Hz. Our deepest gratitude to Bill Kafka, W2YAV, (SK) for allowing us to acquire the original club repeater. ■



## Minutes of April 1, 2013 Board Meeting at Coco's Restaurant, Prescott, Arizona

Present: WB7TPH, W7BJ, AE7CG, K6VVR, W7HAM,  
WB7RRQ, AD7YR, KD5VRW

The meeting was called to order by WB7TPH at 1817 MST.

### Agenda:

1. New Expenses?: WB7TPH asked W7BJ if there were any out of the ordinary expenses incurred during the month of March 2013. W7BJ reported that there were no such expenses.
2. Non-club Material on Club Website: Non-club-related material has been removed from the club website. Future inclusion of content material on the club website will be at the discretion of the YARC board of directors.
3. Club Spending Without Special Approval: How much money is the club authorized to spend without special approval? AD7YR stated that in the recent past, the amount that could be spent without special approval has been approximately \$200.
4. Repeater Trustee and Expenses: Should the club repeater trustee be authorized to meet repeater maintenance expenses within a specific amount? A club fund exists for repeater maintenance. If expenses exceed what is in the fund, then the trustee must seek board of directors approval for additional funds.
5. Club Projector and Screen: Since most presentations at club general meetings have relied on using Microsoft PowerPoint, it would be desirable for the club to purchase a projector and screen to enhance such presentations. WB7TPH queried the board of directors for feedback. AD7YR made a motion for the board of directors to consider and discuss the purchase of such items. WB7RRQ seconded the motion. The board voted in favor of the motion. W7BJ was given the task of inquiring about the prices of the items and to report to the April 4, 2013 general meeting about prices, advantages, and disadvantages of the club purchasing the items.
6. Obsolete Surplus Club Equipment: K6VVR reported that club members K7SEN and AB7NK have returned two old Motorola vacuum tube repeaters to the club. KD5VRW made a motion that K6VVR be given custody of the equipment, and that K6VVR be given the task of scrapping the equipment within 10 days after announcement to the April 4, 2013 general meeting about the free availability of the equipment to any club member who wishes to take possession of it. AD7YR seconded the motion. The board of directors voted in favor of the motion.
7. Backup Repeater: K6VVR mentioned that Countrywide Communications has given the club a Kenwood solid state VHF repeater. However, the programmer and software the repeater will cost the club \$100. WB7TPH made a motion that the board approve of the expense. WB7RRQ seconded the motion. The board of directors voted in favor of the motion.

8. 50 MHz Equipment: K6VVR mentioned that WA7JC has some high power solid state Alinco equipment for the 50 MHz band that he wishes to dispose of. K6VVR will obtain a list of available equipment, and present the list to club members at the next general meeting.
9. 440 MHz Equipment: K6VVR mentioned that availability of a 440 MHz repeater, and the possibility of the club locating such a repeater on Mt. Union. He will look into the costs of purchasing such a repeater and locating it atop Mt. Union.
10. Off-the-Record Discussions: From 1915-1930 MST, the board carried on some informal discussions about various topics. No motions were made, seconded, or voted upon by the board.
11. Adjournment: WB7TPH adjourned the meeting at 1930 MST.

Respectfully submitted by

Loren Singh — AE7CG

YARC Secretary

***Minutes of April 4, 2013 General Meeting  
at Granite Mountain Middle School, Prescott, Arizona***

The meeting was called to order by WB7TPH at 1902 MST, and the Pledge of Allegiance was recited by all present. The board of directors did self introductions. Visitors were welcomed.

WB9VGJ made a motion to approve the minutes of the March 7, 2013 general meeting as published in the *Yavapai Signal*. KF7ING seconded the motion. The minutes were approved by acclamation.

AD7YR made a motion to approve the treasurer's report for February 2013 as published in the *Yavapai Signal*. K6VVR seconded the motion. The report was approved by acclamation.

**Committee Reports:**

1. Event Communications: WA6ZZJ reported about upcoming public service operating events and the need for additional radio operators. He mentioned the Whiskey Off-road Race, the Whiskey Row Marathon, a Cottonwood-to-Sedona-to-Cottonwood event, and others.

2. Badges, Patches, and Decals: W7BJ announced that badges for N7VIN and K7UBO were ready. He announced that patches were available for \$3 and decals for \$1.
3. Shirts: K6VVR announced that goldenrod-colored shirts were no longer available. New shirts will be blue with yellow lettering. Shirts will have space for name and call sign, and will cost approximately \$22 each.
4. Repeater: K6VVR said that the 146.88 MHz repeater was working fine. He also mentioned the club having acquired a spare 2M repeater.
5. Fox Hunt: K6VVR announced the next fox hunt to take place on Sunday, April 7, 2013 at 1300 MST at the Arizona State Credit Union parking lot near the intersection of Gail Gardner Way and Willow Creek Road in Prescott. WB6ODR and his XYL will hide the transmitter.
6. Elmers: N7CW reported that several club members had received loaned HF transceivers.
7. Testing: KD5VRW announced the next Technician class would be held on April 27, 2013. WB9VGJ announced that the next VEC test session would be on May 3, 2013, 1800 MST, at the Jeep Posse Building in Prescott. Pre-registration online would be required.
8. Website Calendar: Members with items for the club's online calendar were requested to contact WN7E.

**Old Business:**

1. Mailing List: WB7TPH asked that all members go to "w7yrc.org" and to click on "YARC Mail" to be added to the email list.
2. Field Day, 2013: WB7TPH announced that YARC's participation in Field Day would take place at Granite Mountain Middle School in Prescott. He asked for volunteers to coordinate the picnic that would take place concurrently.

**New Business:**

1. Projector: WB7TPH said that a new projector would cost the club in the range of \$500 to \$800. N6MY asked that product longevity be considered. K6VVR asked that a remote control be part of any product purchased. WB9VGJ thought that someone be given the task of researching available products and reporting back to the

club about product features, prices, and so forth. KF7ING made a motion to that effect, and WB9VGJ seconded the motion. The motion was approved by acclamation.

2. Old Club Repeater: K6VVR said that the club had a Motorola, vacuum tube repeater with some of its parts already removed. He said that the repeater would be given to any member who wants it and who makes a cash donation to the club. If there were no takers, then he asked the club to give him the authority to scrap the repeater for parts. KF7ING made a motion to that effect and W7HAM seconded the motion. The motion was approved by acclamation.
3. Kenwood Solid-state Backup Repeater: K6VVR said that the repeater has a 50-watt transmitter. When run at a nominal 40 watts, its output is in the range of actual 30-35 watts. The board of directors approved a \$100 expense for the purchase of the programmer and software for the repeater.
4. WA7JC Equipment Sale: K6VVR mentioned that WA7JC has the following equipment for sale:  
  
Alinco DX-70TH (value \$1074), screwdriver antenna (\$175), Diamond 20-C SWR meter, and 30-ft. Rohn tower (value \$200). WA7JC will sell all of the equipment except the tower for \$400. He will sell the tower for \$200.
5. Estate Equipment: N7CW brought some vintage equipment from an estate disposition. He offered it free to whoever wants it. KI6AHH proudly took home an ARC-5 transmitter with an attractive set of two 1625 vacuum tubes installed.
6. Lyle Brown, W7LGB (SK): K7POF announced that the memorial service for W7LGB would be held on April 13, 2013 at 1400 MST at the Heritage Funeral Home in Prescott.
7. Adjournment: WB7TPH adjourned the meeting at 1937 MST.

**50-50 Drawing**: KE7QK drew the winning ticket 394863. KE7DTR was the lucky winter of \$47.

**Program and Speakers**: Tom Sallet, KE7QK of Phoenix and Lee Weitzel, KØCCU of Glendale, “ATN: The Amateur Television Network”

1. The Amateur Television Network is a nationwide organization that was organized in California, and started in the San Diego-Los Angeles region. There is an Arizona Chapter with repeaters located on White Tank Mountain in Phoenix and Mount Lemmon in Tucson.
2. Amateur television makes use of [www.batc.tv](http://www.batc.tv) and Skype for long distance and worldwide coverage.
3. The presentation ran from 1955-2035 MST.

Respectfully submitted by

Loren Singh — AE7CG

YARC Secretary

### YARC Officers for 2013

**President**

Don Bauer, WB7TPH  
[president@w7yrc.org](mailto:president@w7yrc.org)

**Vice President**

Ellis Rackoff, KE7NAP  
[vice.president@w7yrc.org](mailto:vice.president@w7yrc.org)

**Secretary**

Loren Singh, AE7CG  
[secretary@w7yrc.org](mailto:secretary@w7yrc.org)

**Treasurer**

David Hanson, W7BJ  
[treasurer@w7yrc.org](mailto:treasurer@w7yrc.org)

**Board of Directors (includes Club Officers)**

Creighton Grotbeck -- AD7YR

Ralph Gendron -- W7HAM

Bob Rosevear -- WB7RRQ

Roger Nash -- KD5VRW

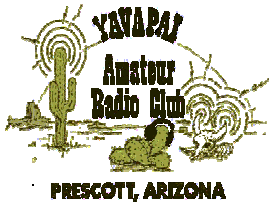
**Newsletter Editor**: Joe Oliver, AC6AA

## VE Testing

By Don Bauer, WB7TPH



The next license test session is Friday May 3<sup>rd</sup> at 6:00 PM at the Jeep Posse Building, in Pioneer Park. This should be a fairly large session, as it will follow the Technician class on April 27<sup>th</sup>. Please, if you are coming to the test, bring a check made out to “ARRL/VEC” or exact cash in the amount of \$15.00. It speeds things along so much if we don’t have to make change. ■



Yavapai Amateur Radio Club  
 PO Box 11994  
 Prescott, AZ 86304-1994

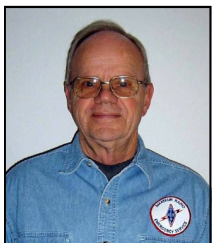
**TREASURER'S REPORT**

			<b>General Fund</b>	<b>Repeater Fund</b>
<b>March 2013</b>				
<b>BEGINNING CASH BALANCE - February 28, 2013</b>			<b>7,247.42</b>	<b>1,893.33</b>
Dues - Rich C Taylor	KG7BGW	new	18.00	2.00
Dues - Joan Tremper	AB7KE	new	18.00	2.00
Dues - W Mike Slawinski	W6UND	new	18.00	2.00
Dues - A Lee Harned	KG7BGT	new	18.00	2.00
Dues - Cheryl M Severance	KD6FCZ		18.00	2.00
Dues - Kenneth C Severance	WA6AQK		18.00	2.00
Dues - Loraine M Severance	KD6FDA		0.00	0.00
Dues - Bryan Whipp	W7BNW		18.00	2.00
Dues - Teresa Whipp	W7TRW		0.00	0.00
Dues - Jeff Hanna	WB7RFY		18.00	2.00
Dues - Frank Kennemur	KF7ING		18.00	2.00
Dues - Ken Nelson	KF7MMS		18.00	2.00
Dues - Lee T Cunningham	K7CBK		18.00	2.00
ARRL - Kenneth C Severance	WA6AQK		55.00	
ARRL - Lee T Cunningham	K7CBK		39.00	
Donation - A Lee Harned	KG7BGT			10.00
Decal - Ellis Rackoff	KE7NAP		1.00	
50/50 Raffle - Ellis Rackoff	KE7NAP		93.00	
50/50 Raffle			(46.50)	
Interest Income				0.08
<b>TOTAL INCOME</b>			<b>339.50</b>	<b>32.08</b>
Joe Oliver - Postage	1155		18.40	
Terry Pemberton - Sharlot Hall Pizza	1156		30.64	
ARRL - Membership Renewals	1157		90.00	
Allegra Printing	1158		17.17	
<b>TOTAL EXPENSES</b>			<b>156.21</b>	<b>0.00</b>
<b>ENDING CASH BALANCE - March 31, 2013</b>			<b>7,430.71</b>	<b>1,925.41</b>

Signature: \_\_\_\_\_  
 David B Hanson, W7BJ, Treasurer

Date: 4/3/2013

## YARC EVENT COMMUNICATIONS...



*By Lloyd, WA6ZZJ*

### Special Events...

'Special event' is a term coined by radio amateurs that refers to activities where the public is in attendance as observers and/or participants. They include sporting events such as marathons, bike rides/races and walkathons. These are all affairs of a pre-planned, non-emergency nature.

Special events are normally held for the enjoyment of the public and often draw large crowds. They provide golden public relations opportunities for radio amateurs who provide support communications on a complimentary basis. They make our activities visible to non-amateurs. They sharpen our operating skills, and help justify our existence. And besides, operating special events is just plain fun!

Special events don't just happen. They are well planned in advance. Event organizers look to Amateur Radio to provide a well coordinated and planned communications system to make their event a success.

Special events are preplanned and non-emergency in nature. The important word here is preplanned. As the event is preplanned so must be our communications effort. Just 'showing up' at a special event with a group of radio amateurs and equipment just won't cut it. "Planning on the fly" is not the way to give a good impression of Amateur Radio. It is up to you as an Amateur Radio operator to be a part of the effort to make the event a success.

Next, treat every special event as emergency communications training. Have the equipment with you that you might use in an emergency. Bring any equipment recommended by the event communications coordinator. They usually know what equipment is going to be needed for an event. Don't be afraid to let the event communications coordinator know what equipment you are lacking. Again, they can usually plan for any equipment shortfalls.

### After The Event...

At the end of the event, there may be some loose ends to clear up. This is the best time to give suggestions and constructive criticism to the event communications coordina-

tor. You may also have suggestions relative to the event itself, which can be passed on to the event organizers. If possible, write all suggestions down for inclusion in an event 'after action report'.

No two special event operations are going to be the same. Amateur Radio is a hobby activity, but if we exercise professionalism we show the public that Amateur Radio is something special, which is what it's all about.

**The YARC Event Communications schedule so far for 2013 is:**

### May 4, 2013 The Whiskey Row Marathon

Will be YARC's long standing participation in the Whiskey Row Marathon in support of the Prescott YMCA. For this event we typically use 18 to 20 operators.

### May 18 - 19, 2013 The MS-150 Ride the Vortex Bicycle Event in the Verde Valley

This event is currently in the early planning stages and signups have started. Being a two day event we will once again need 23 to 25 operators per day. This is another event that will be coordinated with the VVARA. **Signups for this event will continue with the May YARC meeting.**

**Once again, check your calendars and signup. Event communications can be a rewarding and fun experience while at the same time supporting your club and giving back to your community.**

### September 7, 2013 The March of Dimes March for Babies

This is another long standing event for YARC's communications. We will not be taking commitments for some time on this event, but do put it on your calendar...

### September 15, 2013 The Skull Valley Loop Challenge

Another event to put on your calendar...

**To sign up for the above events, email me direct at: [wa6zzi@arrl.net](mailto:wa6zzi@arrl.net) ■**

## My travel plans for 2013-2014:

I have been in many places, but I've never been in Cahoots. Apparently, you can't go alone. You have to be in Cahoots with someone.

I've also never been in Cognito. I hear no one recognizes you there.

I have, however, been in Sane. They don't have an airport; you have to be driven there. I have made several trips there, thanks to my children, friends, family and work.

I would like to go to Conclusions, but you have to jump, and I'm not too much on physical activity, anymore.

I have also been in Doubt. That is a sad place to go, and I try not to visit there too often.

I've been in Flexible, but only when it was very important to stand firm.

Sometimes I'm in Capable, and I go there more often as I'm getting older

One of my favorite places to be is in Suspense! It really gets the adrenalin flowing and pumps up the old heart! At my age I need all the stimuli I can get!

I may have been in Continent, and I don't remember what country I was in. It's an age thing. They tell me it is very wet and damp there.

\*\*\*\*\*

A man left from work one Friday afternoon. But, being payday, instead of going home, he stayed out the entire weekend partying with the boys and spending his entire paycheck.

When he finally appeared at home, Sunday night, he was confronted by a very angry wife and was barraged for nearly two hours with a tirade befitting his actions.

Finally his wife stopped the nagging and simply said to him: "How would you like it if you didn't see me for two or three days?"

To which he replied. "That would be fine with me."

Monday went by and he didn't see his wife. Tuesday and Wednesday came and went with the same results. But on Thursday, the swelling went down just enough where he could see her just a little out of the corner of his left eye. ■

## Upcoming Events

- **April 26, 27 & 28** - The Whiskey Off Road Mountain Bike Event.
- **May 3, 2013** - VE Test Session.
- **May 4, 2013** - Whiskey Row Marathon.
- **May 4 -5, 2013** - 7th Call Area QSO Party
- **May 18 - 19, 2013** - The MS-150 Ride the Vortex Bicycle Event in the Verde Valley.
- **June 22 - 23, 2013** - Field Day

## Need a Hand?

If you need assistance, we want to help you. If you are just starting out in ham radio, or simply have run across something that you could use a hand with... technical assistance or answers to questions about the Yavapai Amateur Radio Club, are available from knowledgeable club members.



**Don't Hesitate to Ask for Help!!**

**CALL:**

**Bud Semon, N7CW at: (928) 771- 8267**

**or**

**Jim Zimmerman, N6KZ at (928) 713- 0542**

## I am looking for the following equipment:

**A 500 watt or 1 kw HF Amplifier; 80 - 10 Meters.**

**Gary Shapiro, WD8DOT**

**[gshapiro57@cablone.net](mailto:gshapiro57@cablone.net)**

# April 2013 Foxhunt

By John Broughton, WB9VGJ



The monthly foxhunt was held April 7<sup>th</sup>. Bob, WB6ODR, and Linda, KD7EEO, hid the transmitters. They hid them in Acker Park. They were somewhat devious in that the primary transmitter was hidden in the back seat of a car parked by the cemetery gate. That was unexpected, so hunters spent some time hunting all around the vehicle.

We had a great turnout of teams, the most hunters in quite a while:

1. Mike, WA7ARK
2. Diane, KE7ODP, and Pete, K6VVR.
3. Jim, WB7UZV, and Frank, KF7ANX.
4. Jeff, WB7FRY, and I.
5. Jerry, KF7FPD, Bryan W7BNW, and Dave, W7BJ.

It was a very good hunt. It was a fast hunt with the winner, WA7ARK, finding the primary transmitter in just 19 minutes. Congratulations, Mike!! He had a new RF sniffer that he bought and it seems that the sniffer worked very well.

Several hunters found the primary transmitter in less than 30 minutes. Unfortunately, Jeff and I were at the back of the pack, time-wise. However, we still had a great time, as did all the hunters. We were all pleased to see Frank, KF7ANX, on his first hunt in many months. Thanks to all the hunters who participated!!

The hunt for the secondary transmitter was challenging. As you can see in the pictures at the link below, it was very well hidden in a small log which was put in amongst several dead branches used to block off a trail shortcut. Most of the hunters spent a bit of time all around it, knowing they were very close to it, before they found it.

We would encourage more folks to get involved in the hidden transmitter hunts. They are really fun and help develop direction-finding skills.

My pictures of the hunt can be seen at: <http://imageshack.us/g/1/10098178/>.

I apologize that some of the pictures seem out of order. However, ImageShack's sort program leaves a lot to be desired. Once the pictures are sorted, when one views them, the order is not the same as shown in the thumbnails for the album; the thumbnails are in the correct order. ■

## Need Cards Checked for ARRL Operating Awards?

Jim Zimmerman, N6KZ can check your QSL cards for DXCC, WAS, VUCC, WAC, etc.

For information contact Jim at: (928) 713-0542.

Jim's QTH is at: 778 Grapevine Lane,  
Prescott, AZ 86305.

## Club contacts - At a Glance

President - WB7TPH	<a href="mailto:president@w7yrc.org">president@w7yrc.org</a>
Vice President - KE7NAP	<a href="mailto:vice.president@w7yrc.org">vice.president@w7yrc.org</a>
Secretary - AE7CG	<a href="mailto:secretary@w7yrc.org">secretary@w7yrc.org</a>
Treasurer - W7BJ	<a href="mailto:treasurer@w7yrc.org">treasurer@w7yrc.org</a>
Board Member - AD7YR	<a href="mailto:cgrobeck@gmail.com">cgrobeck@gmail.com</a>
Board Member - W7HAM	<a href="mailto:smokey7@cableone.net">smokey7@cableone.net</a>
Board Member - WB7RRQ	<a href="mailto:rosevear520@cableone.net">rosevear520@cableone.net</a>
Board Member - KD5VRW	<a href="mailto:rnpublish@sbcglobal.net">rnpublish@sbcglobal.net</a>
Arizona WAC Administrator	<a href="mailto:az.wac@w7yrc.org">az.wac@w7yrc.org</a>
Ask Elmer for Help	<a href="mailto:ask.elmer@w7yrc.org">ask.elmer@w7yrc.org</a>
Badges	<a href="mailto:badges@w7yrc.org">badges@w7yrc.org</a>
Field Day Chairman	<a href="mailto:field.day@w7yrc.org">field.day@w7yrc.org</a>
Fox Hunts	<a href="mailto:fox.hunt@w7yrc.org">fox.hunt@w7yrc.org</a>
License Classes	<a href="mailto:classes@w7yrc.org">classes@w7yrc.org</a>
Mail List	<a href="mailto:yarc_mail@w7yrc.org">yarc_mail@w7yrc.org</a>
Membership Application	<a href="mailto:membership@w7yrc.org">membership@w7yrc.org</a>
Net Manager	<a href="mailto:net.manager@w7yrc.org">net.manager@w7yrc.org</a>
Newsletter Editor	<a href="mailto:newsletter@w7yrc.org">newsletter@w7yrc.org</a>
Program Inputs	<a href="mailto:programs@w7yrc.org">programs@w7yrc.org</a>
Public Information Officer	<a href="mailto:pio@w7yrc.org">pio@w7yrc.org</a>
Public Service - DEC	<a href="mailto:public.service@w7yrc.org">public.service@w7yrc.org</a>
Repeater Trustee	<a href="mailto:repeater@w7yrc.org">repeater@w7yrc.org</a>
Special Events	<a href="mailto:special.event@w7yrc.org">special.event@w7yrc.org</a>
VE Test Liaison	<a href="mailto:testing@w7yrc.org">testing@w7yrc.org</a>
YARC Party Coordinator	<a href="mailto:yarc.party@w7yrc.org">yarc.party@w7yrc.org</a>
Information	<a href="mailto:info@w7yrc.org">info@w7yrc.org</a>
Webmaster	<a href="mailto:yarc@w7yrc.org">yarc@w7yrc.org</a>
Webmaster	<a href="mailto:w7yrc@w7yrc.org">w7yrc@w7yrc.org</a>
Webmaster	<a href="mailto:webmaster@w7yrc.org">webmaster@w7yrc.org</a>



**Lyle Brown, W7LGB - Silent Key**

**By Don Broadston, K7NGK**

Lyle, 93, of Prescott, Arizona, passed away on March 20, 2013. He was preceded in death by Ruth Brown, his wife of 49 years.

Lyle almost made 94, his birthday was in April. He had a wonderful full life, and was a generous and caring man to all he came in contact with. He was in good health until his final days, only having arthritis in his left leg and hip. He attended our QCWA meetings and hosted them until about October 2012, when he decided his mobility was not up to it.

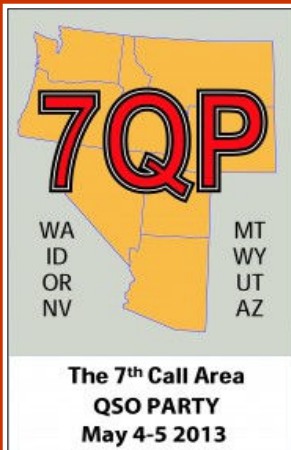
Lyle's ham career started 79 years ago, in Southern California where he grew up. He was a resident of the Hollywood area, and first became a ham in 1934. He worked for and retired from the phone company and moved to Prescott in 1976, as I recall him saying. He got involved in the VA radio station and operated it with other hams, mostly Val Popof, K7AW for many years. He was a member of QCWA (Quarter Century Wireless Association) and SOWP (Society of Wireless Pioneers) for many years. He was active on many HF nets, the telephone company retiree nets and others. I know he had weekly schedules on many. Lyle was a founding member of the YARC in 1991, and was active in the club for many years. ■

## The Legion to Feature HAM Radio Exhibit



The American Legion National Headquarters Library in Indianapolis is hosting an exhibit of items from its archives that display the organization's long interest in, and association with, amateur radio. The exhibit includes articles from The American Legion Magazine, old radio equipment, booklets and fliers, and more. The Legion has been promoting the usage of amateur radio among its members and others since the 1930s. The American Legion Amateur Radio Club (TALARC) was created in 2011. Currently, membership is over 1,000 and local chapters are springing up across the country. The exhibit will be on display at least through the NEC Spring Meetings in May. Learn more about TALARC: [www.legion.org/hamradio](http://www.legion.org/hamradio).

## 7QP / The 7th Call Area QSO Party



7QP is an amateur radio contest, held annually on the first Saturday in May. The stations of the US 7th call area (Arizona, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming) become "the pursued", and the rest of the US, Canada, and the world tries to work as many of us, on as many bands/modes as possible, over an 18-hour period commencing at 6:00am Pacific Time (1300 UTC).

7th call area stations work everyone, others work 7th area stations only. Work stations once per band/mode. 7th area mobiles (and those participating in other concurrent QSO parties or contests) may be worked again as they enter new counties. For more information go to: <http://ws7n.net/7QP/new/Page.asp?Content=start>.

## Essential<sub>2</sub> Service

By Malcolm, NM9J — from the "PCARA Update"

You may remember from previous columns that the "Essential<sub>2</sub>" campaign is sponsored by the American Chemistry Council, in order to show that chemistry is essential to safety, health, innovation, the environment, the economy... essential<sub>2</sub> our lives. Last time, I mentioned the importance of chemistry to two materials associated with antennas... copper wire and polyester rope. This time, let's take a look at some of the spray-on service aids that might be found in a well-equipped amateur radio workshop.

### Fresh air

One of the first items you might pick up is a can of "Dust-Off", "Blow-Off", "canned air" or "air duster". This is an aerosol-style can of compressed gas for removing dust and debris from hard-to-reach areas of electronic equipment. You can use it to clean air-spaced capacitor blades, cooling fans, computer keyboards and printers. Modern transceivers with their dozens of tiny buttons, switches and knobs are obvious candidates for a breath of fresh "air".



But there is no air in "canned air"... the aerosol can usually contains compressed 1,1-difluoroethane,  $\text{CH}_3\text{CHF}_2$ , also known by the DuPont trade name of Dymel®-152a or R-152A. Difluoroethane is

normally a gas, but inside the can it is compressed into a liquid, with a boiling point of  $-13^\circ\text{F}$ . R-152A is a fluorinated hydrocarbon, containing no chlorine, so you need not be concerned that it will deplete the ozone layer, in contrast with those nasty CFCs (chlorinated fluorocarbons). It has a low level of toxicity, though there have been concerns about inhalant abuse by teenagers.

The compound is manufactured by reacting hydrogen fluoride with acetylene. While the product itself is relatively innocuous, those raw materials are distinctly hazardous - acetylene is flammable while hydrogen fluoride is highly toxic and corrosive. Difluoroethane itself is flammable and the combustion products are nasty, so never spray "canned air" into flames, into energized equipment or at other ignition sources. In the past, "canned air" products were based on butane, which was even more flammable.

### A chill in the air

The next item on your service shelf might be a can of

"freezer" or "freeze spray" - used for investigating intermittent thermal faults on circuit boards. If you suspect a component is changing properties as it warms up, spray the component with "freezer" and see if the fault clears or returns. The spray causes rapid cooling of the component, the internal parts will move with respect to each other, and if you are lucky, an internal break will become a "make", with the circuit resuming operation. If nothing happens, then perhaps another component was responsible... give it a squirt of freezer and see. You can use the same product to detect cracks in etched circuit boards, and to protect sensitive components from heat during soldering. (A heat gun is another useful tool for finding intermittent faults.)

Modern freezers such as Chemtronics Freez-It®, Freeze Spray and Blow-Off Freeze Spray contain tetrafluoroethane, another fluorinated hydrocarbon -  $\text{CH}_2\text{FCF}_3$ . It is also known as refrigerant R-134a or Dymel-134a. Liquid tetrafluoroethane boils at  $-15.9^\circ\text{F}$ . In the aerosol can, it is stored under pressure and stays a liquid. Once squirted down the delivery tube and released into the air, the drops of liquid rapidly boil and turn into vapor, in a similar fashion to the refrigerant in an air conditioner. Heat is needed to drive this evaporation from liquid to gas, and the required thermal energy is drawn from the surrounding air or from any component that you spray the freezer onto. The component may then cool to as low as  $-65^\circ\text{F}$ . Brrrr!



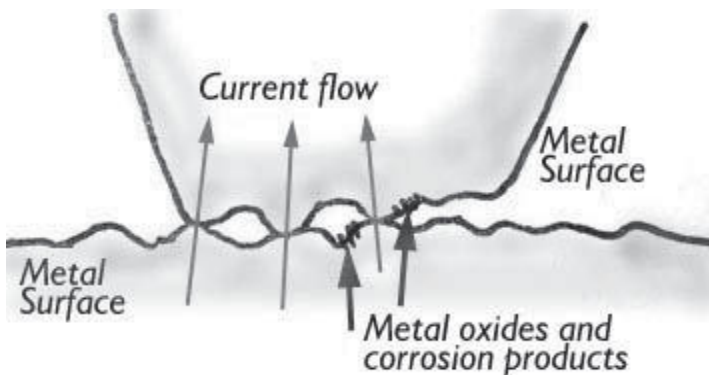
Tetrafluoroethane is manufactured by the reaction of hydrogen fluoride with trichloroethylene. The product has low toxicity and is nonflammable. It is unlikely to dissolve plastics and other parts of electronic equipment. R-134a has much lower ozone-depleting properties than the R-12 refrigerant that it has largely replaced. R-12 is dichlorodifluoromethane - the classic ozone-depleting chlorofluorocarbon that was used as a refrigerant and aerosol propellant until manufacture was banned in 1995.

### Keep it clean

The third item on our well-equipped service shelf is likely to be a product to quiet down noisy contacts. Do you have a vicious volume control, a suspicious speaker connection or a wild wavechange switch? If all you can hear are crackles and bangs when you move the control, the easiest fix may be to spray the parts with contact cleaner. A variety of products are available... my favorite from the UK was "Super Servisol" switch cleaning lubricant. In the U.S. you can choose products such as Kemtronics Kontakt Restorer®, Techspray Contact Cleaners, Rawn Universal Contact

Cleaner and Deoxit products from Caig Laboratories.

Contact cleaners are intended to restore good electrical conductivity between two metal surfaces - for example between switch contacts, relay contacts, plugs and sockets or the track and slider of a volume control. (Some volume controls and potentiometers have a metal contact and a carbon track.) When the components are brand new, there is full metal to metal contact, with low resistance and easy current flow. As time goes by, the metal surfaces may become oxidized, corroded, or coated in dust, dirt, grease and all sorts of other nastiness that is generally non-conducting. If there is any movement between the metal surfaces, the contact resistance will vary significantly, with crackles and bangs added



to the desired signal.

*When metal surfaces touch, current flow can only occur at the points of actual metal-to-metal contact. If the surface is oxidized or corroded, contact resistance rises. As the surfaces move past each other, resistance can vary greatly.*

The simplest spray-on contact cleaners have the ability to dissolve and blow surface contaminants away, then evaporate and leave a clean metal surface. A typical product might contain a mixture of hydrocarbons like isohexane, with alcohols such as ethanol and isopropanol, plus carbon dioxide as the propellant. This type of contact cleaner will evaporate quickly and leave no residue at all. However, the alcohols and hydrocarbons are flammable, so you should take precautions when working on equipment containing sources of ignition. Variations on the simple formula may substitute the hydrocarbons with tetrafluoroethane (as previously encountered) to reduce the flammability - for example Chemtronics Kontakt Restorer.

The only problem with these simple cleaners is that if the metal surfaces got contaminated once, they can get contaminated again. There are more sophisticated products that will not only clean the contact surfaces, but leave a protective film to prevent further oxidation and corrosion. Some of the film additives are proprietary, for example Caig Laboratories DeoxIT contains "D100L" while ProGold contains "G100L".

The film-forming additive used in some contact cleaners is said to be oleic acid, an organic acid that remains liquid at room temperature. It would not only act as a lubricant for the metal contacts, but could also dissolve metal oxides and corrosion products that might be present on the surface.

Other contact cleaners incorporate polyphenyl ether, which leaves a highly stable, non-spreading film, 15-20 microns thick on the metal surfaces. This material provides long-term lubrication and protection even when the connectors are exposed to aggressive atmospheres. The lubricant reduces insertion force, minimizes wear and maintains low, stable contact resistance. It also eliminates "fretting corrosion", where moving contacts are worn away by the abrasive effects of their own corrosion products.

I have had a lot of success with Caig's Deoxit and ProGold products, as well as with the polyphenyl ether-based products such as Chemtronics "Gold Guard". They really do work.

Two words of warning - be careful with "industrial grade" switch cleaners. I can remember using one such product long ago on a Geloso converter wavechange switch. The polystyrene insulation in the switch dissolved and only the metal parts were left! The culprit here was carbon tetrachloride,  $CCl_4$ , a product now banned because of its toxicity.

Also be careful with contact cleaners that contain silicone oil. Silicone oils are remarkable products, but they do not always mix well with electronics. Silicone oil tends to creep and get into places you did not intend it to go. If there is any arcing at the metal contacts, it may convert the surface film of silicone oil to silica (silicon dioxide), which is non-conductive and difficult to remove from the metal surface. If you have contacts that arc, it is usually better to clean them with a fine burnishing tool rather than using any lubricant.

So... next time you need to squirt some "canned air", cool a component or clean a noisy contact, give a thought to all the chemistry in cans that brings you these superior service aids. - NM9J ■



## Area Repeaters

### Weekly Breakfasts



#### Wed. Morning Breakfast:

7:00 a.m. at

**Iron Horse Restaurant**

(Hwy 89 in Chino Valley)  
(N 34°43'56.5" W112°27'15.4")  
*informal – all are invited*

#### Breakfast at Masonic Lodge: 3rd Saturday of each Month at 9:00 a.m.

(1280 Willow Creek Road,  
2<sup>nd</sup> Floor; above Bank of America)  
*informal – all are invited*

\* Location data (per WGS84) provided  
by Fred Zimmermann, N7PJJ

Freq.	PL	Location	Owner/ Club	Auto- Patch	Links	Vo IP	Notes:
52.560-	100.0	Mt. Union	N7NGM			IRLP	Node 3301
144.390	Simplex						APRS- www.aprs.fi
145.290-	127.3	Mingus Mtn.	K7YCA				ARES/RACES
145.350-	162.2	Wildflower	W7QHC				Dawn
146.760-	131.8	Hayden Peak	N7SKO				WECOM INC
146.780-	91.5	Bill Williams Mtn.	K7NAZ			IRLP	BWMRC LITZ, 3178
146.880-	100.0	Prescott Heights	W7YRC				YARC
146.920-	162.2	Mount Ord	W7MDY				ARA
146.980-	162.2	Mt. Elden	W7ARA				ARA
147.000+	162.2	Mingus Mt.	K7MRG				MMRG
147.140+	162.2	Mt. Elden	W7ARA				ARA
147.220+	162.2	Mingus Mtn	W7EI				VVARA LITZ
147.260+	103.5	Mt. Union	K7YCA				ARES/RACES
147.260+	127.3	Mt. Francis	K7YCA				ARES/RACES
147.360+	162.2	Mt. Ord	W7MDY				ARA
442.150+	100.0	Mingus Mtn	WA7UID				MMRG
446.025	Simplex		N7NGM			Echo	
448.475-	100	Mt. Elden	W7ARA				ARA
448.875-	100.0	Mt. Elden	W7ARA				ARA
449.250-	192.8	Chino Valley	K7POF				
927.0875-	151.4	Mingus Mtn	WB7BYV				
927.3875-	151.4	Prescott	WB7BYV			Echo	ARA

**Y.A.R.C. IRLP NODE**  
**Node Number 3182**  
146.100 MHz No PL Tone

**T-Hunt Frequencies:** Pri-  
mary - 145.100 MHz  
Secondary - 146.565



For more Repeater Information & Listings refer to:

- [www.w7ara.org/Web/](http://www.w7ara.org/Web/)
- [www.azrepeaters.net](http://www.azrepeaters.net)
- [www.azfreqcoord.org/listings.htm](http://www.azfreqcoord.org/listings.htm)

## YAVAPAI AMATEUR RADIO CLUB

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PRESCOTT, AZ 86304

Visit us on the web at <http://www.w7yrc.org>

Many thanks to Dick Hughes, W6CCD, our Webmaster

