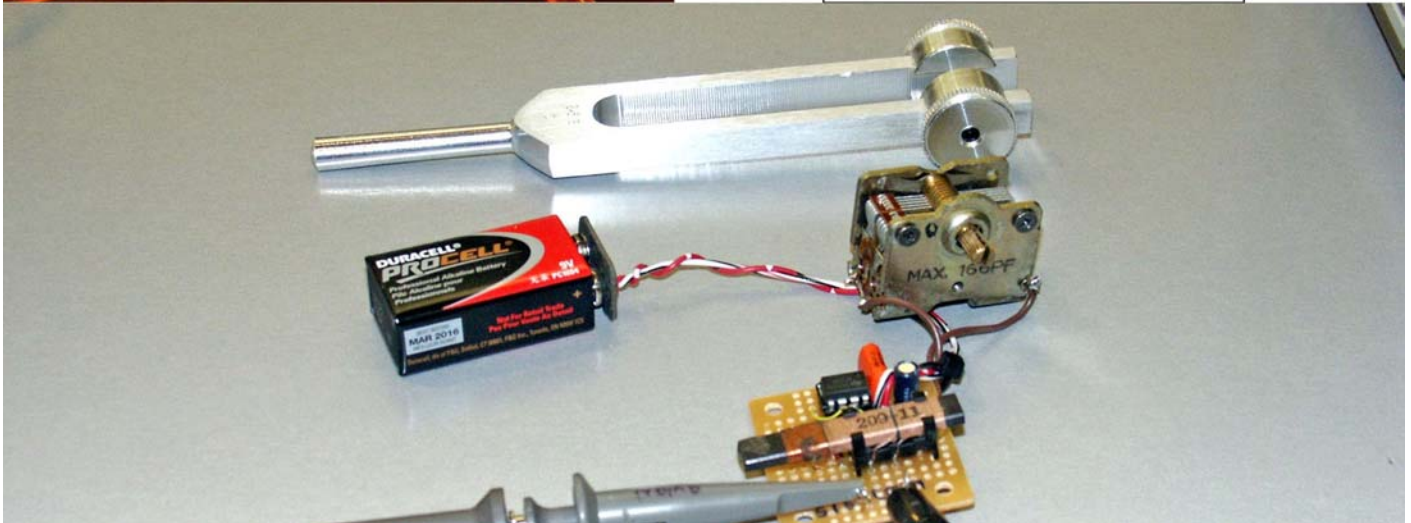
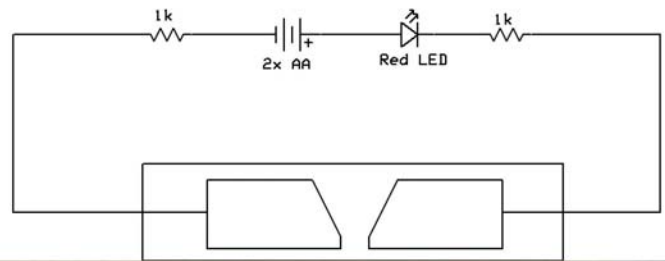
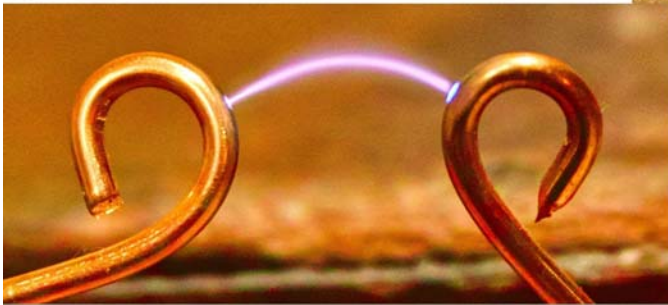
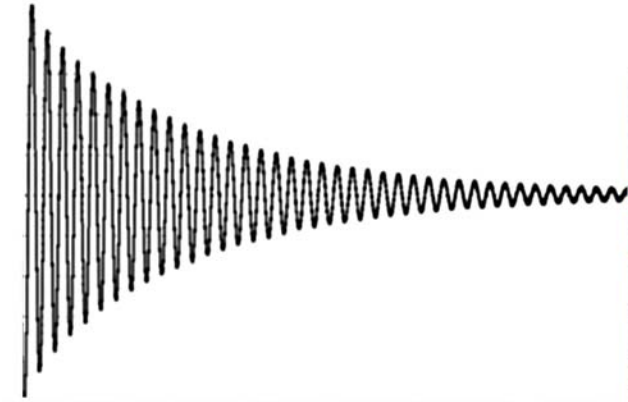


The *Microvolt*

December, 2014



Prologue

Publication: *The Microvolt* (USPS 075-430) is the official publication of the Utah Amateur Radio Club, Incorporated, 699 E. South Temple Ste 100, Salt Lake City, UT 84102-1282. It is published monthly except August. Subscription is included with club membership at \$17 per year. Single copy price is \$1.50. Periodicals postage paid at Salt Lake City, Utah. Postmaster: send address corrections to *The Microvolt*, c/o Dick Keddington, 5474 Hews Place, Taylorsville, UT, 84129-1416.

Deadline for submissions is the 24th of each month prior to publication. Submissions by email are preferred (k7hfv@arrl.net), but other means including diskettes and typewritten submissions can be mailed directly to: Gordon Smith, 632 University St., Salt Lake City, UT 84102-3213. Reprints are allowed with proper credits to *The Microvolt*, UARC, and authors. Changes in mailing address should be communicated to the Club Secretary: Dick Keddington, 5474 Hews Place, Taylorsville, UT, 84129-1416.

Club: The Utah Amateur Radio Club was organized under its present name in 1927, although its beginnings may date back as early as 1909. In 1928, it became affiliated with the American Radio Relay League (club #1602) and is a non-profit organization under the laws of Utah. It holds a club station license with the call W7SP, a memorial call for Leonard (Zim) Zimmerman, an amateur radio pioneer in the Salt Lake City area.

Meetings: The club meets each month except July and August. The meetings are held on the second Thursday of the month at 7:30 PM in the University of Utah's Warnock Engineering Building, generally in room 1230 or 2230, sometimes in 2250 or 105.

Membership: Club membership is open to anyone interested in amateur radio; a current license is not required. Dues are \$17 per year, including a *Microvolt* subscription. *The Microvolt* and membership cannot be separated. Those living at the same address as a member who has paid \$17 may obtain a membership without a *Microvolt* subscription for \$9. Send dues to the Club Secretary: Dick Keddington, KD7TDZ, 5474 Hews Place, Taylorsville, UT 84129-1416.

Contributions: Monetary contributions are gladly accepted. Send directly to the Club Treasurer: Chuck Johnson, 1612 W. 4915 S. Taylorsville, UT 84123-4244. For in-kind contributions, please contact any board member to make appropriate arrangements.

Repeaters: UARC maintains the 146.62- and 146.76- repeaters. The repeaters are administered by the UARC Repeater Committee. Comments and questions may be directed to any Committee member. The Lake Mountain repeater (146.76-) is IRLP node 3352. Instructions for IRLP use are on the club website.

Ham Hot-Line: The Utah Amateur Radio Club (UARC) has a Ham Hotline, 583-3002. Information regarding Amateur Radio can be obtained, including club, testing, meeting, and membership information. If no one answers leave your name, telephone number and a short message on the answering machine, and your call will be returned.

UARC 2014 Board

President: Clint Turner, KA7OEI	801 566-4497
Executive VP: Rick Asper, AC7RA	801 865-1693
Vice Pres: Brett Sutherland, N7KG	801 298-5399
Secretary: Dick Keddington, KD7TDZ	801 274-9638
Treasurer: Chuck Johnson, WA7JOS	801 268-0153
<i>Microvolt</i> Editor: Gordon Smith, K7HFV	801 582-2438
Asst. <i>Microvolt</i> Editor: Mary Alexander, KF7QVL	801 347-3220
Program Chairperson: Morris Farmer, AD7SR	801 278-4966
Program Chairperson: Chuck DeWitt, W7DTO	435 882-9002
Imm. Past Pres: Linda Reeder, N7HVF	801 364-7006

Committee Chairpersons and Members

“Book Lady”: Brett Sutherland, N7KG	801 298-5399
Historian: Ron Speirs, K7RLS	801 904-3587
Field Day Chair: (To be determined)	
License Trustee: Brett Sutherland, N7KG	801 298-5399
Repeater Engineer: Randy Finch, K7SL	801 556-7565
ATV Engineer: Clint Turner, KA7OEI	801 566-4497
Autopatch Engineer: Gordon Smith, K7HFV	801 582-2438

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IRLP Information

For information on using the club's IRLP node on the 146.76 repeater, check <http://user.utaharc.org/irlp>.

For late breaking news listen to the UARC Information Net Sundays at 21:00 on 146.62 or set your browser to: <http://user.xmission.com/~uarc/announce.html>

We are grateful to the management of XMission, our Internet Service Provider (ISP), for the donation of this Web-Page service.



For account information go to:
<http://www.xmission.com/>
Or call 801 539-0852



The Microvolt

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December Meeting: Elections and Ham Quiz

It's time to check your knowledge of ham radio trivia! The December UARC meeting will be held on Thursday, December 11, and will feature election of officers for 2015 as well as one of Gary Wong's famous ham trivia quizzes. Test your knowledge against the other half of the room and help us find officers that will lead UARC forward in the coming year.

The meeting will be on Thursday, December 11, at 7:30 P.M. in room 1250 (main floor, south side of the main corridor) of the Warnock Engineering Building.

UARC meetings are held on the second Thursday of each month at 7:30 P.M., in the Warnock Engineering Building on the University of Utah campus. The fall, 2014, meetings will be in room 1250, "the Stockham classroom" on the ground floor. See the [map](http://user.xmission.com/~uarc/meetmap.html) at <http://user.xmission.com/~uarc/meetmap.html> for information on finding the building. The room number varies depending on availability.

Of course, the meeting will include the "standard" meeting features:

- Availability of ARRL books from Brett, the "book lady"
- An opportunity to join UARC or renew your membership
- An opportunity to join ARRL or renew your membership
- The chance to meet face-to-face the people you talk to on the air
- The "Meeting after the meeting": A chance to enjoy pizza or other gastronomic delights with other hams. It happens at Litza's Pizza, 716 E. 400 South.
- The "Meeting *before* the meeting": A similar get-together for those who can leave work early enough to get there by 5:15 P.M. The December get-together will be at "The Village Inn," 910 E. 400 South in Salt Lake City.

Latest News

Our Cover

Our cover this month is a collage of devices and waveforms from our November meeting about early radio. Upper left is an oscillograph of a damped-wave transmission, showing how

different it is from a continuous wave (CW) transmission. In the upper right is a "coherer," possibly the earliest kind of radio receiver (although this is a recently built one). Below it is a diagram of the coherer circuit used for the demonstration. Center left is the spark from a spark-gap transmitter. At the bottom are devices

that generate damped waves: a tuning fork, and a “sparkless spark transmitter.” The latter generates a tone signal audible on an A.M. broadcast receiver, even though the only thing with broadcast band current is a simple tuned circuit.

Thanks to Clint Turner, KA7OEI, and Ron Speirs, K7RLS for the images.

Officer Slate

At the December meeting we will be having elections for 2015 officers. At the November meeting the nominating committee presented a slate of nominees which was exactly the 2014 officers. The floor was opened twice to further nominations, as required by the bylaws, but no further nominations were entered. Nominations will be accepted again at the December meeting.

The nominations as they now stand are:

President	Clint Turner, KA7OEI
Executive Vice-Pres.	Rick Asper, KC7RA
Vice-President	Brett Sutherland, N7KG
Secretary	Dick Keddington, KD7TDZ
Treasurer	Chuck Johnson, WA7JOS
Program Chair	Chuck DeWitt, W7DTO
Program Chair	Morris Farmer, AD7SR
Editor	Gordon Smith, K7HFV
Asstant Editor	Mary Alexander, KF7QZL

License Classes in Early 2015

Morris Farmer, AD7SR, and friends have license study classes coming up in 2015. The location of each class will be Morris home and the only cost will be the ARRL study guide for the appropriate class of license.

Technician: There will be a “Long Form” Technician course starting on January 12th. Morris will be joined by Bill Rouleau, AE7UI. The schedule will be Mondays at 7 P.M. for approximately 7 - 8 weeks. For more information

contact Morris at f.morris1@comcast.net or Bill at wrouleau@comcast.net.

General: A General class will be taught right after the end of the Technician class above, again on Mondays. The starting date will likely be in mid-March.

Extra: There will be an Extra course starting on Wednesday January 14th. The course will be taught by Morris and Ron Speirs, K7RLS. It will take place each Wednesday at 7 P.M., for approximately 15-16 weeks. For more information contact Morris at f.morris1@comcast.net or Ron at k7rls@comcast.net .

Parking at the “U”

While he was parking for our November meeting at the University of Utah, a bright-eyed UARC member spotted signs on the parking lots near our meeting place saying that parking rules (only vehicles with certain stickers allowed) would be enforced until 8 P.M. (instead of the previous 6 P.M.). This caused some momentary terror. Would we all find our cars ticketed? Fortunately, that wasn’t the case, but we did inquire and got more information.

The most important thing to know immediately is that the new hours won’t be enforced until June of 2015. The University is hoping to collect some parking fees for those taking evening classes. The signs are a bit ahead of the new policy’s implementation, as all the details haven’t been worked out yet.

To allow folks to park for UARC meetings without getting ticketed the club will need to pay a “special event” fee for each meeting. The exact amount of the fee hasn’t been determined yet, but is expected to be somewhere between \$20 and \$50.

Our treasurer, Chuck Johnson, WA7JOS, tells us that our finances are in good enough shape that we can afford the expense through the end of 2015. At that point we can look at the situation again to see if a small dues increase might be necessary.

When enforcement does go into effect, the Board will make sure it is announced in *The Microvolt* and on the web site which parking lot or lots our members need to use to avoid fines.

One might ask why we don't simply find another place to meet. The officers who went through the search last time we needed a new venue don't want to have to go through it again. Other facilities less well equipped than our rooms at the University often go for \$150-200 per use, so even at \$50 for parking, the University is still a bargain.

Until June, though, don't worry about the signs that say "8 P.M."

Field Day Help Needed

One of UARC's biggest events each year is our entry in the annual Field Day contest, when we set up a temporary HF station in the mountains and try to work as many stations as possible in 24 hours. We need volunteers to help plan the event and learn what is involved in the setup each year. In particular, we need someone who could be the Field Day Chairperson for 2015, or maybe the "Assistant Chairperson" for a year to learn the ropes (literally for some steps). If you would be interested in helping, contact any of the officers. Their contact information is on our inside front cover.

General Class Graduates Nov. 25th

by Morris Farmer, AD7SR

Our Technician class, that we reported on last month, were joined by a couple of others in the General course. The class ran for 8 sessions between October 20th and November 24th and they took the exam at Eugene McWherter's regular exam session on November 25th. I'm glad to announce that everyone passed the exam and Dorie Olds and Bill Walker "aced" the test! So far

two of them have decided to continue and take the Extra course that Ron Speirs and Morris Farmer will be teaching beginning on January 14th. Here are the pictures of our happy new 'Generals'. From left to right they are: Dorie Olds KG7OMF, Bill Walker KF7DNX, Brett Johnson KG7OME, Vic Adams KG7OMC, Elliot Moses KF7VUC.



Congratulations to all!

License Examination Schedule

Opportunities to test for new or upgraded amateur licenses

Date	Day	City	Contact Person	Phone
12/06/14	(Sat.)	Salt Lake City ^{1,4}	Gordon Smith, K7HFV	(801) 582-2438
12/06/14	(Sat.)	Logan	Richard D. Elwood, KE7GYD	(435) 753-4360
12/06/14	(Thu.)	Logan ¹	V. Phillip Rasmussen, N7JFG	(435) 770-0630
12/13/14	(Sat.)	Hurricane ²	Gary O. Zabriskie, N7ARE	(435) 674-2678
12/17/14	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
<i>(No last Tuesday test in Salt Lake City during December.)</i>				
01/21/15	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
01/21/15	(Wed.)	St. George ²	Gary O. Zabriskie, N7ARE	(435) 674-2678
01/27/15	(Tue.)	Salt Lake City ³	Eugene McWherter, N7OVT	(801) 541-1871

¹Preregistration required. Check with the contact person before the test session.

²More information at <http://www.dixieham.org/meetings.html>

³New location: Senior Center at the Columbus Center, 2530 S. 500 East

⁴More information at <http://www.utaharc.org/Exams/>

Check <http://user.xmission.com/~uarc/testinfo.html> for further exam information.

2014 Utah Field Day Results

The results from Field Day last June are in and UARC was the highest scorer from Utah this year. We have to qualify that by saying our score did not come close to those posted by other clubs in previous years, or even go as high as our own score in 2012. Our success was more due to a lack of normal competition than to a great improvement in our own operation. Still, we are happy to accept success however it comes.

It seems that the Utah DX Association had a problem finding a large enough supply of operators, while the Davis County club, for some reason, did not submit an entry. Thus, two of our usual biggest competitors had problems this year.

It is not very meaningful to compare raw scores of stations in different entry classes. Even with multiplier advantage, a single operator in the five-watt battery class can't be expected to make as many contacts as a club running three or four

transmitters at 100 watts each. The best way we have found to compare stations is by using their percentile within their operating classes. An entry's percentile is the percentage of entries that scored lower. For example, UARC entered the 3A class, meaning three simultaneous transmitters operated portable by a club or group. It was 38th place among the 315 3A stations in the country. That means 277 stations (315 - 38) scored lower than we did. So our percentile is $277/315 = 87.9$.

With all that said, we came out on top in both percentile and raw score. Thanks to all the operators and those who helped in other ways, such as setup/teardown, hauling equipment to and from the site, preparing Saturday dinner, logging, and getting Forest Service approval for the operation. We hope everyone had a good time.

Following is a tabulation of the Utah entries.

Utah 2014 Field Day Scores

Mobile and Portable Stations (in order of percentile)								
Call	Class	Score	QSOs	Place	out of	Pctl	Pctl 2013	Group or Club Name
W7SP	3A	5,166	1,745	38	315	87.9	84.2	Utah ARC
WR7Q	2B2	217	431	35	276	87.3	—	
K7UM	3A	4,420	1,337	53	315	83.2	97.8	Utah DX Association
K7JEO	1B1	1,394	572	20	104	80.8	58.0	
W7JEX	1B1B	1,570	152	40	140	71.4	42.4	
K7UT	1AB	2,190	236	12	25	52.0	—	Wolf Creek Crazyies
W7IVM	5A	429	39	54	87	37.9	58.1	Bridgerland ARC
W7BAR	4A	2,082	466	99	150	34.0	10.8	Borderline Amateur Radio Club
WA7BME	1B1	342	23	74	104	28.8	61.8	
W7SU	2A	1,006	274	303	392	22.7	44.6	Ogden ARC
W7DRC	3A	1,230	469	258	315	18.1	12.5	Dixie ARC
KF7WGL	1B1B	220	14	126	140	10.0	—	
KB0LQJ	2AB	735	9	16	17	5.9	—	U of UT ARC

Fixed Stations (in order of percentile)							
Call	Class	Score	QSOs	Place	out of	Pctl	Pctl 2013
K9JWV	1E	2,320	217	35	276	87.3	—
K7EA	1E	1,354	276	71	276	74.3	79.3
NA7UT	1E	1,295	209	75	276	72.8	—
WI7J	1E	715	113	120	276	56.5	—
AD7YV	1E	368	59	187	276	32.2	—
N7HZB	1E	255	1	213	276	22.8	—

ARRL members can explore the results further at http://www.arrl.org/results-database?event_id=58360.

Member of the Month

Roya M. Edwards, N0RME

By Linda Reeder, N7HVF

This month we are featuring Roya M. Edwards N0RME. She wanted a vanity call in order to have her call sign have the initials of her name in it. Her Novice call sign was KD6RME. When she got her Technician license, her call sign was changed to N0RME.

Roya has been in amateur radio for 20 years. Her husband, Shon Edwards, K6QT, got her interested in amateur radio. Shortly after they were married Roya and Shon took a ham radio class together in Provo. They even received their first licenses at the same time.

Roya is very active with the emergency response team. She checks into the emergency nets weekly. She participates in emergency drills. Roya used to work at The Salt Lake Regional Hospital as a switchboard operator. She also worked with the hospital two-way radios. This really sharpened her skills in handling emergency situations. She worked there for five years. She now teaches the fourth grade at Sand Springs Elementary School.

When she was first licensed, Roya was attending BYU where she received her degrees in

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elementary education.

Roya enjoys helping her children participate with amateur radio in public service events such as the 24th of July parade. She said it is really great having her children involved in amateur radio. When I asked what her favorite thing in amateur radio was she said it was talking with family and friends, keeping communications open when going on trips. She operates on two meters and 70 centimeters. She said the reflector is great because you can communicate all around the world.

Roya is a member of UARC. She is also member of the Davis County amateur radio club. Roya enjoys reading, especially mystery books.

Roya we wish you the best in all of your endeavors.

W1AW Portable Schedule

The year 2014 is the centennial year for the American Radio Relay League (ARRL). An on-air year-long celebration of the anniversary is in progress. As part this celebration, stations in various states will be signing the W1AW call and looking for contacts. The schedule for the final several weeks is as follows:

Dates	State	State
12-10	Indiana	Montana

12-17	Maryland	Hawaii
12-17	Georgia	
12-24	Pennsylvania	Iowa

For those who have yet to get their “Worked All States” (WAS) certificate, this year presents an opportunity to find all fifty states on the air from easily-heard stations on the HF bands. For full details see:

<http://www.arrl.org/centennial-qso-party>