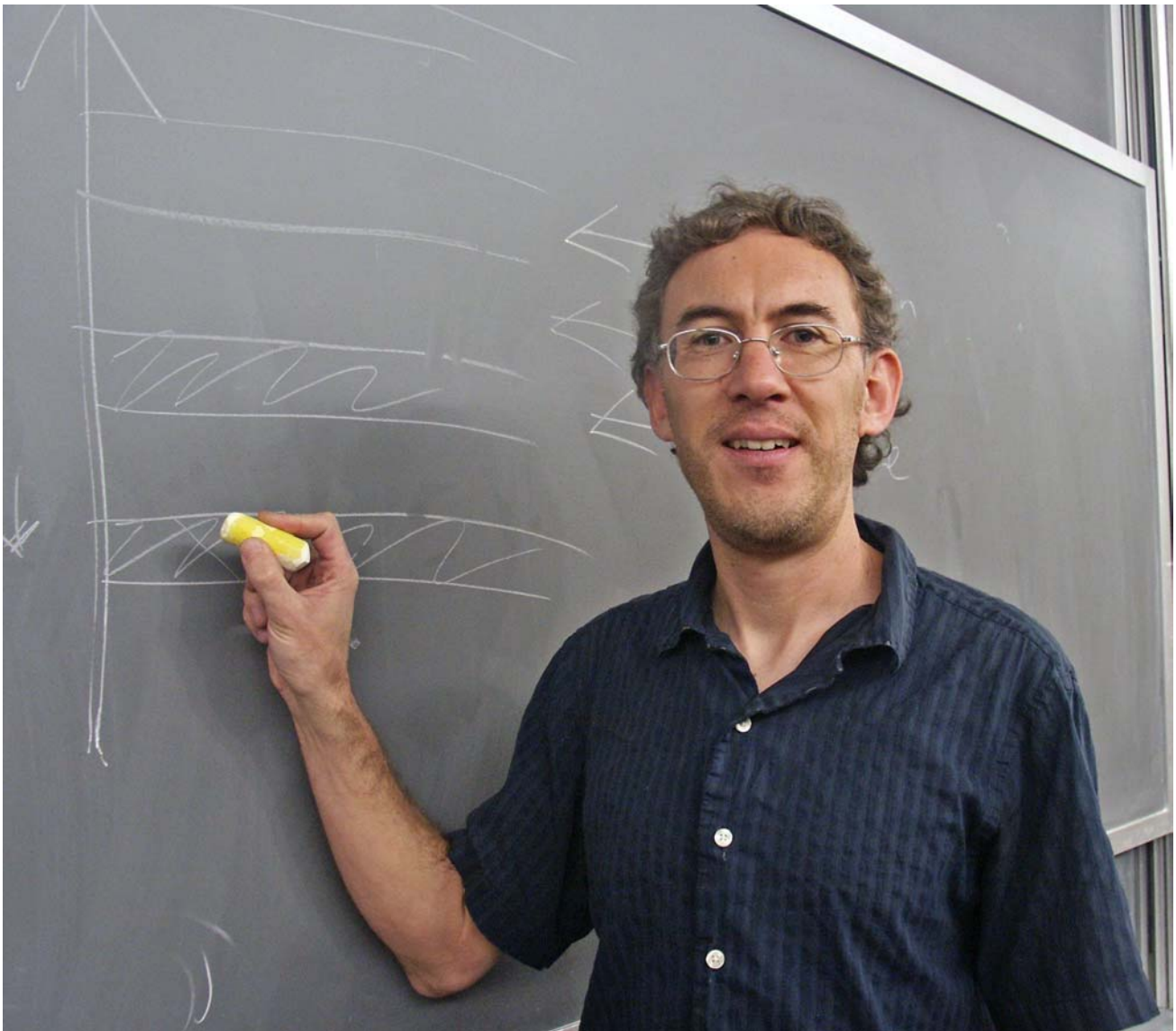


The *Microvolt*

January, 2017



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 \$20 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 \$20 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 \$20 may obtain a membership without a *Microvolt* subscription for \$12. 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 2017 Board

President: Clint Turner, KA7OEI	801 566-4497
Executive VP: Lonnie Oaks, K7LO	801 255-1225
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Treasurer: Chuck Johnson, WA7JOS	801 268-0153
<i>Microvolt</i> Editor: Gordon Smith, K7HFV	801 582-2438
Asst. <i>Microvolt</i> Editor: Rick Asper, AC7RA	801 865-1693
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

Contents

January Meeting: All About DX.....	3
Latest News.....	3
Member of the Month.....	7

IRLP Information

For information on using the club's IRLP node on the 146.76 repeater, check <http://www.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



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January Meeting: All About DX

Have you ever wanted to get into DX? UARC's January meeting, to be held Thursday, January 12, 2017, will be the perfect opportunity to find out how. "DX" is the CW abbreviation for "distance" and on HF it generally means working foreign countries. We will have an avid DXer, Bob Carter, WR7Q, telling us how to get started.

Bob's presentation will tell what DXing is about, along with where to find it, and why we go after it. He has a number of tricks to be of help in trying to make contact with the DX stations and will give us a brief overview of propagation and how solar conditions affect DX. It will certainly be entertaining and likely educational. Bob is currently the President of the Utah DX Association and has DXCC on 10 thru 40 meters (meaning he worked at least 100 countries on each of those bands) and numerous other DXing awards.

It is also interesting to note that Bob entered Field Day last June as a portable station and his score had the highest percentile within its class of any Utah portable.

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 meeting, during the University's spring semester of 2017, will be in room 1230, the "Duke" classroom. To find the room, if you enter through the main (east) door, just go straight down the hall to the last classroom on the right. See the map at <http://user.xmission.com/~uarc/meetmap.html> for information on finding the building. (The room number varies through the year depending on availability.)

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

- Availability of ARRL books from Brett or John, the "book ladies"
- 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. It is held at "The Village Inn," 910 E. 400 South in Salt Lake City.

Latest News

Our Cover

Our cover this month features Gary Wong, AB1IP, who presented our December meeting and

challenged us all with his annual ham radio quiz. Questions ranged from what band gap is important in a semiconductor to what call was used by Jared Smith (our November presenter) on the rare

Pacific island he visited. Gary's December quiz has become a UARC tradition.

License Classes Begin in January

Morris Farmer, AD7SR, will be hosting classes for anyone interested in preparing for the license exam for any of the three classes of amateur operator's licenses. The starting dates for the three classes are as follows:

Class	Day	Start Date
Technician	Mon	01-16-17
General	Tue	01-17-17
Extra Class	Wed	01-18-17

All courses will be taught in the "shack" of Morris Farmer, AD7SR. The Technician and General courses run from 7-9 PM for about 8 weeks. The Extra course runs for approximately 16 weeks. A license exam is offered at the end of each course. Morris Farmer, AD7SR, and Bill Rouleau, AE7UI, teach the Technician and General courses. Ron Speirs, K7RLS, and Morris Farmer, AD7SR, will teach the Extra course. There is no charge for the course except for the ARRL *License Manual* which will be available at the first couple of classes.

Contact Morris if interested at: f.morris1@comcast.net.

Classes Offered in Orem

Noji Ratzlaff, KN0JI, tells us of amateur license courses offered by the City of Orem. All courses are held on Tuesdays at the Orem Public Safety Traffic Training Room, 95 E Center St. Sign up at psclass.orem.org for \$10 per person per course. Instructor is Noji Ratzlaff, KN0JI. Students must bring a smart phone or laptop to each class session; nothing else needed at class time, but

your brain would be helpful. There are no prerequisites for any of the courses. Previously licensed hams are welcome to sign up for a fun refresher, but they have to pay just like everybody else.

Technician: Three nights, 6:30 to 8:30 pm (Jan 17, 24, 31)

General: Four nights, 6:30 to 8:30 pm (Mar 14, 21, 28, Apr 11)

Technician : Four* nights, 6:30 to 8:30 pm (May 23, 30, Jun 6, 13)

General:** Four nights, 6:30 to 8:30 pm (Jul 25, Aug 1, 8, 15)

Technician: Three nights, 6:30 to 8:30 pm (Sep 26, Oct 3, 10)

* An extra day is added for a special hands-on exercise night ahead of the Orem City Drill

** This General course can be converted to an Amateur Extra course if enough people express interest in one, just like last year. In that case, each of the four classes will run from 5:30 to 9:00 pm instead, including a 73-second break.

Questions? Call or text 801-368-1865 or email <mailto:kn0ji@arrrl.net>

Program Suggestions Wanted

Our program chair-persons have the daunting task of finding interesting speakers on interesting topics each month for the regular UARC meetings. They are always interested in suggestions of what facets of the hobby might be interesting to you.

Our hobby has a wide variety of activities available, so wide, in fact, that most of us will not have time, energy, or funds to try a large percentage of them. There's DX, ragchewing, traffic handling, public service events, portable operation, microwave, meteor scatter, satellite

operation, homebrew, and experimentation with new modes, just as a start. It's fun to hear about some of the ones in which we've never been involved and even occasionally get inspired to try one.

So which ones would you like to hear more about? Do you know of someone who would be a great speaker? Let our program chairpersons know. Check the inside front cover for their contact information.

Amateur Radio Parity Act

The "Amateur Radio Parity Act," is a bill in Congress that seeks to guarantee the right to erect antennas to hams who live in communities with deed covenant restrictions. After a promising success in the House of Representatives, it met a disappointing obstacle in the Senate. On December 9, ARRL reported:

The Amateur Radio Parity Act, H.R. 1301, died an unbecoming death as the 114th Congress of the United States drew to a close today. After having passed the House of Representatives on a unanimous vote, the bill stalled in the Senate due to the intervention of only one member, Sen. Bill Nelson (D-FL).

Over the course of the past year, Sen. Nelson has received thousands of e-mails, letters, and phone calls from concerned constituents asking for his support of H.R. 1301. Numerous meetings were held with his senior staff in an effort to move the legislation forward. Negotiations, which led to an agreement with the national association of homeowner's associations and publicly supported by CAI and ARRL, were brushed aside by Sen. Nelson as irrelevant.

In a final meeting with the Senator's staff earlier this week, it became clear that no matter what was said or done, the Senator opposed the bill and refused to allow it to move forward. Unfortunately, as the bill did not receive floor time, the only manner in which it could get passed in the Senate would be through a process that

required unanimous consent, which means no one opposes the bill.

The legislation will be reintroduced in both houses of Congress after the 115th Session begins in January. We have already been in contact with the sponsors of the bill to allow for an early introduction, which will give us more time to obtain success. We believe that we can get his bill adopted given the fact that we were inches away from crossing the goal line. We will continue to need the support of the membership, particularly in Florida, as we go forward through the next year.

NPOTA Tops One Million QSOs

The year 2016 was the centennial of the National Park Service and it was celebrated in the amateur radio world with the operating event "National Parks on the Air" (NPOTA). Amateurs could participate either by "activating" a national park or any of the other park service entities (national monuments, national grasslands, national historic sites, etc.), or by working as many as possible of the "activators."

Now that the year is over, ARRL has reported that the total number of QSOs has exceeded one million as of the week of December 18.

Sean Kutzko, ARRL staff member and administrator of NPOTA, has said that NPOTA became one of the most popular events in the history of the League. Activity on an associated Facebook page seemed to drive a surge of activity, particularly in the last three months, when it became clear that the one-million goal was within reach. He indicated that the rate of uploading QSOs to Logbook of the World (LoTW) hit 25,000 per week during the final months.

Of the 489 NPS units available for activation, 460 were activated at least once during the year. Of the chasers, nearly 150 worked 400 or more each of the activated units. Participants operated from all 50 states and over 100 countries. Kutzko said,

“We heard from countless amateurs who learned something about our country while operating from an NPS unit and experiencing ‘the other side’ of a pileup. There will be other on-air events from ARRL, but National Parks on the Air was a once-in-a-lifetime opportunity. I don’t think there will ever be anything quite like it in Amateur Radio again. I will miss it.”

VHF Society Swap Meet

It has not yet been officially announced, but we believe there is an excellent chance that the annual Utah VHF Society Business Meeting and Swap Meet will be held on the morning of Saturday, February 25, 2017. This event is typically the largest swap meet held in Utah each year and features a large variety of equipment for sale and trade.

The VHF Society gives financial support to a number of repeaters spread across Utah, including most of the Utah repeaters that are part of the

Intermountain Intertie. Many of the repeaters are operated in small rural areas that don’t have a large membership to support keeping a repeater on the air. UVHFS provides a means that some funds from the more populous areas of the state can be used to support repeaters in parts of the state that very much need repeater coverage.

Another function of the VHF Society is to provide frequency coordination for the state. One of the officers elected each year is the Frequency Coordinator, who makes sure that multiple repeaters are not operated on the same frequency from sites that will cause them to interfere with one another. This process is trickier in states like Utah with repeaters on high mountain peaks have wide coverage areas and potentially wide interference areas.

Mark February 25 on your calendar and watch for announcements on the Society’s web site: <http://www.utahvhfs.org/>.

License Examination Schedule

Opportunities to test for new or upgraded amateur licenses

Date	Day	City	Contact Person	Phone
01/18/17	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
01/18/17	(Wed.)	St. George ²	Gary O. Zabriskie, N7ARE	N/A
01/21/17	(Sat.)	Bluffdale ⁵	Erik D. Swanson, KG6GOP	(510) 684-3669
01/31/17	(Tue.)	Salt Lake City ³	Garth Wiscombe, W7PS	(801) 558-5936
02/01/17	(Wed.)	Ogden	Rick Morrison, W7RIK	(801) 791-9364
02/04/17	(Sat.)	Salt Lake City ^{1,4}	Gordon Smith, K7HFV	(801) 582-2438
02/11/17	(Sat.)	Hurricane ²	Gary O. Zabriskie, N7ARE	N/A
02/15/17	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
02/15/17	(Wed.)	St. George ²	Gary O. Zabriskie, N7ARE	N/A
02/28/17	(Tue.)	Salt Lake City ³	Garth Wiscombe, W7PS	(801) 558-5936

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/>

⁵1 P.M., Bluffdale Firestation, 14350 S. 2200 West

Waiver of 15 dB Rule Denied

The FCC has denied a request for the FCC to waive the rule that forbids linear amplifiers to have more than 15 dB of gain. A company called Expert Linears America LLC wanted to sell linears made in Italy and made the request. A petition to eliminate the rule entirely (RM-11767) was already pending and most comments have been positive, but some have objected to the change. With the fate of the petition still uncertain, FCC said that the waiver would “prejudice the

rulemaking proceeding and prematurely dispose of commenters’ concerns” and “provide an unfair market advantage for one equipment model over other manufacturers’ RF power amplifiers that would still be limited.”

The gain limitation rule was originally created in order to avoid letting manufacturers create amplifiers that might easily be used illegally by citizens’ band operators. There is now a feeling that that issue is no longer a problem.

Member of the Month Robert Arbrecht, KE7QEQ

By Linda Reeder, N7HVF

This month we are featuring Robert Arbrecht, KE7QEQ. Robert received his first amateur radio license, a Novice license, in 1958 when he was in high school. His Novice call sign was KN7HEM. Robert had an aircraft receiver which weighed between 20 and 30 pounds and went up to 18 MHz. His transmitter was a Heathkit DX-40. Robert put it together and finally got it running. He had antennas all over the place in his back yard. But, Robert never felt confident with the Morse Code, so amateur radio was put on the back burner for awhile as Robert devoted all of his time to college, career, and raising a family.

For awhile Robert worked as an electrical engineer in Phoenix, Arizona. Then he spent a number of years as an electrical engineer and a computer scientist in Milwaukee, Wisconsin. When Robert came back to Salt Lake City he taught physical sciences, astronomy, and computer classes for 20 years at a junior high school.

Robert and his wife, Sherrie, have four daughters and they are scattered all over the country. Robert

and Sherrie served a mission in London, England. Robert currently attends the family history library in Midvale, where he is working hard on genealogy.

In 2007 Robert finally got back into amateur radio, taking the classes offered by Morris Farmer, AD7SR, and Ron Speirs, K7RLS. In December of 2007 Robert obtained his Technician license; in 2008, his General, and in 2009, his Extra.

Robert's favorite area of amateur radio is building things. Robert got a DX-40 on Ebay and fixed it up, but it hasn't been on the air yet. He built a patching network box for tuning antennas and he built an antenna switch. Other projects include a 70-watt transmitter and a 40-meter QRP rig. Robert also built a homebrew mmr-dj which is a QRP cw rig. He accidentally overloaded the front end and is trying to fix it right now. Robert has participated in several homebrew nights where he demonstrated a solar power battery charger and a trainer for learning the Morse Code.

The Microvolt January 2017

Robert is a member of UARC and has attended many steak fries. He also is a member of the Cottonwood Heights group. They do disaster work with the city for emergency preparedness. They have a net every Thursday night at 9 P.M. Besides amateur radio Robert enjoys reading and astronomy. He said he wants to avoid hard labor.

Robert, congratulations on getting your Extra Class license. We wish you the best in all of your projects.

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Robert Arbrecht, KE7QEQ (Photo by K7RLS)



Kenneth Fackrell, N0UQ (December "Member of the Month")