

The *Microvolt*

September, 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 Kedddington, 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 Kedddington, 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 Kedddington, 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

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"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://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



The Microvolt

The Official Publication of the Utah Amateur Radio Club, Salt Lake City, Utah
Volume 60, Issue 8, September, 2017

September Meeting: Living and Communicating off the Grid

How can you get the most out of solar power and batteries for portable operation and emergencies? This will be the topic for our September 14 UARC meeting. Our presenters will be a father and son team: Larry Jacobs, WA7ZBO, and John Jacobs, W7DBO.

There are many issues to consider including what battery technology is best, how you can get free heat for cooking, what antennas can be backpacked, and what radio equipment can make the most efficient use of solar power.

John will cover solar panels, batteries, and controllers, while Larry will go into radios, antennas, and food.

The meeting will take place at 7:30 P.M. on Thursday, September 14, in room L-103 (level L1) of the Warnock Engineering on the University of Utah campus. Take the elevator near the southwest corner of the building. (The elevators near the main entrance don't go there.)

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. 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 is from the July 15 Steak-Fry in Big Cottonwood Canyon. Prominent is our master

chef, Vice-President Bruce Fereday, KF7OZK. Attendance was about 60 and weather was good.

Thanks to all who came out.

Tech and General License Classes

Morris Farmer, AD7SR, along with Bill Rouleau, AE7UI, will be conducting classes for those interested in obtaining the Technician or General class operator's licenses. The Technician class will begin on Monday, September 18, and the General class on Wednesday, September 20. Both start at 7 P.M. and run for eight to nine weeks. There is no charge except for the text that will be used, the *License Manual*, published by ARRL. It will be available at the class for \$30.

The last session will have volunteer examiners available for those who wish to take the Exam. The normal exam cost of \$14 will apply.

For further information or to sign up, send email to <mailto:f.morris1@comcast.net>.

Homebrew Night: October 12

If you haven't finished your project for this year's Homebrew Night, it's time to get into high gear.

UARC's annual homebrew night, the night when creators of their own amateur radio equipment get to show it off, is coming up on Thursday, October 12. Throughout the history of ham radio, amateurs have been known for their abilities to build equipment from scratch. We hope that by October our current members who have been continuing the tradition will be ready to show their 2017 projects to the rest of the club.

Anything that can be used in amateur radio, was constructed by the person showing it, and has not been shown at a previous UARC Homebrew Night, is eligible to bring. Possible items include power supplies, antenna tuners, electronic keyers, fixed and mobile antennas, audio preamps, rotor controllers, and power amplifiers.

If your project is too large or too permanently mounted to bring in, just bring in photos and/or diagrams to show what you have done. We will

have a digital projector and a Windows computer available.

That's Thursday, October 12. Now get to the hamshack and get building!

Swap Meet: Saturday September 16

Want to attend a swap meet in good weather without needing a winter coat and snow tires? The Davis County Amateur Radio Club (DCARC) may have the answer. They will be holding their annual fall swap meet on Saturday, September 16, starting at 8 A.M. There is no charge for entry or to display items for sale. All are welcome.

Location is the Bountiful City Park on the corner of 400 North and 200 West in Bountiful. Take the Bountiful 400 North exit from I-15 and look for the park on your left.

Scott's Hill Repeater Gets New PA

If you had trouble hearing UARC's 146.62 repeater on Scotts' Hill during August, there may have been a good reason. The Scotts' Hill repeater runs synchronously on 146.62 with the Farnsworth Peak repeater. For those listening in the Salt Lake Valley it is hard to tell if the Scotts' site, located between Brighton and Park City, is transmitting, because the Farnsworth transmitter is much stronger. Mike Collett, K7DOU, who lives in Park City and relies on Scotts' to hear the '62 traffic pointed out that he could barely make out '62 in places where it was normally usable. Guessing that the GE Power Amplifier ("PA") module had failed, Clint, KA7OEI, was able to get another PA from John Lloyd, K7JL.

On Saturday, August 26, Clint and the editor went to the site with replacement PA in hand and found that the guess was correct. We believe all is now working well. The Scotts' receiver was working fine through the outage and relaying what it heard to the Farnsworth site, but those out of Farnsworth range could not tell they were being heard.

How We Did on Field Day

One of the most popular club activities each year is UARC's entry in the national Field Day event. Below is the tally of points from this year's Field Day. We did a bit better than in 2016, but not as well as our all-time high in 2011.

One thing that stood out is the fact that both this year and last we made more SSB contacts on the 40-meter band than on 20 meters. One would normally expect the reverse. So what made the difference? Band conditions? Not likely. The CW station did well on 20 and found the band full of strong signals. Operator proficiency? Maybe, but

it seems unlikely that all the good operators somehow gravitated toward the 40-meter tent and the less skilled to the one for 20 meters.

We are guessing that the answer may be that our A-3 Yagi that we use on 20 meter SSB is not working as well as the A-4 that we use on CW. Maybe a tuning session is in order, similar to the one Chuck, WA7JOS, and Clint, KA7OEI, did on the A-4 a couple of years ago.

Any volunteers to help plan the Field Day 2018 event?

UARC 2017 Field Day Contacts and Scoring (2016 points in parentheses)

Band	CW		Digital		SSB		Total		Bonus Points	2017	2016
	2017	2016	2017	2016	2017	2016	2017	2016			
									Emergency Power	300	
80	110				141	(160)			Public Info Table	100	
40		(471)			938	(544)			Media Publicity	100	
20	458	(226)	101		78	(95)			Message Origination	100	
15			7						Natural Power	100	
6					2	(22)			W1AW Bulletin	100	
Total Contacts	568	(697)	108		1159	(832)	1757	(1529)	Educational Activity	100	
Contact Points	1136	(1394)	216		1159	(832)	2511	(2226)	Safety Officer	100	
Power Multiplier	X2						5022	(4452)	Web Submission	50	
Bonus Points							1050	(970)	Total Bonus	1050	(970)
Grand Total							6072	(5422)			

New Form Asks “Felony Question”

From the *ARRL Letter*, August 24, 2017

The NCVEC Form 605, used to apply for new licenses, operator class upgrades, and other changes through Volunteer Examiner Coordinators (VECs), has been updated to include the question “Has the applicant... ever been convicted of a felony by any state or federal court?” This brings the NCVEC form in line with the FCC’s own form 605 and with an FCC requirement to evaluate an applicant’s qualifications to hold any FCC-issued license.

An applicant’s response and explanation to the felony question — now included on NCVEC Form 605 — will be used to determine eligibility to be a Commission licensee. If the answer to the felony question is “yes,” the applicant must submit to FCC — separately from NCVEC Form 605 — a statement (the FCC calls it an “exhibit”) explaining the circumstances. Such applications

will be held for a basic qualification review, something the FCC already does for other licensed radio services. The FCC’s Wireless Telecommunications Bureau has said that an affirmative answer to the felony question does not mean that an application will be denied automatically. An applicant’s answer to the felony question will be available via the Universal Licensing System (ULS), unless the applicant requests separately that it be kept confidential.

Applicants must answer the felony question only when filing NCVEC Form 605 or FCC Form 605 for a New, Amendment, Modification (upgrade or call sign change), or Renewal/Modification (changes at renewal time). The question does not have to be answered if the applicant is filing a renewal or an administrative update (change of address, name, e-mail address, etc).

Solar Eclipse QSO Party a Success

The 2017 Solar Eclipse QSO Party (SEQP) seems to have been a success. The Reverse Beacon Network (RBN) showed over 670,000 spots and the PSK Reporter reported over 542,000. The purpose of having a contest-style event during the solar eclipse on August 21, was to gather information about possible propagation changes due to the absence of sunlight along with X-rays and ultraviolet light during the eclipse. It was hoped that a large number of reports of useful paths at specific times could be used to infer changes in the upper atmosphere.

The event was sponsored by Ham Radio Science Investigation (HamSCI). Nathaniel Frissell, W2NAF, from that organization, reported that the event went well and he heard a lot of on-the-air activity during the eight hours that SEQP was running.

“It will take some time to get a more scientific analysis of this, but we should have some results by the middle of this semester,” said Frissell, who is an associate research professor at the New Jersey Institute of Technology.

“Despite more than 60 years of research, open questions remain regarding eclipse-induced ionospheric impacts,” Frissell explained in a paper, “HamSCI and the 2017 Total Solar Eclipse,” that he’ll deliver this year at the ARRL-TAPR Digital Communications Conference (DCC).

Those who participated in the event are encouraged to submit logs by September 30. Forms are available at <http://hamsci.org/seqp>.

License Examination Schedule

Opportunities to test for new or upgraded amateur licenses

Date	Day	City	Contact Person	Phone
09/06/17	(Wed.)	Clearfield	Mike Youngs, KK7VZ	(801) 573-3922
09/20/17	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
09/20/17	(Wed.)	St. George ²	Gary O. Zabriskie, N7ARE	N/A
09/25/17	(Mon.)	Taylorsville ^{1,3}	Garth Wiscombe, W7PS	(801) 558-5936
10/04/17	(Wed.)	Ogden	Rick Morrison, W7RIK	(801) 791-9364
10/07/17	(Sat.)	Salt Lake City ^{1,4}	Gordon Smith, K7HFV	(801) 582-2438
10/12/17	(Thu.)	Logan	Richard D. Elwood, KE7GYD	(435) 770-7050
10/14/17	(Sat.)	Hurricane ²	Gary O. Zabriskie, N7ARE	N/A
10/19/17	(Thu.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
10/18/17	(Wed.)	St. George ²	Gary O. Zabriskie, N7ARE	N/A
10/30/17	(Mon.)	Taylorsville ^{1,3}	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 is the Taylorsville City Hall, 2600 Taylorsville Blvd, Room 110

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

More details at <http://user.xmission.com/~uarc/testinfo.html>.

Member of the Month

John Jacobs, W7DBO

By Linda Reeder, N7HVF

This month we are featuring John Jacobs, W7DBO. John has been in amateur radio for 20 years. He is the third generation of his family to obtain an amateur radio license. John's father, Larry, WA7ZBO, received his license in 1960 and Larry's father, Jim, influenced him to get into the hobby. Jim's call sign was W7DBO and Jim had his Advanced license. When John obtained his Technician license in 1996 his call sign was KC7WVP. Years later, when John's grandfather passed away, John got his grandfather's call sign, W7DBO. John now has his General license and is working on obtaining his Extra.

John loves putting together ham radio events. John helped his father, Larry, WA7ZBO, bring back the

WIMU hamfest. (WIMU stands for Wyoming, Idaho, Montana, and Utah.) In years past these states would take turns hosting this event. This was a very popular event which took place every year in August at Mack's Inn in Idaho. Unfortunately Mack's Inn changed hands and it burned down. WIMU wasn't the same after that.

The last time this event was held was in Park City in 1997. John's father wanted to bring it back with the result that it was held June 16 through the 18th of this year. Location was the Garden City Conference Center and Park on the shores of Bear Lake, Utah.

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John said 130 people attended and that this was the most they could have because this place just wasn't big enough. The grand prize was the Kenwood THS-D74A, a good handheld radio. (I know because I have one.)

John works for the Public Police Academy in technology and computer systems. The public Police Academy donated money for the classrooms for the Great Salt Lake Hamfest last year in July. It was held at the Salt Lake Community College campus in Sandy. John said 709 people attended this event.

John is very active in digital communications. He put together a digital communication conference in March of this year and plans on doing it again next year. John enjoys ham radio podcasting in the field. He shares this with others and shares with the ham radio 360. John volunteers at the 100 public service event, swap meets and is the training manager for Logan. John is a member of UARC and the ARRL.

John and his wife, Lynne Marie, have two sons and one daughter. John says his wife is very Supportive of him in amateur radio. He is very

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happy about that. Four years ago John bought a 40-foot tower from a ham who is now a silent key. He put it up in his back yard. He has an ICOM 7300 and is anxious to get it up and running. John also wants to learn the Morse Code. He enjoys having Field Day with his family. This year John and his family camped two miles from UARC.

John is now working on getting his master's degree in education at the Western Governors University on line. John is a gardener and teaches gardening classes. He says that Larry Sagers was his mentor and he really misses him.

John we appreciate your contributions to amateur radio



John Jacobs, W7DBO