

The *Microvolt*

March, 2015



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 2015 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://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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March Meeting: Getting Off the Grid

You have your home station well-equipped for emergency operation, but what happens when an emergency causes the power to fail? Many hams overestimate how long they can operate with available battery capacity or generator fuel. How could you get along indefinitely without any help from the power company, in other words, get “off the grid”?

For our March 12 meeting we have a speaker with extensive experience in solar power and other backup schemes, Jim Brown, NA7G. Jim put together his own solar and diesel scheme at a cabin that is sufficiently isolated that commercial power wasn't ever a practical option. He will be showing us some schemes and considerations for various solutions to the problem of independent power.

Solar power systems that are off-grid (no commercial power available), must gather and store solar energy. How do they work? What are their advantages and limitations? What are the battery and maintenance issues that must be considered? These will be discussed along with the solar power system/generator interface and how it should be integrated, as well as generator sizing issues.

Next, we will discuss how home, or grid-tied, solar power systems work, and how they differ from off-grid systems. Generators that are integrated with home wiring require prior planning and the use of a transfer switch, sometimes with extensive rewiring of the house. Other potential solutions are available, and will also be discussed, as well as things *not* to do.

The meeting will be on Thursday, March 12, at 7:30 P.M. in room 1230 (the “Duke” classroom) 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 spring, 2015, meetings will be in room 1230, “the Duke 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 March get-together will be at “Charlie Chow's Dragon Grill,” 255 E. 400 South in Salt Lake City.

Latest News

Our Cover

Our cover this month is from our February meeting on how to build and tune a dipole. At the top is UARC President, Clint Turner, KA7OEI, keeping the video camera on the MFJ analyzer to display on the big screen. In the lower left is Program Chairperson, Morris Farmer, AD7SR, the speaker. In the lower right is our other Program Chairperson, Chuck DeWitt, W7DTO, making adjustments to a six-meter dipole. Thanks to K7RLS for the photos.

General Class to Start March 23

There will be a course for upgrade to the General class license beginning on March 23rd (note new date). The course will run for about seven or eight weeks on Monday evenings beginning at 7 P.M. and will be taught at Morris Farmer, AD7SR's home. For further information contact Morris Farmer at f.morris1@comcast.net.

Field Day Help Needed

We continue to be in need of folks to help plan our entry in the national Field Day contest coming up on June 27 and 28. We will be making contacts around the country for 24 hours from a portable station near Payson Lakes. If you would like to join the committee, contact one of the officers. (See the inside front cover for a list.)

Parking at the “U”

A reminder that up through UARC's June meeting you can ignore signs on the parking lots at the

University of Utah saying that parking rules are enforced until 8 P.M. The latest word is that the “U” is considering several options for procedures and pricing, but no final decision has been made. We are assured that we will be taken care of for our May and June meetings. If special parking procedures will be needed starting in September, we will get the word out via *Microvolt*, web site, and Yahoo mailing list.

VHS Society Meeting Report

The Utah VHF Society held its annual business meeting and swap meet on Saturday February 28. It was announced that long-time Vice-President John Mabey, W7CWK, needed to step down due to health issues. Mike Groves, KD7MG, was elected by voice vote as the new Vice-President. Incumbents for the remaining offices ran unopposed.

It was announced that the Society had spent over \$15,000 during the past year, although dues were being held at the same \$12 per year rate. Projects completed included the addition to the Intermountain Intertie of a repeater at Monroe Peak near Richfield on 146.84 MHz, and an on-demand connection to the Arizona “Rimlink” system which reaches to Phoenix.

No More Printed Licenses

The FCC, on February 17, began its proposed policy of issuing printed licenses only when requested. The official license is now merely the presence in the FCC's ULS database.

An Electronic-Only Microvolt Subscription?

You may have noticed from last month's Treasurer's report that we spent more than we took in during 2014. Part of the difference is the one-time expenses to update the club's 146.76 repeater with new antennas. But even discounting that, we still are spending more than we take in. The club has enough reserve funds that there is no immediate crisis, but, obviously, that imbalance can't go on indefinitely, especially when we may have some additional annual expense for parking near our meeting place at the University of Utah.

One not-so-pleasant solution would be to raise the dues. But Vice-President Brett Sutherland, N7KG, who prints *The Microvolt*, has suggested what is possibly a more palatable alternative. If there were some percentage of our members who would be happy with an electronic version of the newsletter, it might reduce our printing costs enough to make up the difference.

It's important to emphasize that the proposal is not to eliminate the printed version of *The Microvolt*, but only to reduce the circulation by the number of members who would voluntarily choose to get by with the electronic version only. The printed version would continue to be available to all who want it.

Quite a number of years ago we made this same suggestion and found that the total number of volunteers was in the single digits. We quickly abandoned the idea.

We asked the same question at our February, 2015, meeting and got a quite different response. About half the hands went up showing a willingness to make do with the electronic version only. A sign-up sheet was passed around and 34 names were collected. If we could get the number up to about 100, it would probably be enough to

avert a dues increase. At the same time, there were those who were adamant that the printed version should continue. We don't disagree.

One issue we are still discussing is what electronic format(s) would be the most useful. We realize that many folks do most of their news reading these days on cell phones or tablets. We have been posting a PDF version of *The Microvolt* for quite a number of years, but it may not be optimum for such devices. We would propose to add at least one additional format. As a first try we made an html version of the January *Microvolt*. If you would like to try it out, it's at <http://user.xmission.com/~uarc/Microvolt/Jan2015.htm>. (The capitalization is important.) First suggestions include a table of contents that's closer to the beginning of the document, but it seems to be usable on the average cell phone.

The existing PDF file is useful for those who would like to make their own printed copy, and it would likely continue to be available in addition to a new format tailored for portable devices.

Distribution to the electronic-only subscribers would be by an e-mail containing a link. The new version(s) would likely not be made public. A point that immediately becomes clear is that those interested in the electronic version only would need to keep the club Secretary up to date on their e-mail addresses.

We would be interested in hearing member opinions and comments. Just contact one of the officers shown on our inside front cover. If it is decided to go ahead with the proposal, implementation is probably still a few months away as we resolve issues with formatting details and procedures as well as updates to our database/mailling list program.

License Examination Schedule

Opportunities to test for new or upgraded amateur licenses

| Date | Day | City | Contact Person | Phone |
|-------------|------------|-------------------------------|---------------------------|----------------|
| 03/07/15 | (Sat.) | Logan | Richard D. Elwood, KE7GYD | (435) 753-4360 |
| 03/18/15 | (Wed.) | Provo | Steve Whitehead, NV7V | (801) 465-3983 |
| 03/18/15 | (Wed.) | St. George ² | Gary O. Zabriskie, N7ARE | N/A |
| 03/31/15 | (Tue.) | Salt Lake City ³ | Eugene McWherter, N7OVT | (801) 541-1871 |
| 04/04/15 | (Sat.) | Salt Lake City ^{1,4} | Gordon Smith, K7HFV | (801) 582-2438 |
| 04/11/15 | (Sat.) | Hurricane ² | Gary O. Zabriskie, N7ARE | N/A |
| 04/15/15 | (Wed.) | Provo | Steve Whitehead, NV7V | (801) 465-3983 |
| 04/15/15 | (Wed.) | St. George ² | Gary O. Zabriskie, N7ARE | N/A |
| 04/18/15 | (Sat.) | Logan | Richard D. Elwood, KE7GYD | (435) 753-4360 |
| 04/28/15 | (Wed.) | 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.

Amateur Radio Podcasts

By Clint Turner, KA7OEI, UARC President

While there are many amateur radio related blogs, the number of enduring podcasts on the subject is far smaller, but this should not be surprising as the production of a quality podcasts takes a combination of talent and perseverance that is comparatively rare.

One of the longer-running podcasts is the one associated with Bill Meara, N2CQR's "Soldersmoke" blog mentioned last month, called (not surprisingly) the Soldersmoke Podcast. Having started in 2005, Bill still produces his podcast once or twice a month. Keep watch on the blog page: (<http://soldersmoke.blogspot.com>) or you may find the past podcasts archived here: <http://soldersmoke.com/>.

The ICQ podcast is quite interesting (<http://icqpodcast.com/>). Produced fortnightly by a father and son team, Martin and Colin Butler who

live in England and Ireland, respectively, this podcast has an international flair with many correspondents — including several from the U.S. This podcast typically includes news and technical topics and often a bit of banter about real world issues related to life and amateur radio. If you have trouble with accents it may take a bit of getting used to, but it is worth the effort. (Past shows may be found here: <http://icqpodcast.libsyn.com/rss>.)

Often a bit on the technical side, there is the "Fo Time!" podcast with Cale, K4CDN. A podcast and often blog: (<http://amateurradio15.com/home/>) appears every two weeks or so and has a commercial sponsor or two.

Another technical/nerdy podcast is the "Linux in the Ham Shack" (<http://lhspodcast.info/>) which is

produced live, typically Mondays at 8 PM CT. Consistently the most technically topical of the podcasts listed here, this podcast has been produced since 2008. For the archive of the 170+ podcast, look under the "Podcast RSS Feeds" banner on the left side of the main page.

A very different podcast is "QSO Today" (<http://www.qsotoday.com/>) produced by Eric Guth, 4Z1UG. Each podcast consists of an interview, from somewhere on Earth, with a radio amateur who is notable for his expertise or experience. With a new podcast posted every

week or so, Eric's output make him one of the more prolific producers of content.

This list does not include a few of the long-running audio feeds such as Newline and the RAIN Report, and there are other amateur radio related podcasts that are out there — and many come and go — but the above podcasts and their archives will give many hours of listening!

Next time: A few amateur radio based web-available "TV" shows.

New HF Bandplan Proposals

From *The ARRL Letter*

The ARRL is asking members to comment by April 19 on possible changes to the League's HF Band Plans suggested by the HF Band Planning Committee. The survey is part of the committee's efforts to tweak the band plans for the RTTY/data/CW portions of 80 through 10 meters — excepting 60 meters. The committee developed its suggested revisions to the voluntary band plans after reviewing some 400 member comments in response to a March 2014 solicitation that sought suggestions on how to use the spectrum more efficiently, so that data modes may coexist compatibly.

"The committee concluded that most of the concerns voiced by members could be addressed by modest adjustments to the existing band plans, and mainly by confining data modes with bandwidths greater than 500 Hz to the FCC-designated segments for automatically controlled digital stations (ACDS) and to parts of the

RTTY/data subbands above those segments," ARRL CEO David Sumner, K1ZZ, said. His article detailing the committee's suggestions will appear in the April issue of *QST*.

The proposed changes differentiate among ACDS, narrow RTTY/data modes having a bandwidth no greater than 500 Hz, and wider data modes having a bandwidth up to 2700 Hz.

The League has set up a web page to record members' preferences and comments, which includes links to the HF Band Planning Committee report to the ARRL Board and to Sumner's April *QST* article (and **high-resolution band charts**). See: <http://www.arrl.org/bandplan>. Those wishing to offer more detailed comments may e-mail ARRL at <mailto:bandplan@arrl.org>. The comment deadline is April 19. The HF Band Planning Committee will deliver its final report at the ARRL Board of Directors' July meeting.

Member of the Month

Isaac Edwards, K1ICE

By Linda Reeder, N7HVF

This month we are featuring Isaac Edwards, K1ICE. Isaac received his Technician license

November 6, 2013. It was the influence of his family (his three brothers and his mom and dad

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have their ham radio licenses) that got Isaac interested in amateur radio.

He really enjoys going to ham radio activities with his family. The activity that really got Isaac excited about amateur radio was going on a transmitter hunt with his family a couple of years ago. Isaac thought it was a lot of fun trying to locate a hidden transmitter. He enjoyed it so much that he is looking forward to participating in another one soon.

Another activity Isaac enjoys is helping out in the 24th of July parade. Isaac thinks it is great having stations along the way to help parade participants if needed. Isaac's family did this last year and Isaac is looking forward to doing it again this year.

Yet another favorite thing about amateur radio Isaac really enjoys is taking turns being net control on the Northern Utah Youth Amateur Radio Club net. The net meets every Sunday night at 7 P.M. on the 147.04 repeater. This is a great experience on learning how to be net control. The Northern Utah Youth Amateur Radio club also teaches amateur radio classes for the youth. They are teaching a class right now for the youth in their ward. This class was a great help for Isaac when he was studying to get his Technician class license. Isaac says this summer when school is out he is going to study for his General class license.

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Isaac enjoys exploring technology. Isaac also enjoys computer programming and arts and crafts. Isaac is looking forward to the summer trips his family will be taking this year. They will be going to their family cabin in Bedford, Wyoming, as well as Canada and then Arizona where their grandparents live. They will be bringing their ham radio equipment with them so they can communicate with each other if they get separated.

Isaac with his family is a member of UARC, Davis County Amateur Radio Club and, of course, The Northern Utah Youth Amateur Radio Club.

Isaac we wish you the best in all of your endeavors especially upgrading to General. Have a wonderful summer.



The annual Utah VHF Society Swap Meet was well-attended.