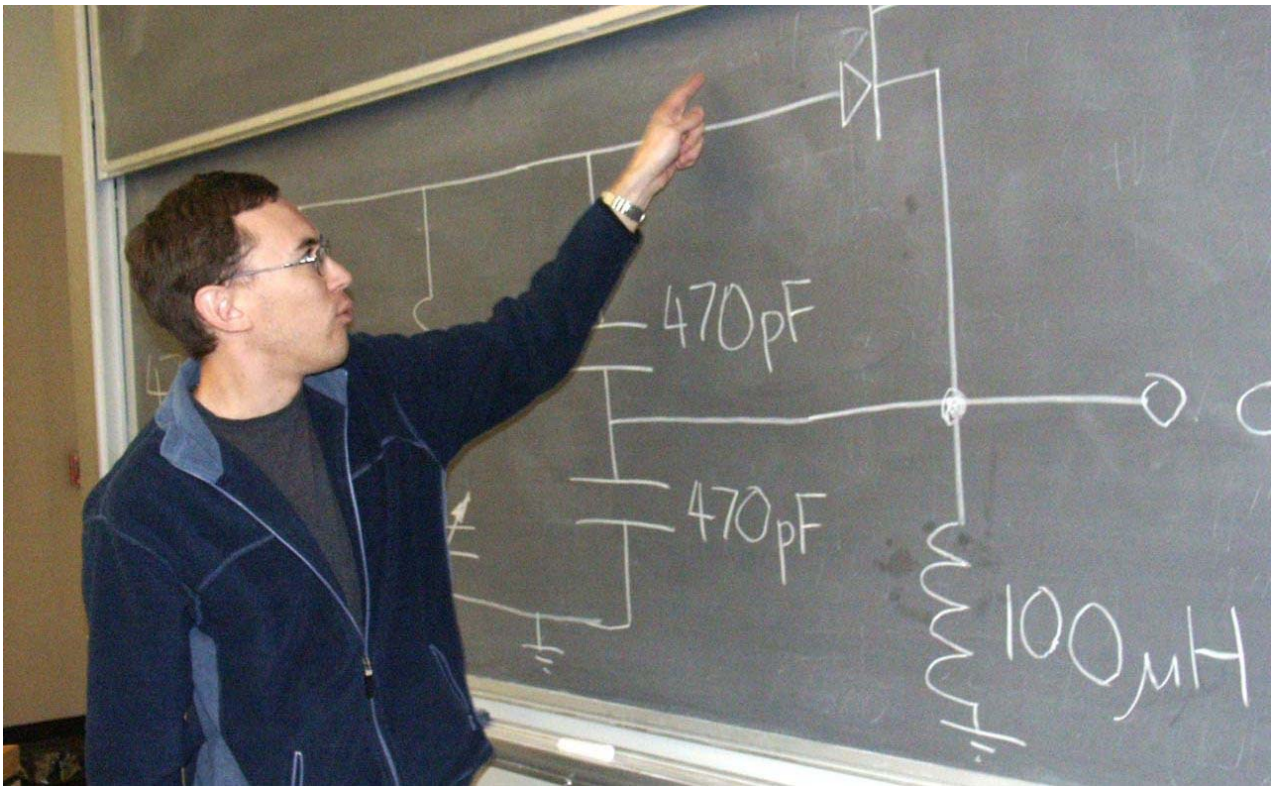
The *Microvolt*

April, 2010



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Prologue

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 in room 1230.

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, 1933 Woodside Drive, Holladay, UT 84124-1632.

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.

Publication: *The Microvolt* is the official publication of the club. Deadline for submissions to *The Microvolt* is the 24th of each month prior to publication. Submissions by email are preferred (uarc@xmission.com), but other means including diskettes and typewritten submissions can be mailed directly to: Gordon Smith, 632 University St., Salt Lake City, UT 84102-3213. All submissions are welcome but what is printed and how it is edited are the responsibility of the Editor and the UARC board. 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, 1933 Woodside Drive, Holladay, UT, 84124-1632.

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Historian: Ron Speirs, K7RLS	801 968-4614
Field Day Chair:	
Club Trustee: Brett Sutherland, N7KG	801 298-5399
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://www.xmission.com/~uarc/announce.html

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The Microvolt

The Official Publication of the Utah Amateur Radio Club, Salt Lake City, Utah
Volume 53, Issue 4, April 2010

April Meeting: Rules, Procedures, and Synchronous Repeaters

Tha April meeting of the Utah Amateur Radio Club will take place on Thursday, April 8, at 7:30 P.M. The program is still being worked out, but will likely include several topics chosen from suggestions about FCC rules, good operating practices, and details of the 146.62 synchronous repeater system. It's being coordinated by Brett Sutherland, N7KG, who is the Official Observer Coordinator for Utah and also the trustee for the club's repeaters. Brett was not available for comment as we went to press, but we suspect the presentation will reveal answers to questions such as:

"Is it legal to announce road conditions to no one in particular?"

"In what order should you send the callsigns?" and

"What the heck is a synchronous pair of repeaters (now that the club owns one)?"

Again, meetings are now on the *second* Thursday of each month, so the coming meeting will be Thursday, April 8, at 7:30 P.M. Our meetings during the spring semester are being held in room 2230 of the Warnock Engineering Building on the University of Utah campus. Room 2230 is in the same position as 1230 where we have been meeting, but one floor up. Our traditional parking on the east side of the building is limited due to construction, so another recommended parking area is near the southeast corner of the Merrill Engineering Building lot. Go south along the east side of Merrill, then go in the north door of Warnock. See the map for information on finding the building. For a map and directions for finding the building, check the club web site at http://www.xmission.com/~uarc/ab1ip_meetmap.html

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

- Availability of ARRL books from Fred, the "book lady"
- An opportunity to join UARC or renew your membership
- An opportunity to join ARRL or renew your membership
- An opportunity to buy tickets to the July Steak-Fry
- 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 April get-together will be at "Crown Burger," 377 E. 200 South, in Salt Lake City.

Latest News

Our Cover

Our cover this month shows Program Chairperson Gary Wong, AB1IP, demonstrating how to use computer software to analyze a circuit in his presentation at our February meeting. (Thanks to Ron Speirs, K7RLS, for the photo.)

As an addendum to that program, Gary has posted the following on the club mailing list:

A couple of people had asked me to send references to software mentioned in the UARC meeting last week, so here are a few descriptions and links:

gEDA

gEDA is the suite of software demonstrated during the meeting (including gschem, the schematic capture program; ngspice, the circuit simulator; pcb, the board layout editor, and more). The main site for the software is:

http://www.gpleda.org/

and various other sites collect user-contributed symbols, footprints, circuits and more. Examples of the other sites are:

http://www.gedasymbols.org/
http://www.opencollector.org/

gEDA runs on virtually any Unix system, including GNU/Linux, MacOS X, and others. Apparently some people have managed to get it running directly on MS Windows with enough work, but that configuration is not officially supported, so if you want to try gEDA on an MS Windows machine I suggest using a Unix environment to run it. Some of the easier ways to do that are to either boot a "live" CD-ROM (an way to test other software without having to install anything to disk), or to run another operating system in a "virtual machine":

http://www.knoppix.org/
http://www.virtualbox.org/

SPICE

I have no idea how many variants of SPICE are available, except to say that there are a lot. A few of the ones I know about are ngspice (shown at the meeting), LTspice, PSPICE, HSPICE, and XSPICE (it is easy to see where the "alphabet spice" jokes come from):

http://ngspice.sourceforge.net/
http://www.linear.com/designtools/software/
http://www.cadence.com/products/orcad/pspice_simulation/

It should be fairly easy to find variants for any popular operating system with any style of interface... the hard part will be narrowing it down to one!

FreePCB

This is another board layout program which is broadly similar to *pcb*. It is Free Software, and runs only on MS Windows. It does not include an autorouter, though it is apparently possible to integrate other software to do that if you want it.

http://www.freepcb.com/

Eagle

Eagle combines the schematic capture and PCB layout into one program:

http://cadsoftusa.com/

It is proprietary software, and runs on MS Windows and at least some Unix systems (not sure about MacOS X). There is no charge for a limited demo version, although that one is crippled and applies extra restrictions (e.g. it will work only on small circuit boards).

ExpressPCB

This software is distributed by a board manufacturer. They have a schematic capture tool and a PCB layout program; both are proprietary software available for no charge. The programs are deliberately limited to operating with files in their own format, to discourage you from designing a board with their software and choosing to have it manufactured by somebody else. It runs under MS Windows only, as far as I know.

http://expresspcb.com/

OrCAD

This is an example of software intended for commercial and high-volume production. It is a suite of proprietary software, costing somewhat over $1,000 for basic editions and over $10,000 for the full thing. Some of the features include support for more advanced PCB manufacturing (e.g. it will do blind and buried vias — essentially holes drilled through some but not all PCB layers), and extensive library support for many components. It runs under at least MS Windows and Solaris, and probably more.

http://www.cadence.com/orcad/

Field Day Help Needed

We are still in need of volunteers to help with Field Day planning. We need people who can help carry or tow equipment to the site, plan antennas, acquire tables and chairs, make sure the tower and generator are ready to go, and plan a general strategy for keeping Murphy at bay. If you would like to be on the committee, contact one of the officers. (Contact information on the inside front cover.)

For those new to the notion of "Field Day," it is a weekend when hams all over the country operate from the great outdoors and from other kinds of portable sites. It is an ARRL-sponsored "operating event" (with a striking resemblance to a contest) held on the fourth full weekend of June each year. UARC has traditionally entered from a location near Payson Lakes on the Mt. Nebo Scenic Loop.

If you like camping and operating HF, be sure to mark June 26 and 27 on your calendar.

Steak-Fry Reservations

The April meeting will be the first chance to purchase reservations for the UARC Steak-Fry, to be held this year on Saturday, July 17, at the Spruces Campground in Big Cottonwood Canyon.

Tickets this year are $10.00 for the full steak dinner. They will also be available at the May and June meetings.

A Ham Haiku

June Anne Olsen, KF7CLR, writes:

"Haiku is a Japanese poetry form, in which a verse is created in three lines. The first and third lines should contain only five syllables each, while the second line has seven syllables. It is an art form which encourages economy of speech. Here is a haiku for hams:

Don't forget call signs,
Keep words to a minimum:
Haiku for Hams. Out..

Division Director Opposes Rule Change

The ARRL Board of Directors met in mid-January and took up the issue of changes to Section 97.113 of the FCC rules to make it easier for emplyees to communicate on behalf of their employers in emergency drills. (This is the same issue we discussed at our January UARC meeting.) The board voted to petition the FCC for changes. Brian Mileshosky, N5ZGT, representing our Rocky Mountan Division, voted against the change. He writes in the February 5 *Division Update*:

"After much debate, the ARRL Board chose to adopt the latter position and, candidly, your Division leadership did not support that position. Our rationale in a nutshell:

"After careful consultation with each Section Manager in our Division who leads the Field Organization including ARES within your area, along with a solicitation to the membership of our Division that's filled with ARES members and other emergency communicators, the overwhelming consensus was that 97.113, a regulation that's been in existence for over 15 years (and yet became a concern to some in the ham community only 8 months ago), isn't broken.

"Many expressed concern about the potential ramifications of liberalizing 97.113 at all. The main concern voiced by many, and shared by your Division leadership, is liberalizing any rule to further permit communication of any kind on behalf of a business, whether for emergency communications drills or otherwise. The concern is larger than emcomm. Every day we use spectrum for (mainly) our personal enjoyment, which generates no commercial or tax revenue, unlike other spectrum that's used for communications all around us. One only has to look at our own 220 MHz band and other ham allocations above 144 MHz that have had portions reallocated for commercial and government purposes over the last decade or two to realize that our bands are not something we can take for granted.

"One only has to look at the current FCC petition to allow commercial medical devices to be used within our own 70-cm band to realize that commercial interests think — for whatever reason — our spectrum is better for their use than frequencies already allocated for such devices and purposes. And one only has to look at the recent investigation by FCC into the Indianapolis Police Departments where a number of their officers were found illegally using ham radio to supplement their normal communications channels, including for tactical communication use, to realize that there are commercial and government entities that wish to use ham radio spectrum, even if illegally.

"While we undoubtedly support ham radio's contribution to emergency communications and are sure that those wishing to utilize ham radio for emcomm drills on behalf of their employer do so with the best of intentions for their community and ham radio in general, opening our Part 97 rules up for business use — whether directly or indirectly, and regardless of the purpose or scope — is a slippery slope that we'd be wise to stay away from completely.

"Our job as your ARRL representatives is to keep an eye not only on specific issues that matter to you, but also to be mindful of the bigger picture as it relates to the ham radio we are so privileged to enjoy every day. And our vote, although not a victorious one, on the 97.113 issue reflects that."

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Examination Schedule

Date	Day	City	Contact Person	Phone
4/14/10	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
4/14/10	(Wed.)	St. George	Gary O. Zabriskie, N7ARE	(435) 674-2678
4/27/10	(Tue.)	Salt Lake City	Eugene McWherter, N7OVT	(801) 541-1871[1]
5/19/10	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
5/19/10	(Wed.)	St. George	Gary O. Zabriskie, N7ARE	(435) 674-2678
5/25/10	(Tue.)	Salt Lake City	Eugene McWherter, N7OVT	(801) 541-1871[1]
6/05/10	(Sat.)	Salt Lake City	Gordon Smith, K7HFV	(801) 582-2438[1]

[1] Preregistration required. Contact the indicated person.

Member of the Month

Steve Olsen, AE7AC

By Linda Reeder, N7HVF

This month we are featuring Steve Olsen, AE7AC. Steve has been exposed to amateur radio all of his life. Steve's uncle was Francis Boyer, WA7TNZ, who is now a silent key. Steve's Uncle Francis was very active in amateur radio and UARC. Francis was Steve's mentor in engineering. He helped Steve get his first multimeter. They spent many years together working on different projects, but Francis could never get Steve to get his ham license. However, when Steve was in high school at Olympus High, he did get his Novice license. He can't remember what his call sign was.

It was Steve's physics teacher Marion Poulson, W7OSV, who convinced Steve to get his Novice license. His first contact on the radio was with his physics teacher. Marion, W7OSV, was one of the founders of UARC. Marion is now a silent key.

The ham gear that Steve really wanted was out of his reach so he let his Novice license lapse. Steve's friend, Morris Farmer, AD7SR, tried to convince Steve to get his license to no avail.

Steve's Wife June, KF7CLR, went on vacation with Morris and his wife to California sailing ships. This is where Morris convinced June to get her ham license. When Steve found out that June was getting her license he decided he would get his license too. They both took the ham class that Morris was teaching. When Steve took the test in May, 2009, he started out with no license and ended up with his Extra Class license in one test session.

Steve loves hiking alone at their old AT&T Longlines station, down near Oak City. Leamington Station is only a couple of hours out of town. After receiving his Extra Class license, Steve discovered that he couldn't out-hike his ham radio like he could the family radio service. This was wonderful. Now Steve can hike as far as he wants and be able to communicate with June.

What does Steve like best about amateur radio? It is building. Steve does lots of building and listening, but very little talking. Steve is interested in what is it that makes these amateur radios work. Steve also participated in building equipment for the Midvalley Elementary school so that they could communicate with the space station. Not only did Steve help build the antennas, but he also

helped get the software that was needed to communicate with the space station.

Besides Steve's family business, Steve is a consultant engineer for the US Army Humanitarian service. They clean up after the wars are over. Steve works on the remote controlled vehicles used for the clearing of land mines. Steve also works on the software and hardware. Steve has been working with the US Army since the year 2000.

Steve is a member of the Utah VHF society and of UARC. Now that Steve's wife, June, is working on getting her General license Steve is researching the HF rigs in depth so that he can figure out which one would best meet their needs. I told Steve about the Kewood 480 because they can operate this radio by computer from home and have this radio at their AT&T station. They can also take part of this radio with them in their vehicle and use it as a remote without bringing the entire station with them.

Steve, we wish you the best in all of your endeavors.

Steve Olsen, AE7AC, and June Anne Olsen, KF7CLR
(Photo by Ron Speirs, K7RLS)