

# The *Microvolt*

October, 2016



## 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 2016 Board

President: Clint Turner, KA7OEI	801 566-4497
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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  
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### October Meeting: Homebrew Night

Our October meeting is the annual Homebrew Night, one of the most popular meetings of the year. It is a time when, if you've recently built a piece of amateur radio equipment, you will have a chance to show it off and tell everyone all about it. Even if you haven't built anything lately, you will probably want to come and see how creative some of your fellow hams have been.

Some hams say that "you can't build anything any more" but it simply isn't true! Things like CW transmitters and power supplies that hams were frequently building in the 1950's and '60's can be built with modern components smaller, cheaper, and lighter. *QST* magazine and its companion, *QEX*, demonstrate this every month with a variety of homebrew projects. We suspect that the projects shown at the October meeting will also help demonstrate what can be done.

Anything that can be used in amateur radio and hasn't been shown at a previous UARC homebrew night is an eligible project. Some projects, like towers and antennas, may be impractical to bring in. If that's the case, bring some files of photos, drawings, performance data, and/or diagrams, to show what you have done. The video projector will be available. You can bring a thumb drive and use our computer, or bring your own with a VGA output.

The meeting will be on Thursday, October 13, at 7:30 P.M. in the Warnock Engineering Building in room L102. To reach the "L" three-digit numbered rooms, take the elevator in the southwest corner of the main floor down to level "L1." (Don't try to use the elevators near the east entrance. They 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. The meeting during the University's fall semester of 2016 will be in room L102. See the map 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. 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 our September meeting. It featured Chuck DeWitt, W7DBO, one of our two program chairpersons, speaking about hamshack essentials. Thanks to Bruce Fereday, KF7OZK, for the photo.

### Swap Meet on October 8

Who can resist a swap meet? There will be one on Saturday, October 8, in Logan. This is the annual "Swaptoberfest" sponsored by the Bridgerland Amateur Radio Club (BARC). Location is the Cache County Sheriff's Office, 450 W. 500 South, in Logan. The meet will run from 10 A.M. to noon. There is no charge to attend.

Talk-in frequencies are:

147.26 (PL=103.5)  
146.72 (PL=103.5)  
927.5125 (offset = -25 MHz; PL=103.5 Hz)

The two two-meter repeaters are linked together. The 147.26 is located in the Promontory Mountains and is useful before you enter Sardine Canyon on Highway 91. The 146.72 repeater is on Mount Logan and should provide good coverage in Cache Valley.

More details will likely be appearing on the BARC website. See <http://barconline.org/>.

### Needed: 2017 Officers

It's getting to that time of year when we need to figure out who will lead UARC in the coming year. Some of the current officers are getting tired and thinking it's about time to get some new blood with new ideas. Think about who might do a good job in some of the positions. Particularly, think whether you might be willing to take on a position yourself.

The Board of Directors works as a team, so you wouldn't necessarily find yourself without help.

During October the officers will be looking for candidates to put in nomination and announced at the November meeting. If you would like to be part of the nominating committee doing this search, talk to any of the officers. (Contact information is on the inside front cover.)

As required by our bylaws, it will be possible to add nominations from the floor at both the November meeting and at the December meeting just before actual voting takes place.

Help us find a good team to lead the club in the coming months.

### Beginners' Tip of the Month

Remember when you're working another station through a repeater that it's not helpful to tell him how many bars are lit up on your S-meter display. Remember that your receiver is tuned to the frequency of the repeater's transmitter, not the transmitter of the station you are working. The bars are telling you how strong the repeaters signal is to you and has nothing to do with how strong the other station is reaching the repeater. (If all the bars are lit up, it may be a compliment to the repeater owner, but not to the station you are working.)

What you *can* do is notice two characteristics of the signal you are hearing: how loud is it, and how much noise is behind it. Stronger signals will quiet more of the noise in the repeater's receiver, so less noise means a stronger signal.

How loud the signal is isn't related to signal strength, but rather to how much audio, i.e. modulation, the other operator is putting on his signal. If it's low, having him get closer to his microphone may help.

## **HR1301: Write Your Senators**

The short version: HR1301 has passed the U.S. House of Representatives unanimously. We need to write our Senators right away for there to be any hope of passage this year.

The longer story goes this way: Many hams living in areas covered by restrictive covenants have been totally prevented from putting up reasonable outside antennas for amateur radio use. Many homeowners' associations have made rules that virtually prevent any kind of outdoor antenna. Almost all new developments require buyers to sign deed restrictions that are unfriendly to antennas.

Adam Kinzinger, the House bill sponsor, said:

“For some this is merely a nuisance, but for others — those that use their Amateur Radio license for life-saving emergency communications — a dangerous situation can be created by limiting their ability to establish effective communication for those in need.”

The FCC has used the “federal preemption” doctrine to force reasonable allowance for satellite dishes, but try as it will, ARRL and the amateur community have been unable to get them to produce parallel rules for amateur radio. The FCC argued that it has no power to regulate private agreements such as restrictive covenants that buyers sign of their own free will.

For a number of years ARRL has been working with people in Congress having amateur licenses or at having least sympathy for the hobby to pass legislation directing the Commission to add the appropriate regulation. For several years they have succeeded each Congressional session in getting bills introduced in both houses, but only this year did a bill actually come up for a floor vote. On September 12, under a suspension of the rules, the

bill was passed unanimously by the House of Representatives.

ARRL President Rick Roderick, K5UR said: “This is huge step in our effort to enact legislation that will allow radio amateurs who live in deed-restricted communities the ability to construct an effective outdoor antenna. Thanks to everyone for their help in this effort thus far. Now we must turn our full attention to getting the bill passed in the Senate.”

It helped that opposition to the Bill had been defused by meetings with the Community Association Institute, an organization promoting the interests of Home Owners' Associations. A modified version of the bill was created that was acceptable both to the Institute and to radio amateurs.

Passage in the Senate, unfortunately, is not a slam-dunk. Congress is currently meeting in a short session before a break for members to return to their home states and campaign for reelection. When they return after the election there will be many important matters to take care of. If no action takes place on HR1301 before the end of the session, we will have to start all over again, introducing a new bill in both houses.

ARRL, using the “Rally Congress” web site, has made it very easy for individual amateurs to make their wishes known to their two Senators. In likely less than two minutes you can use the web site to send a form letter to your two Senators. You don't even have to know who they are! If you would like to personalize the form letter by adding a few sentences about your own experience and interest, that is easy to do as well. You can edit the message in any way you choose, including deleting the original text and writing a personal message from scratch. The process is so easy that

practically no one with an interest in this bill has an excuse not to participate.

The magic web site is:

<https://arrl.rallycongress.net/ctas/urge-senate-to-support-amateur-radio-parity-act>.

For more information, including the complete text of the bill and a link to the above web site without as much typing, go to:

<http://www.arrl.org/amateur-radio-parity-act>.

## **Club Repeater News**

By Clint Turner, KA7OEI, UARC President

A couple of months ago we were notified by Randy (K7SL) that we needed to work on the receiver at the Farnsworth Peak (146.620) site — but the problem was not what one might expect: The “repair” would need a chain saw.

When the receive site — some 400 feet away from the transmitter — was placed in the early 1980s, it was on a (more or less) barren ridge, located distantly to better remove it from the noise from the many broadcast transmitters atop the peak. In the 35 or so years since it was installed, it seems as though some sort of wild brush managed to establish a foothold on the ridge and now it had grown to the point where it had made it difficult to access the equipment box and was now taller than the bottom of the receive antenna itself.

Wielding a chainsaw, a bow-saw, and “loppers,” Gordon and I spent a few hours cutting back the wild brush, gradually re-exposing the rocky ridge and, once again, the ability to just walk up to the base of the tower.

Taking advantage of this opportunity, we also checked the performance of the receiver and noted that it was working as well as it had when last checked a few years ago, but we did find that the coaxial cable had been “nibbled” on by a rodent or deer at some point, exposing a short section of braid and center dielectric. Disconnecting the coax jumper and checking its loss we could see that, although water had gotten into it at some point, its loss was negligible so we re-routed the coax to the center of the tower — more out-of-

reach from larger animals — and put several layers of tape over the damaged section, awaiting replacement on a future trip.

### **New Battery on Scotts’ Hill**

Several weeks ago Scotts’ Hill was the destination of one of our Wednesday Night Hikes — but there was an ulterior motive: Recent telemetry — and the power bill — indicated that something was amiss as the room was noticeably hotter than before and the power bill higher. Upon arriving and entering the building, we found it to be very noticeably warm, the cause being two-fold: The ventilation fan’s bushings had seized, locking its rotor and one of the nine 12-volt batteries was bulging, smelling of sulfur and very hot to the touch.

The immediate remedy was to unplug the fan and remove the defective battery from the circuit. This had the immediate effect of allowing the building to cool down, but it spelled out another need: To replace the battery bank as soon as possible since some of these batteries — which were pulls from a 300 kVA UPS — were well over a decade old and had been in service at Scotts since 2009.

The replacement was available, but presented a difficulty: Some years ago Bryan, W7CBM, approached the club noting that a fairly new set of “station” cells had been abandoned. These cells, “float charged” since that time, were much less than halfway through their 25-year lifetime and were good candidates for installation. There was

one problem: each 6-volt module of three cells weighed well over 800 pounds! Getting them onto the mountain and over the 8-inch door threshold would be a challenge.

With the weather rapidly changing — and the uncertain state of the current battery bank — the pressure was on, but Bryan and his friend and co-worker, Randy, got to work. Borrowing a hoist they were able to lift the modules up, stand them on end and bolt them together. On the day of the installation a portable gantry was set up to put it into Randy's one-ton truck and a myriad of straps used to secure it into place.

On the way to the mountaintop, another two of Bryan's friends joined the caravan and we made our way up the canyon, onto the access road, and up the mountain. Around us, clouds swirled about the higher peaks, occasionally enveloping us in fog while cold wind blew and the snowfall forecast for that altitude seemed to be delayed.

Arriving on site we removed the old battery bank, set up the tall hoist and gantry, lifted the battery bank so that the truck could drive out from under the battery and so that we could attach a set of casters to it. Once on the ground, the smaller gantry was set up, straddling the doorway, allowing us maneuver the 3/4 ton battery through the doorway, over the threshold, and into the building. From that point on, it was just a matter of wheeling it into position, reconnecting the battery, and checking that it was functioning.

Approximately two and a half hours after arriving, we headed off again, down to the valley but just two hours after that, the very strong weather front — the one that spawned several tornadoes and funnel clouds — struck the area and doused the mountains with rain and snow: We were glad that mother nature had delayed 16 hours or so to allow us to complete the project!

## **Member of the Month**

### **Kevin Westenskow, KB7SNA**

**By Linda Reeder, N7HVF**

This month we are featuring Kevin Westenskow, KB7SNA. Kevin was introduced to amateur radio a long time ago when Kevin and his buddies were working for what, back then, was called US West. They were interested in getting involved in emergency preparedness. They started looking at CB radios because they didn't want to become "code nerds." Loren Mortensen, one of their co-workers, just happened to be an amateur radio operator who had his Advanced license. His call sign back then was N7EFL. (He is now KK7SU.) When he saw what they were doing he told them "You don't want CB radio." He demonstrated the difference between CB radio and amateur radio. At that time Kevin was the only one who obtained his amateur radio license. He received his General license in 1988. Years later his buddy, Mark Hansen, received his Technician license. In fact it

was just recently that Mark took a class from Morris Farmer, AD7SR. Kevin went with Mark to the class and took it as a refresher course.

Kevin still works for this company but it is now called Centurylink. Kevin works in technical support as a connection tester, the one who helps you with your connections. He also works with broadband equipment.

Kevin and his wife, Jackie, have seven children: five boys and two girls. Kevin said his son, Jayson, is interested in getting his amateur radio license and has promised to do that when he gets home. Jayson has been in the navy-marine corps and is now serving in Afghanistan.

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The thing that Kevin likes best about amateur radio is that everyone is so willing to help you learn. Kevin wants to learn everything he can about amateur radio. Kevin said at first he didn't want to learn the code but now he does. Kevin also appreciates the friends he has made through emergency preparedness groups. Kevin is CERT certified.

Kevin is active on 2 meters and 70 centimeters. He enjoys talking with the 76ers and is working on getting his ham shack together. He was excited to attend the ham club meeting and listen to Charles Dewitt, W7DTO, give his presentation on what you should and shouldn't have in your ham shack. Kevin has an old Swan HF rig and wants to get it up and running. He is trying to figure out which antenna would be good. Suggestions are welcome. Kevin is a member of UARC and the VHF society.

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Kevin has been in a few movies: *One Good Man*, *A Christmas Wish* and *The James File*. Kevin has also made commercials and been in several plays. Kevin serves on the Murray Advisory Board. Other hobbies Kevin enjoys are model trains and shooting guns.

Kevin, we wish you the best in all your endeavors



Kevin Westenskow, KB7SNA, at his station