

# *The Microvolt*

**November, 2013**



## 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, 1783 Woodside Drive, Holladay, UT, 84124-1620.

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

**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, 1783 Woodside Drive, Holladay, UT 84124-1620.

**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 2013 Board

|   |              |
|---|--------------|
| President: Clint Turner, KA7OEI                       | 801 566-4497 |
| Executive VP: Rick Asper, AC7RA                       | 801 865-1693 |
| Vice Pres: Brett Sutherland, N7KG                     | 801 298-5399 |
| Secretary: Dick Keddington, KD7TDZ                    | 801 274-9638 |
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| Program Chairperson: Gary Wong, AB1IP                 | 801 582-0906 |
| 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: Brett Sutherland, N7KG | 801 298-5399 |
| 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

The Official Publication of the Utah Amateur Radio Club, Salt Lake City, Utah  
Volume 56, Issue 10, November 2013

### November Meeting: Operating Practices

What is good operating on the amateur bands? How much is a matter of personal taste and how much is established by long tradition? How many people would fail to understand callsigns if we did not append “for ID” to them? How often should we call “CQ DX” on top of stations in rare countries? These are some of the questions we will be trying to answer and the coming UARC meeting to be held Thursday, November 14.

With the possible exception of folks who just got their licenses as wall decorations or to please an eager spouse, operating practices affect all of us. We would like to work new stations easily, enjoy roundtables that proceed smoothly, comply with FCC regulations, and experience a sense of camaraderie with our fellow amateurs. We will be talking about how best to advance these goals.

November is also time for officer nominations. The nominating committee will present its choices and nominations will be accepted from the floor. Think about who you would like for officers in 2014 and even consider volunteering.

That's Thursday, November 14, at 7:30 P.M. in room 2230 (the “Clark” 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 fall, 2013, meetings are scheduled in room 2230. See the [map](#) 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 November get-together will be at “Greek Souvlaki,” 404 E. 300 South in Salt Lake City.

## Latest News

### Our Cover

October was the month for JOTA, the “Jamoree on the Air” when boy scouts around the world can talk to one another and learn about amateur radio. Brett Sutherland, N7KG, organized a combination JOTA and campout on Lake Mountain for Troop 220. With help from Clint, KA7OEI, a 15-meter station was set up and the boys were able to make about two contacts each with various parts of the country. A few seemed to get quite excited about the opportunity and might make great future hams.

### N7MLP, SK

We have received word of the death of Charles Clark, N7MLD, of Farmington, on October 28. Some UARC members may remember when he presented a program on Microwave some years ago. He was active in VHF and microwave weak signal and contest work.

His obituary can be found at:

[http://www.russonmortuary.com/sitemaker/memso.l.cgi?user\\_id=1152143](http://www.russonmortuary.com/sitemaker/memso.l.cgi?user_id=1152143)

### Wasatch-100 A Success

The Wasatch Front 100-Mile Endurance Run took place on September 6 and 7 and, as usual, amateur radio operators were heavily involved. This is one of the most extensive Utah public service events that use amateur radio. Runners cover 100 miles starting at East Mountain Wilderness Park in Kaysville, and ending at Soldier Hollow in Midway. There are at least 19 fixed locations and two roving vans that all need to communicate with one another using both voice and packet radio over a 100-mile course through the mountains. The race continues for 36 hours. We’re not sure if anyone has tabulated just how many total

operators that requires, but it is clearly not a trivial number.

This year 312 runners started the race, about 50 more than in any previous Wasatch. We always find it amazing that humans are able to run 100 miles with only short stops for rest, food, and above all, water. When describing the event we usually have to answer several questions that show the questioner’s incredulity.

“No, there are no horses involved.”

“No, there are no bicycles involved.”

“Yes they *run* 100 miles. On foot.”

“No, it’s not a staged event. The finishers must cross the finish line within 36 hours.”

“Yes, people do this voluntarily, so many of them that there has to be a lottery to pick the lucky 300.”

The amateur communications network might produce some wonder as well. The packet radio system has temporary nodes in enough places that the operators at each checkpoint can key in the times that each runner arrived and departed and have them appear almost instantly in a master database kept near the finish line. That information then appears on a web page available to the public, a feature that is helpful to runners’ “crews” who meet their runners at checkpoints and assist with food, encouragement, and fresh clothes. More important, the database makes it clear when a runner is overdue at a checkpoint and may be lost or otherwise in trouble. It is immediately clear which portion of the route must be searched. The software to make all this work was all written by volunteer amateurs.

Maintaining a VHF network over a 100-mile course through backcountry in mountainous terrain takes substantial planning. Voice communications uses a portion of the Intermountain Intertie system.

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Each checkpoint has its own personality and its own challenges for the amateur operators. For some, the challenge is capturing 600 in-times and out-times in the space of a half hour. For others it's getting 100 gallons of water over a difficult four-wheel-drive road. And for still others it's figuring out how to backpack in with enough gear to operate voice and packet stations, provide shelter, and stay warm through a long, cold, night at nearly 10,000 feet elevation.

The last eight miles of the course had to be re-routed this year to a new finish area at Soldier Hollow. There was some question if the propagation would be as good from the packet digipeaters into the new finish area as it had been at the old one at The Homestead. Additional radios were set up at The Homestead just in case. As it turned out, runners and volunteers adjusted easily and the new radio path worked just fine.

The course this year was both too hot and too cold depending on when and where you were on the course. On Friday afternoon Salt Lake City hit a new record high for the date of 98 degrees. Of

course it wasn't that hot in the mountains, but it was hotter than any previous run of the event. To balance that out, the course was hit with heavy, cold rain on Saturday afternoon. The usual awards ceremony was abbreviated down to a quick handing-out of certificates, allowing the runners to make a quick dash to their cars before the certificates could become too waterlogged.

Despite the weather, communications continued with only an occasional outage of the packet system. Race finishers totaled 205, about 2/3 of those who started. First place winner was Nick Clark from Colorado, who finished in 20 hours, 25 minutes, and four seconds. He maintained the lead for the entire event. He had also won the 2010 event with the slightly better time of 20:21:04. (The course record is 18:30:55, set in 2009 by Geoff Roes of Arkansas.)

Those who might like to participate in this event in 2014 should contact Claude Grant, WC7G, at <mailto:info@wasatch100.com>.

## License Examination Schedule

Opportunities to test for new or upgraded amateur licenses

| Date     | Day    | City                          | Contact Person              | Phone          |
|----------|--------|-------------------------------|-----------------------------|----------------|
| 11/20/13 | (Wed.) | Provo                         | Steve Whitehead, NV7V       | (801) 465-3983 |
| 11/20/13 | (Wed.) | St. George <sup>2</sup>       | Gary O. Zabriskie, N7ARE    | (435) 674-2678 |
| 11/26/13 | (Tue.) | Salt Lake City <sup>3</sup>   | Eugene McWherter, N7OVT     | (801) 541-1871 |
| 12/07/13 | (Sat.) | Salt Lake City <sup>1,4</sup> | Gordon Smith, K7HFV         | (801) 582-2438 |
| 12/07/13 | (Thu.) | Logan                         | V. Phillip Rasmussen, N7JFG | (435) 770-0630 |
| 12/14/13 | (Sat.) | Hurricane <sup>2</sup>        | Gary O. Zabriskie, N7ARE    | (435) 674-2678 |
| 12/18/13 | (Wed.) | Provo                         | Steve Whitehead, NV7V       | (801) 465-3983 |

<sup>1</sup>Preregistration required. Check with the contact person before the test session.

<sup>2</sup>More information at <http://www.dixieham.org/meetings.html>

<sup>3</sup>New location: Senior Center at the Columbus Center, 2530 S. 500 East

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

Check <http://user.xmission.com/~uarc/testinfo.html> for further exam information.

# October Homebrew Night

Here are the projects shown at UARC's annual homebrew night, October 10.  
(Photos by Ron Speirs, K7RLS)



Bruce, KC7DGN, and device to record temperatures remotely.



Chuck, W7DTO, and his 40- and 20-meter loop.



Dick, W7DML, gave suggestions about RG-6 and grounding.



K7XTC's method of using film cans for weather protection.



Clint, KA7OEI, shows low-distortion 1-kHz source.



Jim, N7UTE, shows remote antenna switcher using the Arduino processor.



Jim, AG7A, with his 20-meter transceiver plus audio and power amplifiers.



Dale, WJ7L, and his power supply for GPS-based clock generator.



Glen, WA7X, show system to carry remote switching information on the antenna feedline.

## **80<sup>th</sup> Sweepstakes This Month**

from the *Rocky Mountain Division Update*, by Brian Milesosky, N5ZGT

This year marks the 80th running of ARRL's annual November Sweepstakes, the oldest domestic ham radio contest, which debuted in 1930. The goal, besides having a fun time on the air, is to work as many US and Canadian stations as possible during the contesting period, in addition to trying to work every ARRL and RAC section (referred to as a "Clean Sweep"). The CW event is this weekend, November 2-3, while the phone event is the weekend of November 16-17. On both weekends, the action gets underway at 2100 UTC Saturday and runs through 0259 UTC Monday.

Complete details can be found at <http://www.arrl.org/news/arrl-november-sweepstakes-marks-80-years>

If you've never contested before, this is a fun one for getting your feet wet. If you're planning on participating and know a brand-new ham or someone in your club who may take an interest in contesting, consider welcoming them into your shack to assist you on the air this year. Being the 80th running of Sweepstakes, there are new individual and club awards being offered this year.

## **Member of the Month** **Harold Collier, K5WHC**

By Linda Reeder, N7HVF

This month we are featuring Harold Collier, K5WHC. Harold is from Texas. He worked in the maintenance department for the LDS Church in Texas where he was a foreman mechanic. He worked on sound systems, heating, and air conditioning. Harold worked for the LDS church for 37 years.

Harold and his wife, Marianne, had five children, but one died when he was a baby. So now they have three boys and one girl, all grown. One son lives in Idaho and is a computer programmer. Two of his sons work for a cheesecake factory. One lives in Seattle, Washington, and the other one lives in Texas. They are both in charge of the kitchens. Harold and Marianne's daughter is in North Carolina working on her nursing degree.

Harold has been interested in radio for 50 years. In 1960 he was active in Citizens' Band radio. Harold's brother-in-law was active in amateur radio for several years. Harold really wanted to get

into ham radio but couldn't pass the code test. Finally, in 1983, Harold obtained his Novice license, which he held for ten years. He never did too much with it because he still had problems with the Morse Code; however, he did a lot of listening. He would listen to 80 meters on a Kenwood TS-520 HF rig. He also had a Hallicrafter radio.

Harold received his Technician class license in 2005 when he was still living in Texas.

Harold loved building things. Harold built a 100-foot groundplane antenna and used it a lot when he was living in Texas.

In 1993 Harold started having health problems. He had throat cancer and the chemo really messed up his body. It burned his feet and now he has a hard time walking. He has a hard time hearing and talking. Harold also has heart problems.

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In 2006 Harold and his wife, Marianne, received a genealogy mission call to serve in Salt Lake City Utah. Marianne is a professional genealogist. She still does this as her profession today. They served five missions. After their missions were over they decided to stay here in Utah.

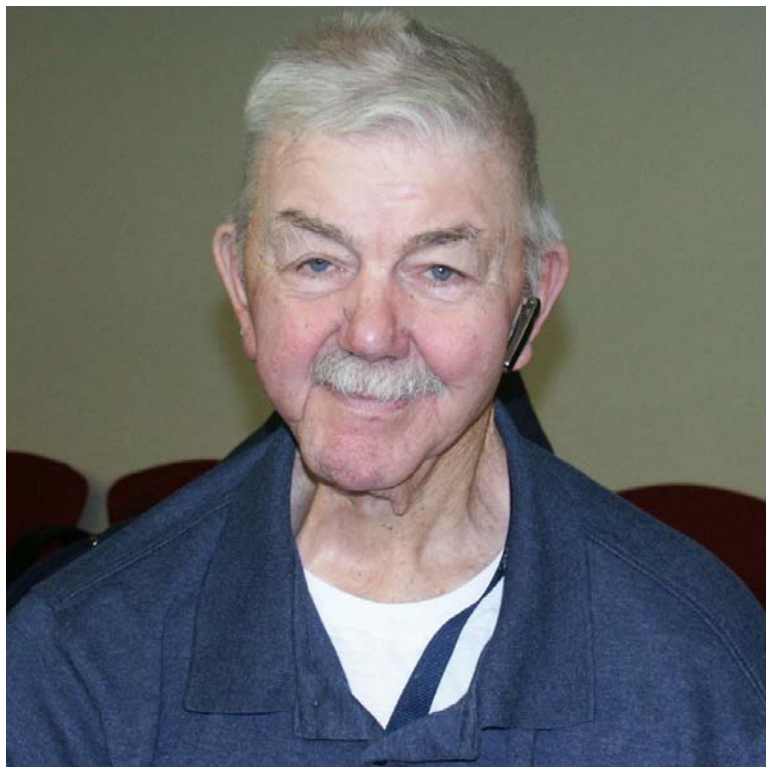
Last year Harold took the General license class given by Morris Farmer, AD7SR, and received his General class license in December, 2012. What a wonderful Christmas present! Then Harold decided to take Morris Farmer's Extra license class and in July of this year Harold obtained his Extra class license. He said it was a real challenge but he finally did it.

The only two radios Harold has now are the Kenwood TMV-71A and a Kenwood handheld. He is hoping to get an HF radio soon. He could use some help putting up antennas. Harold

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lives in a motor home park and is limited on the types of antennas he could put up. Harold is a member of UARC and enjoys coming to the ham club meetings.

Harold, congratulations on getting your Extra Class license.



Harold Collier, K5WHC  
(Photo by Ron Speirs, K7RLS)