

The *Microvolt*

October, 2010



Prologue

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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.

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 2010 Board

Table listing UARC 2010 Board members and their contact numbers, including President Linda Reeder, Executive VP Andrew Madsen, and others.

Committee Chairpersons and Members

Table listing committee chairpersons and members, including 'Book Lady' Brett Sutherland, Historian Ron Speirs, and others.

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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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For account information go to: http://www.xmission.com/ Or call 801 539-0852



The Microvolt

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October Meeting: Homebrew Night

It's that time of year again! UARC's October meeting, to be held Thursday, October 14, will be annual homebrew night. This is a chance to show off home-built amateur radio equipment and to see what others have done over the past year. If you've built a keyer, linear amplifier, mike preamp, power supply, or antenna, this is a great time to show it off to fellow hams.

Ham radio has a great tradition of innovation. One of the reasons the FCC is willing to give us spectrum is the expectation of "Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art." (FCC Rules, 97.1(b).) We hope the tradition will continue for a long time and homebrew will always be an important part of our hobby.

We ask that projects shown be usable in some aspect of amateur radio and not have been shown at a previous UARC homebrew night. Each person will have a few minutes to describe his project and tell about its virtues. There will be some awards available to those who show equipment. Projects can be entirely original designs or may simply be copies of designs that have been published in magazines or handbooks.

If your project is too big to bring in (for example, your 160-meter beer-can beam), just bring in pictures and/or diagrams to show all its features. We will have a VGA projector available, so you can bring your laptop computer, or just files in one of the common formats.

Meetings are held on the *second* Thursday of each month, so the coming meeting will be Thursday, October 14, at 7:30 P.M. in room 1230 (the "Duke" classroom) of the Warnock Engineering Building at the University of Utah. Some of our traditional parking on the east side of the building is blocked off for construction, so if you find it full, 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 http://www.xmission.com/~uarc/ab1ip_meetmap.html for information on finding the building.

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 September get-together will be at "Charlie Chow's Dragon Grill," 255 E. 400 South in Salt Lake City.

Latest News

Our Cover

The Wasatch Front 100-Mile Endurance Run, a 100-mile footrace through the Wasatch Mountains, celebrated its 30th anniversary this year and amateur radio has been a significant part of it for about 26 of those years. Our cover this month shows the Swallow Rocks aid station at mile 35. In the foreground is Clint Turner, KA7OEI, who is using his TRS-80, Model 100, to send runner in-times by packet radio to a database at the finish line. The white truck in the background belongs to Gary Crum, KK7DV, who is transmitting out-times on a separate packet station. See more in the article on page 5.

SET Coming November 6

The annual Simulated Emergency Test or SET for Utah is scheduled for Saturday, November 6. Chairman Roger Kehr, N3AOQ, would like to hear from all amateurs and groups who are active in emergency communications by Monday, September 6. All amateurs who would like to participate must register by that date to be included. Contact Roger at: <mailto:cottonwoodheightsradio@gmail.com>. Include your name, callsign, emergency communications group, the group manager, and his contact information (email address and phone number).

Logan “Swaptoberfest”

Another swap meet is in the offing during October. The Bridgerland Amateur Radio Club (BARC) announces Swaptoberfest 2010 to be held on Saturday, October 9, at the Cache County Fairgrounds, 450 South 500 West, in Logan. The event begins at 8 A.M. and admission is free. Those needing to set up displays may come at 7

A.M. Swap tables are \$10 at the door or \$8 if paid in advance via PayPal. (See: <http://www.barconline.org/meetings> .)

Talk-in will be on the 146.72 MHz Mt. Logan repeater, requiring a PL tone of 103.5. Those still on the Wasatch Front can use 147.26 (also needing a PL of 103.5) which is linked to Mt. Logan.

Net Help Needed

Robert Gibby, KE7TYX, who has been one of the faithful net control operators for UARC’s Sunday night “Information Net,” has recently been called away on a church mission. This leaves an open position where a volunteer is needed. There are also several slots in the monthly schedule for operators to do the “Other Club Information” portion of the net. The only requirements for those interested in filling these positions are the ability to read well aloud and to operate on two-meter FM on Sunday evenings.

If you are interested in the Net Control position, contact Mike Youngs, KK7DV, at (801) 573-3922. If you would like to take one of the “Other Club Information” slots, contact Gary Openshaw, KC7AWU, 484-3407.

ARES/RACES Conference

Emergency communicators will want to attend the annual ARES/RACES conference sponsored by the Amateur Radio Emergency Service (ARES) and the Radio Amateur Civil Emergency Service (RACES) organizations. It will be held Saturday, November 13, from 8 A.M. to 4 P.M. at the Red Lion Hotel, 161 W. 600 South, in Salt Lake City. It will include valuable training and information for would-be emergency communicators.

Those wishing to attend must pre-register using the state's "U-Train" system on the web. Go to <https://www.utah.train.org>. If you already have an account, log in. If not, follow the "Create Account" link. Next, find the ARES/RACES conference by searching on "ARES" or "RACES" or by entering the course number, 1011069, in the appropriate slot on the right-hand side of the page. When the proper course is on the screen, follow its link and choose the "Registration" tab to register.

Steve Olsen, AE7AC, SK

We regret to report that Steve Olsen, AE7AC, passed away from cancer on Sunday afternoon, September 12. Steve was featured in *The Microvolt* recently as the "Member of the Month" and was a major participant in the Midvalley School ARISS project last fall.

Thanks to Morris Farmer, AD7SR, for bringing Steve's passing to our attention.

Wasatch-100 Turns 30

By Gordon Smith, K7HFV

In 2010, the Wasatch Front 100-mile Endurance Run celebrated its 30th anniversary. Volunteer amateur radio operators again played a major part in its success.

As best we can learn, it started back in 1980 when some avid runners decided to host an event where entrants would try to run a full 100 miles. When presented with the notion of a 100-mile run, most people experience a certain amount of mind-jam and need some extra clarification. No, it doesn't involve horses or bicycles; it's a foot race. No, it isn't a relay; each runner runs the entire length. Yes, people are actually capable of doing such a thing. Many survive.

The idea of a 100-mile "ultra marathon" was not entirely new. The first one happened accidentally in 1979 when Gordy Ansleigh, a regular entrant in a 100-mile horse race in California's Sierra Nevada mountains, had his horse go lame prior to the event. He decided to run the event on foot, and finished under 24 hours, not doing particularly worse than his equine competitors. Thus, the Western States 100-mile event was born.

Wasatch began the following year and the record seems to say that there was only one finisher in that initial 1980 event. He finished in 35 hours and

one minute, beating the 36-hour cutoff by almost a full hour.

The course was not an easy one, starting in the Kaysville/Farmington area and running through the tops of the Wasatch Mountains to end in Midway. It had an elevation gain and loss of more than 21,000 feet, roughly equivalent to going up Mt. McKinley from sea level and back.

There was no communication along much of the course in the early years. One year the National Guard came in after the race and swept the course just to make sure there were no lost runners still trying to find their way to civilization.

Enter John Moellmer, WB7SUB, a member of both the running and amateur radio communities. John suggested that maybe the event could benefit from volunteer ham radio operators who already had provided successful communications for running events such as the Wasatch Steeple-Chase. So in about 1984 a group of amateurs first set out to establish radio communications from about 15-20 checkpoints spaced along the course.

Alan Cranney, KA7RZR, did much of the organizing of the ham operators for many years. That first year he said that it put the race in perspective for him when, driving to his post, he

passed the sign that said “Evanston, Wyoming: 80.”

A few of the checkpoints were on paved roads. Others required four-wheel-drive to access, and still others were accessible only by horseback or on foot.

My first experience was at a checkpoint called “The Brink.” It required about a two-hour hike to reach and I figured an H-T and a clipboard would be about all I would need. Then I got a call from the couple that would take care of the aid station wondering how much water I could carry. Huh? I’m just a ham operator. All we do is communicate, right? But I had to admit I did own a frame pack and could probably carry a gallon or two of water. It was a good thing. We needed to feed and water the entire pack of runners with what the three of us could carry.

The hams contribution proved helpful enough that amateur radio has been a part of Wasatch ever since. Each checkpoint could know whether it had any runners outstanding before shutting down. The National Guard was no longer necessary. Originally, hams simply used the Snowbird repeater to report runner arrival times by voice. After a few years that was upgraded to separate arrival and departure times. Net control operators found the appropriate paper form and penciled the times into the appropriate slots. A few years later, the hams then established a computer database at the finish line where split times were kept and a personal record could be printed for each runner.

Ultra-marathons increased in popularity over the years. More ultras came into existence and existing ones got larger. The Wasatch-100 was no exception. As runner counts increased, more aid station people were required, the voice channels got busier, and three people could no longer carry enough water for The Brink. (As much as fifty gallons of water was carried in on horseback prior to the event.)

A big improvement in communications came when Kirk Boman, KD0J, worked over a computer program for keeping a runner database using packet radio. Kirk created a whole network of digital stations, independent of the voice channels in use, to allow operators at each checkpoint to enter times using packet stations on two meters. The communications were linked to the database computer at the finish line via digipeaters and 70-cm links. This freed up the voice repeaters for administrative questions, van dispatch, runner emergencies, and similar traffic, as well as backup for the packet system.

Almost every year saw more improvements in the packet program’s features and reliability. New digipeaters were added so all checkpoints could communicate. Some digipeaters had to be hiked into place on mountaintops each year. Operators found ways to set up packet stations in hike-in checkpoints like Desolation Lake. Kirk’s efforts were taken over by a team, ensuring that packet, net control, and internet databases all played nicely with each other.

The 2010 event was probably the smoothest yet for the packet radio system. The setup included six user nodes, four UHF links, and two Internet UDP links, all communicating with the Race computer at the finish line. The system made runner positions available on Internet almost in real time. It was used to respond to inquiries from runners’ crews, project likely arrival times, identify data anomalies at checkpoints, and distribute data about runners who decided to drop out. We particularly enjoyed the comment from one runner,

“Wow, the Leadville 100 doesn’t have anything like this!”

The race is quite possibly the public service event requiring more ham man hours than any other in Utah. We hope the record of great service and innovation continues for many years.

Examination Schedule

Date	Day	City	Contact Person	Phone
10/02/10	(Sat.)	Salt Lake City	Gordon Smith, K7HFV	(801) 582-2438 ¹
10/06/10	(Wed.)	Ogden	Mary Hazard, W7UE	(801) 430-0306
10/20/10	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
10/20/10	(Wed.)	St. George	Gary O. Zabriskie, N7ARE	(435) 674-2678
10/26/10	(Tue.)	Salt Lake City	Eugene McWherter, N7OVT	(801) 541-1871 ¹
11/03/10	(Wed.)	Clearfield	Mike Youngs, KK7VZ	(801) 573-3922
11/17/10	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
11/17/10	(Wed.)	St. George	Gary O. Zabriskie, N7ARE	(435) 674-2678
11/30/10	(Tue.)	Salt Lake City	Eugene McWherter, N7OVT	(801) 541-1871 ¹

¹ Preregistration required. Contact the indicated person.

Member of the Month: Edward Hansen, KC7KCU

By Linda Reeder, N7HVF

This month we are featuring Edward Hansen, KC7KCU. Ed received his Novice license in 1955 when he was attending Olympus High School. His callsign was WN7YWU. Ed was in the same class that Steve Olsen, AE7AC, was in. It was the same electronics teacher, Marion Poulson, W7OSV, who convinced Ed to get his Novice license.

Ed enjoyed making contacts by way of Morse Code because that was the only mode available to him at that time. When Ed was a junior in high school, he joined the national guard and attended their summer camps. After graduating from high school, Ed made the national guard his career. Ed was in a communications platoon, but he let his Novice license lapse.

Ed was in the national guard for 27 years. He was involved helping with the Berlin wall crisis in the 1960s. After getting out of the national guard, Ed was the facilities manager for the LDS church for 15 years.

In 1995 Ed received his Technician License. If Ed could prove that he once had a Novice license he could be a Tech Plus. Ed said it was a lot of hard work, but he finally found an old call book that had his call sign in it. Shortly after that he obtained his General license. Ed said he has become a lifetime student of Ron Speirs, K7RLS.

Ed and his wife, Janis, have five children, three boys and two girls, and the children are all grown now. Ed said it breaks his heart that he couldn't get his children involved in amateur radio. He has gotten them active on GMRS, which is a family radio service, but you have to be licensed to use it. They use it when they go camping. Ed's wife, Janis, has her Technician license. They are both active in emergency communications. Ed and Janis work with the Butler West district. Ed and Janis are very active on the Cottonwood Heights net.

Ed is a member of UARC. He really loves to attend Field Day. He was one of the Field Day helpers for this year. Ed helped put up the antenna system. Janis, his wife, loves to watch him put up the antennas. Ed and Janis were at the Field Day campsite four days before Field Day started and stayed after everyone else had left. Ed said he spent about three hours making contacts on the phone station. This was his second year of attending UARC's Field Day entry. Ed said he wants to come back again next year if Cottonwood Heights isn't planning to enter Field Day.

Ed's favorite thing about amateur radio is HF. He says HF is where it is at. He plans on getting into DXing when he gets his tower up. He said that UARC is a wonderful organization. Everyone is friendly and willing to help each other.

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Ed's other hobbies and interests include fishing, woodworking, and photography. In fact, Ed belongs to the same photo club that Ron Speirs, K7RLS, does. Ed is also a bee keeper, an interest which started when Ed was 14 years old

Ed, thank you for your help at Field Day this year. It is greatly appreciated.



Ed (KC7KCU) and Janis (KE7DSX) Hansen at their home station (*Tnx to K7RLS*)