

The *Microvolt*

December, 2009



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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
Board Liaison &	
Autopatch Engineer: Gordon Smith, K7HFV	801 582-2438
Provo Autopatch Host &	
ATV Engineer: Dale Jarvis, WB7FID	801 224-3405

Contents

Prologue 2
December Meeting..... 3
Latest News..... 4
The Candidates Speak..... 5
Member of the Month 6
New Antennas on ISS 8
Examination Schedule 8

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: www.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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December Meeting: Rules and Operating Practices

Can you give road instructions to a trucker who needs them for his job? How often do you need to ID a series of test transmissions? Is it OK to call CQ on FM? Can you use an autopatch to order a pizza? The coming UARC meeting, Thursday, December 10, will be a chance to get questions of this sort answered. Brett Sutherland, N7KG, our Official Observer Coordinator for Utah, will be on hand along with a panel of experienced hams to look at these and other issues regarding rules and operating practices.

Recent announcements by the FCC indicate that they really do mean what their rules say in Section 97.113(a)(3), that is, that prohibited transmissions include “communications on behalf of an employer.” There will be some discussion about the reason for this rule and how it impacts our operation, particularly for emergency communications.

December is also election month. Come and help us choose a slate of officers to carry the club forward in 2010. A group of potential officers have been nominated by the Nominating Committee, but that is not the final word. Nominations for all officers will again be open at the December meeting. If you know someone who would do a good job, or if you would like to volunteer for an officer yourself, there is still time.

Meetings are now on the *second* Thursday of each month, so the coming meeting will be Thursday, December 10, at 7:30 P.M. Our meetings during the Fall semester are being held in room 1230 of the Warnock Engineering Building on the University of Utah campus. Our traditional parking on the east side of the building is blocked off for construction, so recommended parking 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. For a map and directions for finding the building, check the club web site at http://www.xmission.com/~uarc/ablip_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
- 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 December get-together will be at “Chuck-A-Rama,” 744 E. 400 South in Salt Lake City.

Latest News

Our Cover: Microwave Crowd

Our cover this month is from last month's UARC meeting which was devoted to amateur microwave communications. In addition to the array of dishes, waveguide, breadboard transceiver, etc. it shows the entire group of presenters. They are (l. to r.) Glen Worthington, WA7X; Bryan Mogensen, W7CBM; Robb Kunz, N0KGM; Clint Turner, KA7OEI; Ron Jones, K7RJ; Dale Heisler, WJ7L; Dave Williams, WA7GIE; and John Lloyd, K7JL. Thanks to Ron Speirs, K7RLS, for the photo.

ISS QSO Scheduled December 2

It's been officially confirmed! The first school contact between the International Space Station and a school in the Salt Lake Valley is scheduled for Wednesday, December 2, at 9:13 A.M. Mountain Standard Time. Unfortunately, you probably won't receive this in time to listen in, but we hope you may have gotten the word on nets or via the web site.

Carla Burningham, KC7HON, who is the Principal at Midvalley Elementary School, has been working for nearly two years to arrange a QSO between students and astronauts aboard the International Space Station (ISS). She worked with local hams, particularly Randy Kohlwey, WI7P, to put together a plan that was acceptable to the ARISS ("Amateur Radio Aboard the International Space Station") administrators.

It was a source of considerable excitement to get word that the opportunity was imminent. We will report next month on the success of the project.

ISS school QSOs take place on 2-meter FM. It can be fun to listen in on such QSOs where the space station will be in view of your receiving location. Those with a reasonable outdoor 2-meter receiving antenna can listen in on most of a QSO. The uplink frequency (where the school will be transmitting) is 144.49 MHz (only important if you are near enough to the school to hear their transmissions on simplex). Downlink is on 145.80 MHz. *Do not transmit on either frequency!*

You may want to program two adjacent memory channels to these frequencies for easy switching. Switch to 145.80 when ISS is transmitting, and to 144.49 when the school is transmitting.

An even better option might be to put 144.49 in a memory channel and access 145.80 in the VFO mode. This will allow you to change the downlink frequency to compensate for Doppler shift. Initially, when the ISS is approaching Utah, the received frequency will be higher than the nominal, so the receiver will need to be tuned high for clearest reception. The received frequency will appear to decrease with time. At the point of closest approach it should be right on 145.80, but changing at the fastest rate for the pass. It will continue to slide down until the satellite is out of range.

For the most up-to-date list of imminent school contacts, download the file at:

<http://www.amsat.org/amsat/ariss/news/arissnews.rtf>. It is updated each Wednesday UTC (which is Tuesday evening in North America). Among the programs that can read the RTF (rich text) format are Microsoft *Word* and the free Word Viewer.

The Candidates Speak

Elections for 2010 UARC officers will take place at the December UARC meeting. Our bylaws state: "The nominees are encouraged to present a short autobiographical sketch or campaign letter to *The Microvolt* for publication in the December issue." We have sent an e-mail invitation to each known nominee to write something about themselves. Below are the pieces written by those who responded.

Linda Reeder, N7HVF For President

I have been in amateur radio for 24 years. I have also been a member of UARC for 24 years. I remember when I passed my Technician/General theory test on December 14, 1985. Back then, the Technician and General theory was one test. If you wanted to get your General, after passing the theory test you had to pass 13 words per minute code to get your General. That happened for me a few years later. Anyway, I remember after I passed my test, Randy Finch, K7SL, whispered to Gordon Smith, K7HFV, "Should we tell her about the money?" They asked me if I would like to be a member of UARC and help pay for the use of the repeaters. I said yes and have been a member ever since. I have been Program Chairperson several times.

My goal as President is to get more members involved in UARC. I know all of you have great talents and would like to share them. There are several things you could get involved in. For example, we need a volunteer to be Chairperson for Field Day or Steak-fry. We could use volunteers to help out on the UARC Information Net. Maybe you would like to teach a class or get UARC involved in a special project. Whatever it may be just let one of the officers know. Remember this is your club.

Dick Keddington, KD7TDZ For Secretary

Thanks for the opportunity of serving you as the Club Secretary. I appreciate your confidence in me and I am willing to continue in this position if you as a club reelect me.

The club secretary maintains the membership database, prepares *The Microvolt* mailing lists, and performs other duties.

I've been a Ham since 2002, and upgraded to General in 2005. It is a great hobby, and I appreciate the friendships it has generated, both on the air and in person.

After graduating from the University of Utah, I served as an Air Force officer on active duty and in the reserves for 28 years. I have recently retired from retail sales. I currently serve as Chairman of the Board of AVERT (Association of Volunteer Emergency Response Teams).

Thanks again for your friendship.

Gary Wong, AB1IP For Program Chairperson

Hi! I expect I will need an introduction to most UARC members, since I am still new to amateur radio; newer than that to Utah; and even newer to UARC.

I'm a New Zealander and spent most of my life in that country, so it's fortunate for me that the FCC specifies only the language required for phone station identification and not the pronunciation. I have been a U.S. resident for the last decade or so, living in Tucson, AZ; Randolph, NJ; and then Boston, MA. It was in Boston that a co-worker of mine (Austin Wolfe, KB1CCJ) started nagging me about taking amateur examinations. After a few months of that treatment, I succumbed, and so was licensed last year (while still living in Boston, which is why my call sign is from district 1). Since then I moved to Salt Lake City, and I was delighted to discover that the region hosts a wonderful amateur radio community.

If I am to be honest, I should admit at this point that I am certain I am not the best candidate for a Program Chairperson: the reason I know this is from meeting so many very talented people through UARC meetings, repeaters, and activities. I've been fortunate enough to be the beneficiary of their patient and polite assistance each time my background (in software and digital logic) proves inadequate to understand some aspect of amateur radio (especially the analogue topics which are so mysterious to me). Even though I know each of those kind people would make a better Program Chair than I would, it is because of their examples of generosity that I am willing to serve on the board if elected: I have gotten so much out of my short UARC membership that I've already accumulated quite a debt of gratitude to the organisation.

Many thanks to the UARC board and members for all your work and friendship in 2009. You've raised expectations high for 2010!

**Gordon Smith, K7HFV
For *Microvolt* Editor**

If you elect me as Editor, you are likely doomed to the same kind of newsletter you've been getting this year, so don't say I didn't warn you!

I got my first license back in 1959 when I was still in junior high school. My first stint as Editor was in 1963 when, as still a teenager, I had the privilege of working with the late Mac Petersen, W7WKF, who was that year's President. Mac volunteered for the office after a motion had been made to disband the club. He was remarkably successful at revitalizing the club and was the one who instigated the steak-fry tradition.

After being Editor off and on, I left the job to others in the early 80's. This was partly because of the narrow-minded opinion of some members that getting the

January issue in October wasn't acceptable. There was the issue of the possible law suits too, but I'll leave that discussion for another time.

Last year our elected Editor found that family issues and time constraints would not allow him to continue. In a weak moment I volunteered to try to fill the gap and have been getting the paper out since. I found it's not nearly as much work as it was in the 80s. There's a lot of great help. Rick Asper, AC7RA, the Assistant Editor, takes care of the mailing and keeping the post office happy, not a trivial job. Brett Sutherland, N7KG, prints the paper and allows us to have color covers. Secretary Dick Keddington, KD7TDZ, keeps the mailing list up to date. The ability to pass material by e-mail has made the job easier for all of us.

Whoever is Editor for 2010, I hope everyone will make *The Microvolt* their publication by contributing to it.

**Rick Asper, AC7RA
For Assistant Editor**

I think UARC is a great organization.

The Board has done a great job in running it's operations. First of all I would like to thank the board for doing such a wonderful job. It is people like you that makes this club great.

I love Amateur Radio and spend several hours a day on the radio having fun. I feel the need to support the club and its operations because of the many benefits I have received from being a member.

I would love to help keep the club and *The Microvolt* running. So I would like to continue being the Assistant *Microvolt* Editor.

Member of the Month

Robert Gibby, KE7TYX

By Linda Reeder, N7HVF

This month we are featuring Robert Gibby, KE7TYX. Robert has been interested in radio for a long time. When he was six years old his father

introduced him to a crystal set. It was a tube radio with a coil that would move the tuning up and down, but it wasn't easy. Robert started out as

a short wave listener. He loved listening to the baseball games.

Robert's father had a friend who was an amateur radio operator. His name was Chet Ashby, and his call sign was W7DTB. He lived in Clearfield, Utah. Robert used to go to his house and watch him for hours making CW contacts. This is what sparked Robert's interest in amateur radio.

Robert lived in Roy Utah. He attended Weber High School because Roy High didn't exist then. It wasn't until Robert was attending an electronics class at Weber State College that he obtained his Novice class license. His first call sign was KN7HCC

Robert homebrewed his first transmitter. It ran a 6V6GT tube delivering about 5 watts into a half-wave dipole. His receiver was a tube type (early 1950's) automobile radio, converted to line voltage by removing the vibrator power supply and replacing it with a transformer. A homebrew converter got it on to 40 meters. A local beat frequency oscillator made copying code possible; Tuning in single sideband was "interesting."

Robert said he will never forget his first CW contact. The person who was receiving his code was very patient with him. Robert was really nervous copying the code. Finally he shut the whole thing down and went to bed. Robert was wide awake for 2 hours because of the excitement of his first contact.

Robert served a mission for the LDS Church in Australia, which kept him away from amateur radio for awhile. He did get to listen to the Mormon Tabernacle choir on shortwave radio. One day while Robert was on his mission he noticed that his landlady was throwing away a radio. He asked her why she said because it doesn't work. Robert said that a solder cap was unsoldered. He fixed it for her and she was a happy camper.



Robert Gibby, KE7TYX, showing off his "atomic watches" at homebrew night.
(Photo by Ron Speirs, K7RLS)

When Robert returned from his mission his Novice license had expired. Robert's electronic career and raising seven children put amateur radio on the back burner for quite some time. Robert and his wife, Dorothy, have seven children, two boys and four girls, as well as 22 grandchildren.

Robert worked four years at the Hansen Planetarium as a repair technician. For 28 years Robert worked for the Utah Department of Transportation as a traffic signal coordinator. Then for three years Robert worked for Wasatch Construction rebuilding freeway I-15. Robert said he still does some work for the the Utah Department of Transportation.

Robert has been away from amateur radio since 1960. Robert's wife, Dorothy, received an emergency preparedness calling from the LDS church in their ward. Their stake was teaching a class in amateur radio. Robert and his son Daniel took the class. On May 13th, 2008, Robert and Daniel both passed their tests. Not only did Robert pass the Technician, but the General as well. Robert's son, Daniel, has his Technician license. Daniel's call sign is KE7TYS. On

Wednesday November 4, 2009, Robert received his Extra Class license.

“atomic watches.” Robert is a member of UARC.

Robert's favorite thing about amateur radio is building stuff that works. Robert participated in this year's homebrew night. He demonstrated his

Robert, welcome back to the hobby.

New Antennas on ISS

From *The ARRL Letter*, November 25 edition

On Saturday, November 21, astronauts Mike Foreman and Randy Bresnik completed the second EVA (extra-vehicular activity) – NASA's term for a spacewalk – of their mission. While on the 6-hour, 8-minute EVA, Foreman installed the Amateur Radio on the International Space Station ([ARRL](#)) antennas for 2 meters and 70 cm on the *Columbus* module.

Columbus module,” he explained. “The AIS antenna is forward and the ARISS antenna is aft. The ARISS team is planning to migrate some stowed Amateur Radio gear to take advantage of the new antenna.”

NASA ISS Ham Radio Project Engineer Kenneth Ransom, N5VHO, told the ARRL that this new antenna – along with another VHF antenna – was developed by ARISS in cooperation with the European Space Agency ([ESA](#)) to support an experiment involving the maritime Automatic Identification System ([AIS](#)). “Both antennas were installed on the Earth-facing starboard edge of the

Frequencies available for transmission to and from *Columbus* will be 2 meters, 70 centimeters and 13 cm. To start, two radios for 2 meters and 70 cm that don't see much use on the ISS will be moved and installed in *Columbus*.

The space shuttle *Discovery* is expected to return to Earth on Friday, November 27, and will bring Nicole Stott, KE5GJN, back from her stay on the ISS.

Examination Schedule

12/05/09	(Sat.)	Salt Lake City	Gordon Smith, K7HFV	(801) 582-2438 ¹
12/12/09	(Sat.)	Logan	V.P. Rasmussen, N7JFG	(435) 770-0630
12/15/09	(Tue.)	Tremonton	Robert A. Anderson, AA7TR	(435) 257-2154
12/16/09	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
12/16/09	(Wed.)	St. George	Gary Zabriskie, N7ARE	(435) 674-2678
	(Tue.)		<i>(Last Tuesday test in Salt Lake City omitted in December)</i>	
1/20/10	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
1/20/10	(Wed.)	St. George	Gary Zabriskie, N7ARE	(435) 674-2678
1/26/10	(Tue.)	Salt Lake City	Eugene McWherter, N7OVT	(801) 541-1871

¹ Preregistration required. Contact the indicated person.