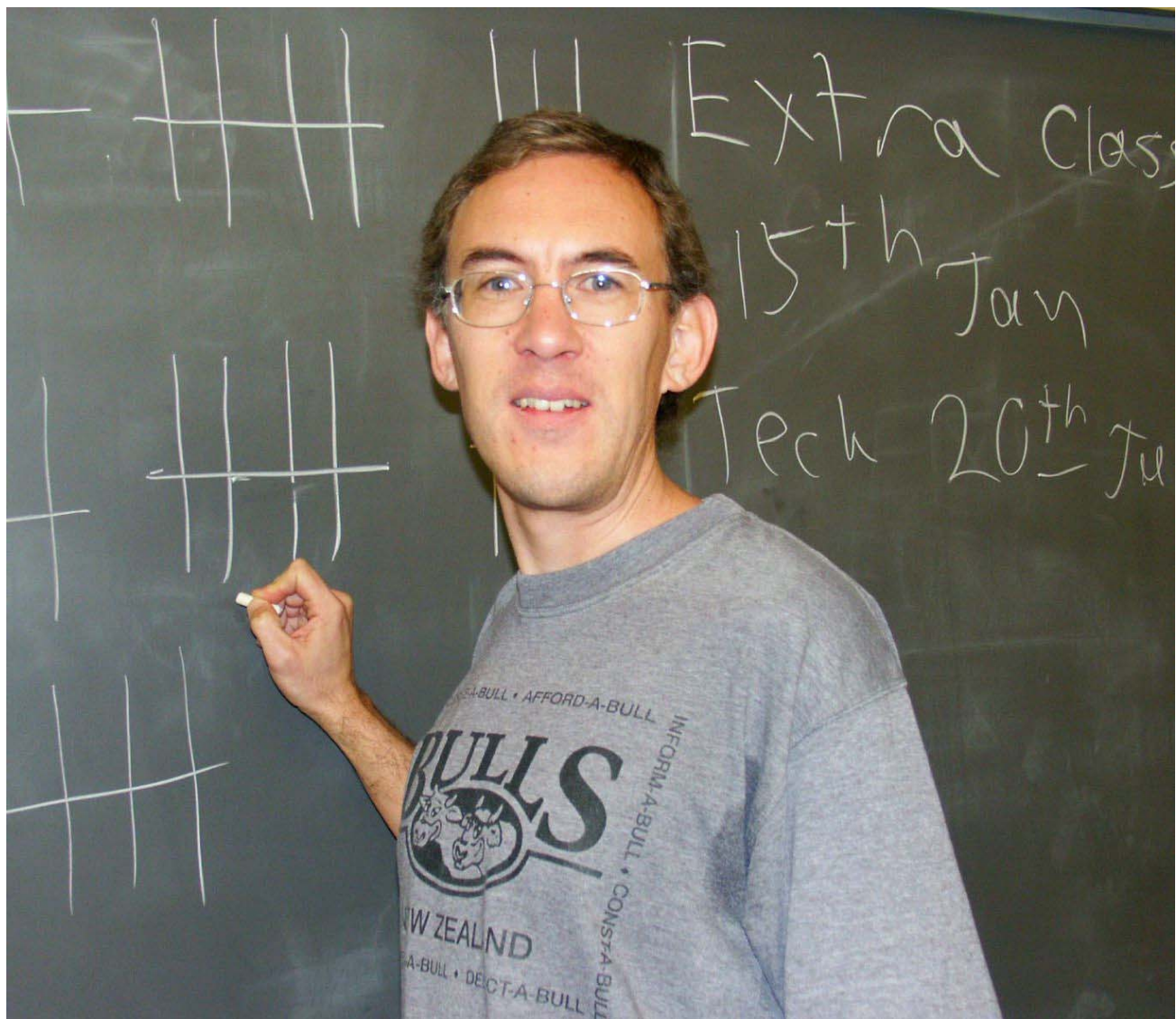


# The *Microvolt*

January, 2015



## 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, 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 \$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, 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 2015 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
Treasurer: Chuck Johnson, WA7JOS	801 268-0153
<i>Microvolt</i> Editor: Gordon Smith, K7HFV	801 582-2438
Asst. <i>Microvolt</i> Editor: Mary Alexander, KF7QVL	801 347-3220
Program Chairperson: Morris Farmer, AD7SR	801 278-4966
Program Chairperson: Chuck DeWitt, W7DTO	435 882-9002
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: (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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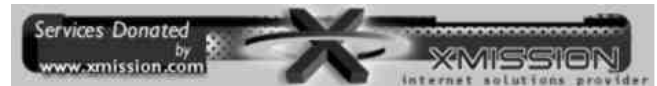
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## IRLP Information

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 58, Issue 1, January 2015

# January Meeting: Grounding Your Station

We are used to thinking that our rig and our antennas are the most important part of our ham stations. But, unless we have properly grounded our stations we are likely to be disappointed with the performance of our rig. Grounding is not one topic, but at least three separate topics that need to be addressed: lightning protection grounds; RF grounding, and AC power protective ground.

For our January 8 meeting we are lucky enough to have, perhaps, the foremost Utah expert on the topic of grounding, Mack Gilbert, K7HEN. Mack has more than 30 years of experience in commercial tower construction, providing grounding for the tower, and the equipment that uses the tower. He has installed over a thousand towers and is recognized as an expert in the field of tower installation and station grounding.

Unless you *only* operate with a handheld radio, this is a presentation you should not miss!

The meeting will be on Thursday, January 8, at 7:30 P.M. in room 1250 (main floor, south side of the main corridor) 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 spring, 2015, meetings will be in room 1250, “the Stockham classroom” on the ground floor. See the [map](http://user.xmission.com/~uarc/meetmap.html) 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. The January get-together will be at “Charlie Chow's Dragon Grill,” 255 E. 400 South in Salt Lake City.

# Latest News

## Our Cover

Our cover this month shows Gary Wong, AB1IP, who presented the program for our December meeting: the (now) traditional ham radio quiz. This year’s questions included topics ranging from Poynting Vectors to the frequency of Utah’s only six-meter repeater. Of special note this year was that several questions shared the same answer: “73.”

## Election Results

In a remarkable show of confidence (that’s what it was wasn’t it?) the UARC members at the December meeting re-elected the entire slate of incumbents to become the 2015 officers and Board members. None of the other nominees got a single vote. (Some suggested the reason might be the lack of other nominees.)

The 2015 officers are:

President	Clint Turner, KA7OEI
Executive Vice-Pres.	Rick Asper, KC7RA
Vice-President	Brett Sutherland, N7KG
Secretary	Dick Keddington, KD7TDZ
Treasurer	Chuck Johnson, WA7JOS
Program Chair	Chuck DeWitt, W7DTO
Program Chair	Morris Farmer, AD7SR
Editor	Gordon Smith, K7HFV
Asstant Editor	Mary Alexander, KF7QZL

## License Classes in Early 2015

Morris Farmer, AD7SR, and friends have license study classes coming up in 2015. The location of each class will be Morris home and the only cost will be the ARRL study guide for the appropriate class of license.

**Technician:** There will be a “Long Form” Technician course starting on January 12<sup>th</sup>.

Morris will be joined by Bill Rouleau, AE7UI. The schedule will be Mondays at 7 P.M. for approximately 7 - 8 weeks. For more information contact Morris at [f.morris1@comcast.net](mailto:f.morris1@comcast.net) or Bill at [wrouleau@comcast.net](mailto:wrouleau@comcast.net).

**General:** A General class will be taught right after the end of the Technician class above, again on Mondays. The starting date will likely be in mid-March.

**Extra:** There will be an Extra course starting on Wednesday January 14<sup>th</sup>. Ron Speirs, K7RLS, and Morris will teach the course. It will take place each Wednesday at 7 P.M., for approximately 15-16 weeks. For more information contact Ron at [k7rls@comcast.net](mailto:k7rls@comcast.net) or Morris at [f.morris1@comcast.net](mailto:f.morris1@comcast.net).

## Field Day Help Needed

The national event called “Field Day,” sponsored by the American Radio Relay League (ARRL) is the most popular operating event in amateur radio. It is a test of groups’ abilities to set up portable stations on short notice and show that they work well by working as many stations as possible in a 24-hour period. Field Day is held each year on the fourth Saturday in June and the following Sunday. That puts the 2015 event on June 27 and 28.

A UARC club entry in Field Day is one of UARC’s most popular events each year. We set up several HF stations in the mountains near Payson Lakes and combine a family campout with some HF contest operating.

We need volunteers to help plan the event and learn what is involved in the setup each year. In particular, we need someone who could be the Field Day Chairperson for 2015, or maybe the “Assistant Chairperson” for a year to learn the ropes (literally for some steps). If you would be

interested in helping, contact any of the officers. Their contact information is on our inside front cover.

### **Parking at the “U”**

A reminder that until UARC’s June meeting you can ignore signs on the parking lots at the University of Utah saying that parking rules are enforced until 8 P.M. As soon as the officers find out (we hope before the June meeting) we will announce where you will need to park to avoid being ticketed.

### **Orem License Classes**

Noji Ratzlaff, KNØJI, has license study courses coming up in 2015, sponsored in part by the City of Orem. The location of each course will be

Orem Public Safety Traffic Training Room  
95 E Center St  
Orem, Utah 84057

There is a charge of ten dollars per course per person, payable by calling 801-229-7076 with a credit card handy. Please bring a laptop, tablet, or other device with which you can access your email and websites to each class. Feel free to park just west of the Public Safety building.

All classes are held on several successive Wednesday evenings as follows:

<b>Class</b>	<b>Sessions</b>	<b>Start Date</b>	<b>Times</b>
Technician	3	1-28	1830-2030
General	3	4-29	1830-2020
Technician	3	7-29	1830-2030
Extra	4	9-23	1730-2100

For more information, please contact Noji at [kn0ji@arrl.net](mailto:kn0ji@arrl.net) or 801-368-1865. You can also see this information if you go to <http://www.arrl.org/find->

[an-amateur-radio-license-class](#) and search for the 84057 ZIP code.

### **New Net Night for 76ers**

The weekly 76ers Net will be changing from its traditional Thursday night to Wednesday night beginning on Wednesday, January 7. It is hoped this will make it easier for those who would like to check into the net and also attend UARC meetings. The net meets at 7 P.M. on the 146.76 repeater. (No tone required.)

The 76ers are a “social group” who congregate principally on UARC’s 146.76 repeater. More information can be found at: <http://www.uarc-76ers.net/>

### **Six-Meter Net to Restart**

Morris Farmer, AD7SR, tells us that there is a move afoot to try again to hold a weekly six-meter SSB net, similar to the “Six-Pack Net” that ceased meeting several years ago. The net will meet on Friday evenings at 9 P.M. on 50.15 MHz upper sideband. The first session will be on Friday, January 9.

### **New General Question Pool Announced**

The new question pool for General Class examinations was announced in mid-December. It will go into effect on July 1, 2015. It is available in several common formats at: <http://ncvec.org/page.php?id=364>.

Amateur license examinations in the United States are supervised by 14 volunteer examiner coordinators (VECs). Question pools are selected by a three-member Question Pool Committee chosen from the VECs. Updates take place on a four-year cycle.

## License Examination Schedule

Opportunities to test for new or upgraded amateur licenses

Date	Day	City	Contact Person	Phone
<i>(No last Tuesday test in Salt Lake City during December.)</i>				
01/21/15	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
01/21/15	(Wed.)	St. George <sup>2</sup>	Gary O. Zabriskie, N7ARE	N/A
02/04/15	(Wed.)	Ogden	Rick Morrison, W7RIK	(801) 791-9364
02/07/15	(Sat.)	Salt Lake City <sup>1,4</sup>	Gordon Smith, K7HFV	(801) 582-2438
02/14/15	(Sat.)	Hurricane <sup>2</sup>	Gary O. Zabriskie, N7ARE	N/A
02/18/15	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
02/18/15	(Wed.)	St. George <sup>2</sup>	Gary O. Zabriskie, N7ARE	N/A
02/24/15	(Wed.)	Salt Lake City <sup>3</sup>	Eugene McWherter, N7OVT	(801) 541-1871

<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.

## Rocky Mountain Division Update Excerpts

By Brian Mileschosky, N5ZGT  
ARRL Rocky Mountain Division Director

### January ARRL Board of Directors Meeting

The ARRL Board of Directors convenes twice a year to represent their Divisions on ARRL policy matters, its first meeting of 2015 taking place next month. Your concerns, questions, and ideas regarding ARRL policies are always welcome. As always, please help us better represent you by sharing your thoughtful feedback on League matters that are important to you.

### ARRL Rocky Mountain Division Net — Accessible via both IRLP and Echolink!

In an effort to provide more options for hams across the Division to participate in the monthly

Rocky Mountain Division net, since not everyone has an IRLP node nearby, an experimental/trial Echolink path into the net will once again be made available for Wednesday's net. Its performance and level of use will be monitored to determine potential feasibility as a long term solution.

To try connecting to a second Wednesday evening net via Echolink, please connect to node number 415699 (K0JSC-R).

### ARRL Rocky Mountain Division Scholarship

The ARRL Foundation is currently accepting applications from eligible young radio amateurs pursuing higher education. More than 80 scholarships ranging from \$500 to \$5,000 are awarded annually — including our very own

Rocky Mountain Division scholarship. Additionally, one applicant is selected for the prestigious William R. Goldfarb Scholarship, awarded to a high school senior pursuing a degree in business, computers, medical, nursing, engineering or science. The recipient of the Goldfarb Scholarship is eligible to receive funding throughout four academic years to earn a bachelor's degree. All applicants must be active radio amateurs and must complete and submit the online application.

If you are a young person who is pursuing higher education, or know such a young person in your ham club, please visit

<http://www.arrl.org/news/the-arrl-foundation-invites-scholarship-applications-for-2015-16-academic-year> for more information, including links to scholarship descriptions and an online application form.

## **Help Support Scholarships**

The Rocky Mountain Division scholarship was established with the vision that it would be a gift to our Division's young hams that keeps on giving. However, that can only be realized if the scholarship continues to be funded to benefit our Division's young hams year after year. Individual hams, clubs, organizations, hamfest organizers, and convention organizers across our Division are kindly asked to consider supporting the scholarship's future and its great cause through a tax-deductible contribution, even if just a few dollars. Contributions may be made by completing the form at:

<http://www.arrl.org/arrl-foundation-donation-form> and including a check payable to the ARRL Foundation with "ARRL Rocky Mountain Division Scholarship" written on the memo line, and mailed to:

ARRL Foundation  
225 Main Street  
Newington CT 06111

The ARRL Foundation, Inc. awards more than 80 scholarships to young hams who are pursuing higher education, and is a not-for-profit organization operating under IRS Tax ID # 23-7325472. As a benefit, all contributions will be acknowledged with a tax receipt letter and are deductible to the full extent of the law.

## **2015 Rocky Mountain Division Convention**

The good folks in Utah are in the midst of planning the 2015 Division Convention, returning to gorgeous Bryce Canyon, Utah. Mark your calendars for July 31-August 2, 2015 for a special convention, packed with many of the activities and events our Division's conventions have become known for.

Many more details are forthcoming and will be announced in these spaces.

## **Arc Fault Circuit Interrupter (AFCI) problems**

As noted in the last Division Update, ARRL's Lab staff has been engaged in a working relationship with Eaton Corporation, a manufacturer of arc fault circuit interrupter (AFCI) breakers, to resolve problems reported by amateur radio operators that caused certain breaker models to trip unnecessarily due to RF transmissions, even if the RF source is stood off by a significant distance. Like the more common ground fault circuit interrupter (GFCI), an AFCI is a safety device that is mandated by code in some household circuits and that detects potentially hazardous arc faults due to poor connections in wiring and other factors.

Details about ARRL's industry partnership with Eaton can be found at:

<http://www.arrl.org/news/arrl-helps-manufacturer-to-resolve-arc-fault-circuit-interrupter-rfi-problems> .

To understand and track the extent of (known) AFCIs that are tripping due to RF transmissions within the Rocky Mountain Division, all hams within Colorado, New Mexico, Utah, or Wyoming who are currently experiencing RFI problems with AFCIs are asked to email *both* Rocky Mountain Division Director Brian Milesosky, N5ZGT (n5zgt@arrl.org), and ARRL Lab staff member Mike Gruber, W1MG (w1mg@arrl.org), with details about your situation (AFCI make/model, bands and power levels causing trips, etc.). Mr. Gruber can provide information on Eaton's process to replace faulty AFCIs.

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## **Member of the Month**

### **Jared Edwards, N2JAE**

**By Linda Reeder, N7HVF**

This month we are featuring Jared Edwards N2JAE. Jared has been in amateur radio since 2010. It was his father, Shon, who got him interested in the hobby. Shon would let Jared talk on his station as a third party. Jared was able to talk on six meters and thought that was really exciting. He now has his General class license and is really interested in learning the Morse Code. He wants to communicate with people all over the world on CW. Jared said this is an interesting way to communicate and it is his goal to be able to send and receive at 20 words per minute. He is working hard on this every day using a code keyer and listening to recordings of the Morse Code.

Jared operates on 2 meters and 70 centimeters. He really enjoys talking on the reflector. He talks to people all around the world. Jared is very active on his brother James' Worldwide Friendship Net every Saturday morning at 8 A.M. using Echolink and the Western Reflector. Jared said they talk to youth all around the world. Jared also participates in his brothers' youth net of the Northern Utah Youth Amateur Radio Club every Sunday night at 7 P.M. on the 147.04 repeater. One of the things

that Jared likes best about amateur radio is being able to communicate with his family.

Jared enjoys participating in public service events. Jared was able to participate in the Fourth of July parade last summer and enjoyed it very much. He is looking forward to doing it again this year. JARED is a member of UARC and the Davis County Amateur Radio Club. He really enjoys attending the meetings. One of the speakers talked about preparing go kits for emergencies.

Jared is in the eighth grade. He attends Legacy Junior High School in Layton, Utah. Jared is in the band and plays the euphonium. Last month they traveled to different elementary schools and performed Christmas concerts. He really enjoyed it. Band is his favorite subject.

Jared has several hobbies. He enjoys bicycling, flying RC planes, playing chess, and sea monkeys and they have hatched. Jared also loves to read. He is reading Shannara book series.

Jared we wish you the best in all of your endeavors especially learning the Morse Code.