

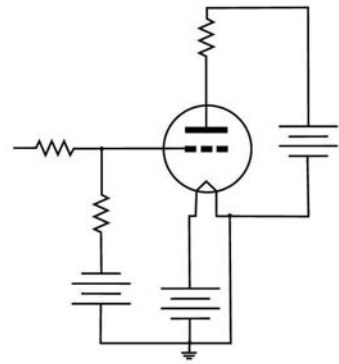
The *Microvolt*

January, 2016

Equipment

20

The term “C battery” might now be used to describe a size of cell (which a sufficiently pedantic person might argue is not actually a battery). But old radios might include a C battery, meaning something entirely different. What was it?



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.

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Committee Chairpersons and Members

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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>. The prefix code required is 314. Please do not give this out to nonmembers of UARC.

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.



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The Microvolt

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January Meeting: The Ideal Grab-and-Go Kit

Anyone who has been involved with any of the emergency response organizations has learned about the importance of a “Grab-and-Go” kit, the bag of essential items you will need to provide emergency communications on short notice. You won't have to ask “What will I need?” or “Where did I put that stuff?” You will know that you figured all that out during your advance preparations and now you need merely to grab your kit and head out.

But what will you need and how do you condense it into a reasonably sized package? We will have some help for that question available at our January 14 UARC meeting. Larry Jacobs, WA7ZBO, and John Jacobs, W7DBO, will be presenting a program on what to take and how to operate.

The meeting will be on Thursday, January 14, at 7:30 P.M. in room 1230 (the “Duke” 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 winter, 2016, meetings will be in room 1230. See the map at <http://user.xmission.com/~uarc/meetmap.html> for information on finding the building. The room number varies depending on availability. Parking lots circled in green are ones where you can park without needing a University permit.

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 shows Gary Wong, AB1IP, along with one of his questions from his December Ham Quiz competition. Gary's quizzes on a variety of ham radio topics have become a tradition at December UARC meetings. (The answer, by the way, is that the "C" battery is used for grid bias.)

January License Classes

We will be teaching Technician, General, and Extra license courses starting in January. The Technician course will start on Monday, January 18th. The General course will start on Tuesday, January 19th, and the Extra course will start on Wednesday January 20th. All courses will start at seven PM and will be taught at the home of Morris Farmer, about 5000 South and 1500 East. The Technician and General courses will run for about 8 weeks and the Extra course will run for roughly 16 weeks. There is no charge for any of the courses; however, there is a charge for the text, the ARRL *License Manuals*. The manuals will cost \$30.00 each and the proceeds go to UARC, they will be available at the class.

The instructors for the Technician and General courses will be Morris Farmer, AD7SR, and Bill Rouleau, AE7UI. The instructors for the Extra course will be Ron Speirs, K7RLS, and Morris Farmer, AD7SR.

If you are interested in taking one of these courses or have any questions, send email to Morris Farmer, AD7SR, at f.morris1@comcast.net.

VHF Society Swap Meet 2016

The annual Utah VHF Society Swap meet will be held at 9 A.M., Saturday, February 27, 2016. This annual event is typically the biggest amateur radio

swap meet in the state. Admission is free to VHF Society members, and it will be possible to join at the event. There will be a charge for admission for non-members and for display tables.

In order to avoid long lines on the day of the event, those planning to join or renew for 2016 are encouraged to pay dues in advance. It can be done through PayPal.

Location will be the Legacy Events Center in the Farmington Fair Park, the same place as for the last several years.

The Society gives financial support to a large group of repeaters. This is particularly valuable for repeaters which must be supported by towns having a relatively small ham population. The Society also provides frequency coordination for the state of Utah.

For more information see the UVHFS web site at: <http://www.utahvhfs.org/>.

Convention Registration Open

We have received word that registration is now open for the 2016 ARRL Rocky Mountain Division Convention and HamCon Colorado, to be held May 13-15. This year's event will be held at the Keystone Conference Center in Keystone, Colorado (east of Vail on US 6). It will include seminars, keynote speaker, contests, awards, and, at midnight, the famous Order of the Wouff Hong initiation.

For more information or to register, see: <http://www.hamconcolorado.org/>.

Field Day Help Needed

Volunteers are needed to plan UARC's annual Field Day entry.

The Microvolt January 2016

For those new to the hobby we should explain that Field Day is a nationwide contest-like event to test our ability to set up good portable and mobile communications. It happens on the fourth full weekend in June and is the largest operating event in amateur radio. The object is to work as many stations as possible in a 24-hour period. (Last year we worked over 2000 stations.) UARC in recent years has operated two to four stations from a portable site near Payson Lakes.

There are a lot of jobs that need to be done both before and during the event. Those include securing our special use permit, finishing work on our small trailer, towing trailers to the site, checking fuel levels and tires on the generator trailer and making necessary corrections, making sure all the transceivers are in operating condition, finding folks who can set up a six-meter SSB station, finding folks who can set up a satellite station, finding tent heaters than can be borrowed, initializing logging computers, and making sure we have logs, scratch paper, help sheets, and other useful kinds of paper (plus all the jobs your editor has forgotten about).

If you would be interested in managing any of these areas, let one of the officers know. And, oh yes, we still need someone to be the official Field Day Chairman and make sure everyone else is doing their jobs.

The whole thing is more fun if we have more people helping and we actually need to start planning very soon.

Orem License Classes in 2016

Noji Ratzlaff, KNØJI, has license study courses coming up in 2016, 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.

The cost is \$10 per course per person, payable by going to:

<https://secure2.orem.org/ps/ApplicationCert.aspx> with a credit card handy. Please bring a smart phone, laptop, tablet, or other internet-capable device to access your email and websites to each class. Feel free to park just west of the Public Safety building.

Technician Class License Course - three nights

Thu 28 January
Thu 04 February
Thu 11 February
6:30 to 8:30 P.M.

General Class License Course – four nights

Tue 22 March
Tue 29 March
Tue 05 April
Tue 12 April
6:30 to 8:30 pm

Technician Class License Course – three nights

Thu 26 May
Thu 02 June
Thu 09 June
6:30 to 8:30 pm

General Class License Course - four nights

Wed 20 July
Wed 27 July
Wed 03 August
Wed 10 August
6:30 to 8:30 pm

Technician Class License Course – three nights

Thu 29 September
Thu 06 October
Thu 13 October
6:30 to 8:30 pm

License Examination Schedule

Opportunities to test for new or upgraded amateur licenses

Date	Day	City	Contact Person	Phone
01/16/16	(Sat.)	Provo	Noji Ratzlaff, KN0JI	(801) 368-1865
01/20/16	(Wed.)	Provo	Noji Ratzlaff, KN0JI	(801) 368-1865
01/20/16	(Wed.)	St. George ²	Gary O. Zabriskie, N7ARE	N/A
01/26/16	(Tue.)	Salt Lake City ³	Garth Wiscombe, W7PS	(801) 558-5936
02/06/16	(Sat.)	Salt Lake City ¹	Gordon Smith, K7HFV	(801) 582-2438
02/06/16	(Sat.)	Logan	Richard D. Elwood, KE7GYD	(435) 753-4360
02/13/16	(Sat.)	Hurricane ²	Gary O. Zabriskie, N7ARE	N/A
02/17/16	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
02/17/16	(Wed.)	St. George ²	Gary O. Zabriskie, N7ARE	N/A
02/23/16	(Tue.)	Salt Lake City ³	Garth Wiscombe, W7PS	(801) 558-5936
03/02/16	(Wed.)	Clearfield ¹	Mike Youngs, KK7VZ	(801) 573-3922

¹Preregistration required. Check with the contact person before the test session.

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

³New location: Senior Center at the Columbus Center, 2530 S. 500 East

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

From the Clipboard of the Editor

It seems that a lot of people get their licenses these days because they have heard of the value of amateur radio in emergencies. There is no doubt that the service has a long, honorable record for jumping in when a disaster takes out normal phone communications. In Part 97 of the FCC rules, the Commission even suggests as one of the reasons for giving us frequencies: "Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications."

As good as we are, though, we shouldn't over-sell our capabilities. A few repeaters and an HF frequency or two can provide valuable channels for communications among first responders, and agencies such as state and local emergency management departments and the Red Cross. But they can't begin to provide the thousands of connections by which people talk to each other on the phone system every day. I think this is the

point people miss when they come to believe that an H-T will take care of their personal communications if the phone network fails.

It's not uncommon to hear about two family members or a husband and wife who need to communicate with each other when they're in different cities and they find a repeater that seems to make the connection between their handie-talkies. It might be a husband who works in Salt Lake Valley and lives in Utah County or two brothers who live in different cities. Problem solved, right? Well, not necessarily.

The range of an H-T with a "rubber duck" antenna is pretty limited unless there is a repeater involved. A lot of the repeaters are considerably less robust than the commercial systems that they often share space with. The ham repeaters are built by people in their spare time with whatever gear they can scrounge at low prices. They often have limited, if any, backup power. Some of the best

sites are quite difficult to access in wintertime and few ham clubs or individuals can afford a helicopter ride, so it is not uncommon for a repeater to stay off the air for months until the snow melts from the jeep trails that access them. Compare this to cell sites where full-time employees are ready to head out on short notice when an outage occurs. Outages cause serious loss of revenue and that justifies a large outlay for skilled people and parts to ensure reliability. That is in contrast to ham repeaters which are built and maintained just for the fun of it.

So the fact is than in a widespread disaster, there may be only a few good performing repeaters that are left on the air, and they will quickly be taken over by hams assisting various agencies to get help to places where it is most needed.

So, if you really want to be sure you can communicate with your spouse, friend, or relative, you probably need to work out a system that doesn't need a repeater or an internet-connected system. (Remember, internet is carried on the same kinds of cables and links that carry telephone traffic. If phones are down, so, likely, is Internet.)

That doesn't mean the situation is hopeless; it just means you need to learn about ways to communicate over some distance without the need for infrastructure. If you just need to get across the

valley, a good vertical on the roof and a 50-watt mobile in the car may be all it takes. You can pick a little-used simplex frequency on a little-used band, say six meters or 222 MHz, and you will likely have no trouble.

If you need to get between Logan and Provo, it gets a little harder. It's probably time to consider HF. Good HF antennas on a car are not as petite, unassuming, and low-cost as those for VHF or UHF, but if you really want your own reliable communications you'll have to be prepared for some work and cash-outlay.

And what if HF propagation refuses to cooperate? We still have a mode called CW that can frequently get through when voice can't, even when we are restricted to low power. Digital modes, meteor scatter, aurora, and even moonbounce might be the answer.

So what is the bottom line? It's that the strength of the Amateur Radio Service is not in the size of its repeater system or the quality of its H-T's, it's rather in the diversity of its bag of tricks. The more of that bag we qualify ourselves to use, both in equipment and skills, the more effective emergency communicators we can be. Whether it's to talk to a spouse or serve our nation in time of emergency, it's our versatility and ingenuity that can make us stand out.

More Volunteers Needed

We are still in need of some volunteers for the Sunday night "UARC Information Net" which meets each Sunday at 9 P.M. There are several vacancies for Net Control Operators and those who can read the "Other Club Information" section. In most cases the commitment is only for one night each month. If you can help, contact Mike Youngs, KK7VZ, at kk7vz@arrl.net or (801) 573-3922.

Member of the Month

Gaye Eggli, KC7KDY

By Linda Reeder, N7HVF

This month we are featuring Gaye D. Eggli, KC7KDY. Gaye and her husband, Daniel, decided that amateur radio was a hobby that they could

enjoy together. They studied and obtained their licenses together, receiving them in 1995. That was when the FCC had done away with the Novice test.

If an individual passed the five word per minute Morse Code test, that individual would have a Technician Plus license. That is what Gaye and her husband chose. Gaye said while studying for her license she learned a lot about the safety of the radios. Gaye's call sign is KC7KDY and her husband Daniel's call sign is KC7HOS. Daniel now has his Extra class license.

Gaye says communications is very important and this is something she can do with her husband. Communications turned out to be helpful when they were on their way to the steak-fry. They had the ham rig on in their vehicle and got the information they needed, such as the directions to the steak-fry and if there was parking.

Gaye was impressed that you could communicate long distances with ham radio. Technology has made this possible with the IRLP and repeaters being connected together. Gaye just loves to listen to people communicate on two meters. She says you hear a lot of interesting things. She has participated in Field Day and thought it was very interesting.

She really enjoys the UARC meetings. Her favorite meeting is homebrew night. Dan and Gaye are both members of UARC and they enjoy listening to the UARC information net on Sunday nights. Gaye

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enjoys the Newslines and her husband likes listening to the roundtable. It is interesting to learn how to solve amateur radio technical problems.

Gaye and her husband, Daniel, have four children: two boys and two girls. They are all grown now. They haven't shown an interest in the hobby. Gaye's sister, Joy, was in the hobby but lost interest and let her license lapse.

Gaye has her associate degree in finance and credit. She attended The Salt Lake City Community College. She now works for Deseret Industries as a cashier. Gaye enjoys handy crafts, knitting, crocheting, quilting and weaving.

Gaye we wish you the best in all of your endeavors.

