

The *Microvolt*

March 2022



Where did APRS come from?

Originally invented in
1982 by Bob
Bruninga WB4APR at
USNA

Current version
established in late
1990's



Prologue

Publication: *The Microvolt* (USPS 075-430) is the official publication of the Utah Amateur Radio Club, Incorporated, 632 S. University Street, Salt Lake City, UT 84102-3213. 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 Tom Kamlowsky, 4137 Clover Lane, Salt Lake City, UT, 84124-2711.

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: Tom Kamlowsky, 4137 Clover Lane, Salt Lake City, UT, 84124-2711.

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: Tom Kamlowsky, WA7ZRG, 4137 Clover Lane, Salt Lake City, UT 84124-2711. Let the Secretary know if you prefer the electronic edition of *The Microvolt* instead of the printed version.

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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License Trustee: Brett Sutherland, N7KG	801 298-5399
Repeater Engineer: Clint Turner, KA7OEI	801 566-4497
Autopatch Engineer: Gordon Smith, K7HFV	801 582-2438

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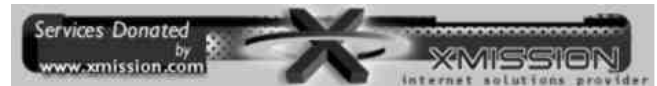
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IRLP Information

For information on using the club's IRLP node on the 146.76 repeater, check <http://www.utaharc.org/irlp>. UARC Members may get the required prefix code by asking the club Secretary.

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

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Latest News

March (Online) Meeting: “Using APRS for SMSGTE and Winlink”

In a way, the March meeting may look much like the February meeting about APRS (“Automatic Packet Reporting System”). However, now that we know what APRS is, we would like to go into more detail about a couple of specific uses. Rian McKee, KF7QGY, one of our new Program Chairpersons, is going to tell us about two interesting systems that put APRS to good use.

“SMSGTE” is actually just a way to connect the amateur radio world to places (particularly over seas) where cell phone service is not available or not compatible. It was launched in 2014 and is useful, particularly in emergencies.

The other system, “Winlink,” is a way of sending e-mail by Ham Radio. Winlink is basically a worldwide system that uses Amateur Radio as well as government frequencies to send electronic messages without having to rely on Internet.

As has become our recent custom, the meeting will be held on-line via YouTube. Any time after 7 P.M. you can start looking for us at:

<https://www.youtube.com/c/UtahAmateurRadioClub>.

From there, look for the feature that is marked “live.” The meeting should commence at 7:30.

UARC meetings are held on the second Thursday of each month except for July (annual steak-fry) and August (vacation).

Our Cover

Our Cover this month features a few images from last month’s program about APRS (“Amateur Packet Reporting System”) presented by Tyler Griffiths, N7UWX, operating from his home in River Heights, near Logan.

He told about the history of APRS, a variety of uses, and how a one-way message can be sent to almost anywhere when the proper headers are used.

If you missed the program you can still access the recording. Go to <http://www.youtube.com/> and search for “Utah Amateur Radio Club.”

Elmer’s Corner

By Mike McAinish, KI7MTI, Program Chair

If you hold a Technician’s license and have heard things about the Technician portion of the 10-meter band that make you feel like it’s a waste of time to pursue contacts in that allotment, you’re not alone. I hold a Tech license, and confided via email to Paul Plack, AE4KR, that I felt pursuing QSOs on 10 meters would be a waste of time. His reply got me to re-think my negative notions about 10 meters, and led me to invite Paul to share his knowledge of this band in the “Elmer’s Corner” segment of the UARC meeting that we’re calling *10 meters for Techs*.

I won’t spill the beans by saying any more on the subject than that right now, but, if you’d like more

information on this subject, be sure to tune in on March 10th at 7:30 PM.

Anyone who would want a topic discussed in this forum should send an email to ki7mti@arrl.net. The more interest that is shown in a particular topic, the better the chance that it'll be chosen for discussion in *Elmer's Corner*. So, if you and a few other hams are discussing a radio-related topic, and something comes up that has everyone scratching their heads, send an email that says something like, "Me and a few of my friends was discussin' on-air just exactly how a rectifier goes about rectifying..." and we will try to answer that question for you.

Utah County License Classes

Noji Ratzlaff, KNØJI, tells us that a number of in-person license classes will be offered during 2022. Each course will cost \$10. Register at: <http://psclass.orem.org/>.

License Class	Day	Dates	Times
General	Four Tuesdays	Mar 22	6:30-8:30 PM MDT
		Mar 29	
		Apr 5	
		Apr 12	
Extra	Five Tuesdays	Jul 12	6:30-8:30 PM MST
		Jul 19	
		Jul 26	
		Aug 2	
		Aug 9	
Technician	Four Tuesdays	Sep 20	6:30-8:30 PM MDT
		Sep 27	
		Oct 4	
		Oct 11	

These are homework courses; you'll be expected to complete an assignment (and email me the results) by the start of every class period, even the first one. No course textbooks are required. Then

again, these courses will be casual, hands-on, and fun for those who remain awake.

Please contact Noji (nojiratz@hotmail.com or 801-368-1865) with any questions about the courses.

New 10-Meter Net Running By Paul Plack, AE4KR

Prompted in part by the increasing solar activity of Cycle 25, a new weekly net has begun to serve the needs and interests of 10-meter enthusiasts in the Salt Lake City area. The net will meet weekly, Wednesday evenings, at 2000 local time, on 28.345 MHz, USB.

After check-ins and a round of informals, participants with General-class or higher licenses are invited to reconvene on 10-meter FM simplex, on a 29 MHz frequency to be announced week-to-week based on band conditions.

The purposes of the net are to offer signal reports, share news of specific interest to 10-meter operators, to broaden experience in different modes, and to promote friendship and networking among hams with these common interests.

For this net, the recommended antenna polarization is vertical for both sideband and FM, but horizontally-polarized check-ins are also accommodated. Questions and suggestions are welcome, at <mailto:ae4kr@arrl.net>.

Annual Digital Communications Conference

The annual Utah Digital Communications Conference will be held on Saturday, March 26. There will be sessions focusing on various topics from 8:30 A.M. through about 6:00 P.M.

The conference supports a large variety of transmission modes that can be classified as

“digital amateur radio.” That can include Winlink, APRS, Mesh, EchoLink, D-Star, DMR, and FT-8. It also features updates on various kinds of hardware that facilitates getting on the digital modes and new test equipment that lets one determine his own effectiveness.

Sessions will include looking at the NanoVNA antenna analyzer, Winlink, DMR, FCC exposure requirements, and even the art of hidden transmitter hunting.

Cost of attending is \$15 in advance or \$20 at the door. For those of age 18 or less, entry is free.

Location will be the Community College Conference Center at 9750 S 300 West, in Sandy.

For full details check the web site at:
<http://utah-dcc.org/>

Virtual Hamfest March 12-13

With COVID-19 considerations still an issue, the *Virtual Hamfest* may be something everyone can attend without fear of bringing on disease, via Internet. This year’s event takes place on Saturday, March 12, and Sunday March 13.

Like a traditional hamfest, there are speakers, displays, Q&A sessions, manufacturers, and (darn) an entry fee.

Unlike an in-person hamfest, if two lectures are scheduled at the same time, one can still attend both at the convenience of the attendee. They will continue to be available for 30 days after the live event ends.

For full details or to register go to:
<https://www.qsotodayhamexpo.com/>

Ukraine Hams Ordered off the Air (Thanks to ARRL)

A state of emergency was declared in Ukraine just prior to the Russian military invasion. Among other things, the February 24 decree from President Volodymyr Zelensky will remain in effect at least for 30 days and may be extended. As published on the website of the Verkhovna Rada, Ukraine’s unicameral legislative body, the state of emergency includes regulation of TV and radio activities and “a ban on the operation of amateur radio transmitters for personal and collective use.”

The decree also imposes a ban on mass events and on strikes and authorizes checking the documents of citizens, and if necessary, conducting searches on persons, vehicles, cargo, office space, and housing. A curfew could be imposed.

“The situation changes rapidly,” IARU Region 1 Secretary Mats Espling, SM6EAN, said. “IARU Region 1 continues to monitor the development and expect all radio amateurs to follow their national laws and regulations.”

FCC: Amateur Service Licensees May Not Use Radio Equipment to Commit Criminal Acts (Thanks to ARRL)

The FCC Enforcement Bureau has re-issued an earlier [Enforcement Advisory](#) that licensees in the Amateur Radio Service, as well as licensees and operators in the Personal Radio Services, are prohibited from using radios in those services to commit or facilitate criminal acts.

“The Bureau recognizes that these services can be used for a wide range of permitted and socially beneficial purposes, including emergency communications and speech that is protected under the First Amendment of the US Constitution,” the FCC said. “Amateur and

Personal Radio Services, however, may not be used to commit or facilitate crimes.”

As it did in advisories in 2021, the Enforcement Bureau is reminding amateur licensees that they may not transmit, “communications intended to facilitate a criminal act” or “messages encoded for the purpose of obscuring their meaning.”

“Likewise, individuals operating radios in the Personal Radio Services, a category that includes Citizens Band radios, Family Radio Service walkie-talkies, and General Mobile Radio Service, are prohibited from using those radios “in connection with any activity which is against Federal, State or local law.”

“Individuals using radios in the Amateur or Personal Radio Services in this manner may be subject to severe penalties, including significant fines, seizure of the offending equipment, and, in some cases, criminal prosecution.

“To report a crime, contact your local law enforcement office or the FBI,” the FCC advised.

ARISS Seeks Hosts for Ham Radio Contacts with Space Station Crew Members Sought

Amateur Radio on the International Space Station is accepting applications until March 31 from US schools, museums, science centers, and community youth organizations (working individually or together) interested in hosting contacts with International Space Station (ISS) crew members. Contacts will be scheduled between January 1 and June 30, 2023. Proposal information and additional details are available on the ARISS-USA website.

ARISS is looking for organizations capable of attracting large numbers of participants and integrating the contact into a well-developed education plan.

ARISS contacts afford participants the opportunity to learn firsthand from astronauts what it’s like to live and work in space. The program’s goal is to inspire students to pursue interests and careers in science, technology, engineering, and mathematics.

Students can learn about satellite communications, wireless technology, scientific research on the ISS, radio science, and related topics. They’ll also learn how to use amateur radio to talk directly to an ISS crew member. Contacts are approximately 10 minutes long.

ARISS will help educational organizations to locate amateur radio groups that can assist contact hosts with equipment and operational support. Because of the nature of human spaceflight and the complexity of scheduling activities aboard the ISS, host schools and organizations must demonstrate flexibility to accommodate changes in dates and times.

An ARISS introductory webinar will be held on March 4, at 0100 UTC (the evening of March 3 in North American time zones). Registration is required.

It is recommended that one visit: <https://aris-usa.org/> to learn about the ARISS program and the basic requirements for submitting a contact proposal before you sign up.

In-Person Soon?

A common question we (the UARC Board) hear is “When do we go back to in-person UARC meetings?” The answer is that we don’t know yet. September looks like a likely target, but the board will have to watch the disease data and check with advice from the U of U that provides our meeting place. It’s likely, though, that Field Day and Steak-Fry and will be held in their normal locations.

Utah Test Sessions for Amateur Licensing

A few in-person examination sessions that will be given in Utah during March.

Check <https://hamstudy.sessions> to find *on-line* exams in other states

City	Date	Day of Week	Contact Person	Call	Phone	To Sign Up Go To:
Logan	03-05-22	Sat	Richard D. Elwood	KE7GYD	(435) 770-7050	https://hamstudy.org/sessions/61d852828f171c8ef91e1494/1
Provo	03-16-22	Sat	Steve Whitehead	NV7V	(801) 465-3983	https://hamstudy.org/sessions/61f5dfe4431daa7a5c8af81a/1
Taylorsville	03-28-22	Mon	Garth Wiscombe	W7PS	(801) 558-5936	https://hamstudy.org/sessions/61987af710240966cc71fa66/1

Member of the Month

James Bennett, KK7AVS

By Linda Reeder, N7HVF

James became interested in amateur radio in the year 2012. He was living in Denver, Colorado, at that time. One day he went to an amateur radio store where there were some amateur radio operators who demonstrated the hobby for him. They even took James on a fox hunt. He got really excited, bought a scanner, and took it everywhere he went, listening to amateur radio frequencies. Time went on, though, with James not getting his amateur radio license.

Five months ago James ran into a couple of ham radio operators. Flin, KJ7GJZ, encouraged James to get his license. James decided it was time. He studied, went to BYU, and passed his Technician test. They asked James if he would like to try the General test. He did and he passed! He is now a General and his call sign is KK7AVS.

After he passed his test James received a note in the mail from Noji Ratzlaff, KN0JI, inviting

James to join the Utah Valley Amateur Radio Club. James was really impressed.

One of the things that James wants to accomplish is to help people to get into the hobby. James said some times people take classes and that's where it ends. They aren't sure what radios they should buy and when to buy them. They have a hard time programming them. James wants to help them.

James and Mike, KI7MTI, enjoy attending expo events. They bring their radios and demonstrate amateur radio for those attending. They also go to emergency groups wanting them to know the important role amateur radio has in emergency situations. They want to get them interested and sign them up for classes. As this is written in late February, they are attending the University of Utah Expo.

James likes nets. He is a member of the Salt Lake Crossroads Amateur Radio Club, which meets on 448.525 Monday through Friday. He has become one of the net control operators, handling the Monday sessions. The net meets every week night at 7 P.M. He also does a simplex net at 9 P.M. on the 5th Thursday of each month. James likes to see how many people in various parts of the valley can check in.

James is also a member of the Ogden Amateur Radio Club. He runs a “Ham and Eggs Breakfast Net” on Wednesday nights at 6:30 P.M. on the 448.600 repeater with a PL tone of 123 Hz.

James is a member of UARC club and the Utah Valley Amateur Radio Club.

James is interested in Home-brew Night. He loves building antennas. I told him about UARC's Home-brew Night in October. Maybe he will build something for this year's event.

KI7MTI got James interested in Winlink. On Winlink you can send email over the radio. One end is hooked to your computer and the other end is hooked to your radio. You type an email message and Winlink converts it to audio that can be heard on your receiver.

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James is interested digital radio, such as APRS, D-star, and DMR. He is also interested in QRP, which is low power operation. James has an Icom 705 all-mode transceiver.

James has his own business called Tile Valley. He designs tile for public buildings. That includes different kinds of buildings such as church buildings.

Other hobbies James enjoys are electronics, computer science, and physics.

James, thanks for all of your contributions to amateur radio.



James Bennett, KK7AVS, at his station