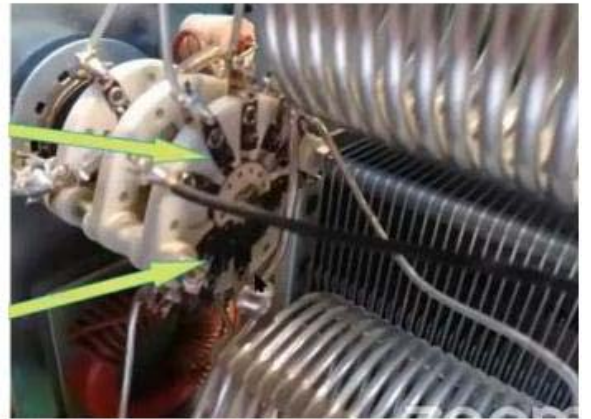


# The *Microvolt*

November 2020



## 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.

### UARC 2020 Board

President: Morris Farmer, AD7SR	801 278-4966
Executive VP: Lonnie Oaks, K7LO	801 255-1225
Vice Pres: Bruce Fereday, KF7OZK	801 883-9428
Secretary: Tom Kamlowsky, WA7ZRG	801 505-9134
Treasurer: Chuck Johnson, WA7JOS	801 268-0153
<i>Microvolt</i> Editor: Gordon Smith, K7HFV	801 582-2438
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Program Chairperson: Robert Jelf, KG7OHV	385 252-7900
Program Chairperson: Mary Jelf, KG7QNG	385 347-7900
Imm. Past President: Clint Turner, KA7OEI	801 566-4497

### Committee Chairpersons and Members

Bookseller: Rick Gregory, KG7GOW	801 582-7783
Historian: Ron Speirs, K7RLS	801 904-3587
Field Day Chair: (To be determined)	
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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### 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://user.xmission.com/~uarc/announce.html>

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# The Microvolt

The Official Publication of the Utah Amateur Radio Club, Salt Lake City, Utah  
Volume 63, Issue 10, November 2020

## Latest News

### November (on-line) Meeting: Building Your First HF Station

Our UARC President, AD7SR, will be presenting the program at the next UARC meeting on Thursday, November 12. He writes:

“Every Ham proudly remembers the day he passed the exam for his General ticket. Then he stops and realizes that the high frequency bands are all new territory and his station will need an upgrade to work these new bands. As a Technician you probably used off-the-shelf equipment and just did the plug-and-play routine. That doesn’t generally work when assembling an HF station.

“Building your very own HF station can be one of the most challenging and enjoyable experiences of your Ham career. It is important that you are armed with the information needed to do it right the first time, thus avoiding the frustrations and expenses of having to go back and fix what you did wrong.

“I’m going to discuss a *fairly comprehensive* list of what you’re going to be needing to get on HF with the goal of taking some of the mystery of what’s needed and why. Fair warning: the list is long. In fact, I’m a bit concerned about scaring you away.

“While you really will need these items that I’m going to talk about, most of them aren’t terribly expensive and will last for years, probably your whole time as a ham. The most expensive and shortest lived will likely be your radio and that can easily last 15-20 years.

“Hopefully I will help you get *most of it* right the first time.”

—Morris Farmer, AD7SR  
President, UARC

Our next meeting will be on Thursday, November 12, and will, again, be an on-line meeting. It can be accessed (along with several past meeting programs) by going to:

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

The meeting will start at the usual 7:30 P.M.. It should be possible to connect to it and make sure everything is working any time after 7:00.

Except for July and August, UARC meetings are held on the second Thursday of each month at 7:30 P.M.

### Nominations Sought

We are at the time of year when we need to select UARC officers for 2021. Would you be interested in taking over the responsibilities for one of the offices or know someone else who is capable of doing a good job? If so, we would like to know about it before the November UARC meeting so it can be presented to the full club. Get in touch with any of the officers and let them know. (See contact information on page 2.) The slate of officers picked by the current Board of Directors will also be presented at the meeting. This will give everyone time to think about their choice of officers for the coming year.

Just in case some find none of the nominations to be satisfactory, there will be another chance to put forth nominations at the *December* meeting, just before voting for any offices for which two or more



nominations exist. But, if possible, make your nominations known prior to the November meeting so everyone will have time to consider them.

## **Member of the Year Award**

Our UARC President, Morris Farmer, AD7SR, has suggested the creation of a “Member of the Year” award, to be given to a UARC member who has made significant contributions to the hobby and/or the community as suggested in the “Basis and Purpose” section of the FCC rules.

For anyone who has not recently read the Amateur Radio rules, here is what the FCC considers the “Basis and Purpose” of our hobby (Section 97.1).

(a) 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.

(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.

(c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art.

(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.

(e) Continuation and extension of the amateur's unique ability to enhance international goodwill.

## **ARRL Members Urged to Oppose FCC-Proposed Fees**

The American Radio Relay League (ARRL) has sent out a special bulletin urging its members and other amateur operators to file comments strongly opposing the FCC's proposal to charge a \$50 fee for processing many types of amateur license

applications. Applications affected include new licenses, renewals, license class upgrades, and even sending an “official copy” of the printed license. The proposal is properly known as MD Docket 20-270. It was adopted to implement portions of the “Repack Airwaves Yielding Better Access for Users of Modern Services Act” of 2018 — the so-called “[Ray Baum's Act](#).”

As the FCC explained in its *NPRM*, Congress, through the Ray Baum's Act, is compelling regulatory agencies such as the FCC to recover from applicants the costs involved in filing and handling applications. The Act requires that the FCC switch from a Congressionally-mandated fee structure to a cost-based system of assessment. In its *NPRM*, the FCC proposed application fees for a broad range of services that use the FCC's Universal Licensing System (ULS), including the Amateur Radio Service.

ARRL is encouraging members to file comments that stress amateur radio's contributions to the country and communities. ARRL's *Guide to Filing Comments* (<http://www.arrl.org/FCC-Fees-Proposal>) includes “talking points” that may be helpful in preparing comments. These stress amateur radio's role in volunteering communication support during disasters and emergencies, and inspiring students to pursue education and careers in engineering, radio technology, and communications.

As the FCC explained in its *NPRM*, Congress, through the Ray Baum's Act, is compelling regulatory agencies such as the FCC to recover from applicants the costs involved in filing and handling applications.

In its *NPRM* the FCC encouraged licensees to update their own information online without charge. Many, if not most, Amateur Service applications may be handled via the largely automated Universal License Service (ULS). The Ray Baum's Act does not exempt filing fees in the Amateur Radio Service, and the FCC stopped assessing fees for vanity call signs several years ago.



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i. Percent Paid (15c divided by 15f times 100)		98.9%	98.9%

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*London R. Smith*  
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PS Form 3526, July 2014 (Page 3 of 4) [www.usps.com](http://www.usps.com)

## Member of the Month

### Hal Ruttinger, KZ9HMR

By Linda Reeder, N7HVF

This month we are featuring Harold (Hal) Ruttinger, KZ9HMR. Hal has a background in digital electronics and computer software development and has worked as a contractor in the software development industry since 1979. His educational background is in mathematics and digital electronics which he learned while attending Brigham Young University where he changed majors three different times (microbiology, mathematics, Digital Engineering and finally Computer Science) before he found his love for computer programming. His first job as a contractor for Code 3 Medical owned

by Dr. John Morgan was working at the department of Biophysics at the University of Utah on the development team of Dr. Homer Warner's medical diagnosis system H.E.L.P. Hal was responsible for developing the patient information abstracting portion of H.E.L.P. that utilized the medical diagnosing database being developed by Dr. Warner. Hal also developed software that interfaced medical diagnostic equipment e.g. blood analyzers and blood gas monitors.

While working as a programmer analyst for Code 3 Medical Systems, Hal became the systems installation manager of Code 3 Medical's hospital medical records system that was marketed nationwide. During those years Hal traveled around the country installing and training hospital personnel in the use of Code 3 Medical products. Over the years Hal has worked for many companies either as an employee or as a contractor. They include Software Engineer for Berkley Scientific Labs, SLC, UT; Telemarketing Systems, Poway, CA; Robinson Electronics, San Luis Obispo, CA; Montedoro Whitney Corp, San Luis Obispo, CA.; Eaton Kenway ISO Division, Salt Lake City, UT. Towards the end of Hal's career in the computer industry he left the development arena and became involved in computer networking and network administration. He worked as a network administrator at Eccles Broadcast Center at the University of Utah where he met his wife, Rosemary Tanner. Prior to retiring from the computer industry Hal worked for United Health Group at their Lake Park Facility in West Valley. Hal worked in the area of remote secure access into the UHG global WAN and was designated a Subject Matter Expert (SME) under the Vice President of Operations for United Health Care, Neal Lewandowski. As a contractor Hal operated as a Tier 3 support person involved in remote server and lifecycle operations for the largest medical organization in the world. In 2008 at the age of 56, in a bad economy just before Obama's election to office, Hal was laid off as a contractor from United Health Group.



In spite of efforts to find an equivalent position at the pay level that he was used to, after a year of looking for another position, Hal got his Commercial Driver's License and started driving over the road nation-wide for Fedex Ground, pulling double trailers all over the country.

One year before being laid off, Hal got his amateur radio Technician license and began playing with radios. His first interest in amateur radio came from an operator in the neighborhood where he grew up. It was there that Hal learned how to pan the frequencies and listen to far away radio stations. From that brief exposure Hal always has had a love for the technology but never got his license until much later in life. It was his car mechanic, Gary Ganemetes, KE7VFP/W7JAR (now a silent key) that sparked Hal's motivation to actually get his license. After Hal got licensed he found that several of his friends also were licensees. A few of his other ham friends are Dan Robinson, KG7BJL; Marty Stampfli, N7XHB; and Dan Mignona, AA3YT (SK). He had been out of contact with them for years and ran into them again through either attending functions or on the air years later. Ham radio does bring people together.

As an over-the-road commercial driver, "The Hobby" was a great addition to being a truck driver. Hal has worked the air from all of the 48 geographical states during his time as an extra-board priority shipment driver for Fedex Ground and while working as an owner/operator for his own trucking company, Muir Transportation, LLC, prior to the position that he currently has working for Cowan Systems doing local trailer moves between a soap products plant and three shipping centers here in the Salt Lake City area.

Hal has become a collector of radios and now that he works locally and is home every night, he can operate a radio station from the basement of his home in Millcreek. He operates a lot of SSB (single sideband voice) mostly on the 20- and 40-meter bands. He also enjoys the digital-over-RF modes PSK31, FT8, and a variety of weak signal protocols. He users Ham Radio Deluxe and the WSJT suite of

radio control software. Hal was introduced to digital-over-RF modes by Dan Mignogna, AA3YT. Hal believes in using the least power required to make the contact. Even though his radios' outputs may go up to 200 watts, everything that he does on the air is less then 50 watts. He has successfully worked the world from his basement station and is always thrilled to spend endless hours studying about his radios or studying different antenna configurations. Hal has learned how to effectively use computers with his radios and automated logging to be able run his station.

Hal's ham radio affiliations are: Diamond Member of ARRL, Member of the Utah VHF Society, Member of UARC, and Member of Salt Lake Crossroads Radio Club. Hal supports the Spectrum Defense Fund, the DSO and DISA. Hal submits contact logs to QRZ, LOTW, eQSL, and HAMLOG. He is also affiliated with the PODSX O70 Club, OMISS, NATA, and participates yearly with the 13-Colony Live radio event. He is always encouraging people to support these organizations financially, especially if they are active radio operators. He advocates paying a sum no less then one tenth of your cable and cell phone bill to support the independently owned radio equipment that are provided for our use by clubs and organizations that do so much to enhance the world of amateur radio. To Hal, the hobby of ham radio is an endless source of educational material that keeps his mind active and provides plenty of challenges to learn new things.

Hal (KZ9HMR) and his wife Rosemary (KZ9RMC) both have vanity call signs. The last three characters are their initials. The first three letters are in memory of Hal's 1976 rebuilt Kawasaki (KZ900) Police Special motorcycle. Hal also enjoys playing old jazz tunes on his steel string acoustic Martin guitar. Hal enjoys visiting with his six adult children and their families whenever he can. He is the proud grandfather of five!

Some of Hal's local contacts on two-meter FM include W7MR (SK), AA3YT (SK), W7JAR/KE7VFP(SK), N7FOD, K7HFV, KI7GGG,

**The Microvolt November 2020**

KF7QGY, KB2WTA, KB0SRS, KI7MTI, KD3NZI, KC7FMW, and N7HVF.

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Hal's Antenna



Hal's Kawasaki



Hal's Music Group



Hal with his XYL, Rosemary