The *Microvolt*

November, 2017

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 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: Ton Kamlowsky, WA7ZRG, 4137 Clover Lane, Salt Lake City, UT 84124-2711.

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 2017 Board

President: Clint Turner, KA7OEI	801 566-4497
Executive VP: Lonnie Oaks, K7LO	801 255-1225
Vice Pres: Bruce Fereday, KF7OZK	801 883-9428
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Microvolt Editor: Gordon Smith, K7HFV	801 582-2438
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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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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

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

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November Meeting: Antenna Simulation

Past UARC President Ron Jones, K7RJ, once said "It's great to do the calculations to find the ideal antenna, but when all is said and done, the antenna goes where the trees are." He had a point. Our antenna choices are limited by available space, zoning rules, XYL preferences, home owners associations, and budgets. But wouldn't it be nice to know up front how a real antenna placed "where the trees are" will perform, even if you can't get the ideal height above ground, or there is a lot of metal in the neighborhood?

Now there's a way to make some educated guesses using computer simulation. There are a number of programs available for the home computer that will let you model a proposed antenna in your situation. At our November 9 UARC meeting, Jed Petrovich, AD7KG, will be giving us some of the details about antenna simulation. Jed is an active DXer and has an antenna setup better than many of us. He will be telling us what is available in simulation programs and how helpful they can be.

The meeting will take place at 7:30 P.M. on Thursday, November 9, in room L-103 (level L1) of the Warnock Engineering on the University of Utah campus. Take the elevator near the soutwest corner of the building. (The elevators near the east entrance do not go there!)

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. See the map at http://user.xmission.com/~uarc/meetmap.html for information on finding the building. (The room number varies through the year depending on availability.)

Of course, the meeting will include the "standard" meeting features:

- Availability of ARRL books from Brett or John, the "book ladies"
- 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 some of the projects displayed at Homebrew Night, our October program. At the top, going left to right, we have Bob Harbrecht, KE7QEQ, who showed how to turn various kinds of boxes into 40-meter transceivers by stuffing them with the BITX40 two-board solution. The case shown here is from a 1960's Heathkit VHF transceiver.

To the right of Bob is Dennis Nelson, N7FOD. Dennis found that a chalk line reel makes the perfect way to carry antenna wire for quick deployment in the field.

Next is Greg McArthur, W7GEM, showing a portable two-meter quad.

The bottom row shows John and Steven Whitney,.AF7ZU and AF7ZV, respectively. Their project is one that monitors and displays temperatures from multiple sensors.

In the lower right is UARC President, Clint Turner, KA7OEI. Clint has an old tube portable radio. The radio now works again owing to Clint's module that creates the required high plate voltage from batteries that are currently available. (The old "B batteries" are not no longer in plentiful supply.)

Thanks to club Historian, Ron Speirs, K7RLS, for the photos.

Elections Coming Soon

The November UARC meeting will include a phase of the annual election process. A nominating committee will have chosen a proposed slate of club officers for 2018 and will present the names. There will be an opportunity for further nominations from the floor. The full list of nominees will then be published in the December *Microvolt* prior to the December elections.

Help keep the club running. Help us find folks who might be willing to serve as officers or volunteers next year. Nominate (with your nominee's permission, of course) or volunteer!

RACES/ARES Conference

The annual ARES/RACES all-day training conference for those involved in emergency communications, will take place this year on Saturday, November 4, at the Davis County Convention Center in Layton. The conference is open to all members of ARES or RACES. Lunch is included. There is no charge, but on-line registration in advance is required.

To register go to http://www.utah.train.org. If you already have an account, log in; otherwise, create an account. From that point you can search for RACES or for course number 1011069.

W7JFH, SK

We note with regret the passing of Dave Jenkins, W7JFH, on October 4 at the age of 70. Dave had been a UARC member for several years and was heard often on the club's 146.62 repeater. He particularly enjoyed radio-internet connections through Allstar.

Dave had some respiratory problems that were initially diagnosed as pneumonia but during September turned out to be stage four terminal lung cancer. The cancer was so advanced that no treatment was recommended.

The family plans a Celebration of Life for a future date yet to be announced. They are specifically encouraging the ham community to attend.

For obituary and comments see:
http://www.premierfuneral.com/obituaries/David-Jenkins-14/.

LF and VLF Bands Now In Use

Our newest ham bands, the 630- and 2200-meter bands, came to life on Friday the 13th of October, when a number of hams got notification that they were cleared to start operating on one or both bands.

The FCC's action to make the new bands available took effect on September 15, but the rules required that each amateur planning to use either of the bands make his intention known to the Utilities Technology Council (UTC) and wait thirty days to see if there was any objection. UTC would check each applicant's location against the known

locations of power lines using Power Line Carrier (PLC) for control and telemetry. If the ham was within one kilometer of such a line it would notify the ham that he would not be allowed to operate.

It had been expected that communication from UTC would only take place if there was an objection to the amateur operating from his stated location. A number of operators were surprised on the 13th to receive affirmation that they *could* operate.

Operation commenced that very night.on 630 meters and some contacts were made even thought noise levels were high and a geomagnetic storm was in progress. Not much happened the following night, but on Sunday the 15th the band was reported to be awash with signals including CW, JT-9, SSB, and WSPR.

On the 17th, a 630-meter contact was completed between W7IUV (Washington state) and VK4YB in Australia. This might well turn out to be the very first US to DX contact on that band.

One Massachusetts amateur, W1TAG, who had been operating on the 2200-meter band for years under an experimental license was denied use under the new amateur rules. That seemed odd after no reported problems under the experimental license. He was encouraged to apply for 630-meter operation.

There is a seven-minute video on YouTube showing preparation for 630 meters by Laurence Howell, KL7L, in Wasilla, Alaska. Go to youtube.com and search for "Ham radio 630m station."

Most antennas of practical size for amateurs are so small compared to a wavelength on these bands that they are very inefficient. To allow for this, the FCC has allowed transmitter power levels much higher than the allowable effective radiated power (ERP). Operation must not exceed either number. Below is a listing of the basic parameters for the two bands.

Band	**Frequency Range**	**Xmtr Power**	**EIRP**
630 m	472-479 kHz	500 W	5 W
2200 m	135.7-137.8 kHz	1500 W	1 W

License Examination Schedule

Opportunities to test for new or upgraded amateur licenses

Date	Day	City	Contact Person	Phone
11/15/17	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
11/15/17	(Wed.)	St. George[2]	Gary O. Zabriskie, N7ARE	N/A
11/27/17	(Mon.)	Taylorsville[1,3]	Garth Wiscombe, W7PS	(801) 558-5936
12/02/17	(Sat.)	Salt Lake City[1,4]	Gordon Smith, K7HFV	(801) 582-2438
12/02/17	(Sat.)	Logan	Richard D. Elwood, KE7GYD	(435) 770-7050
12/06/17	(Wed.)	Clearfield	Mike Youngs, KK7VZ	(801) 573-3922
12/09/17	(Sat.)	Hurricane[2]	Gary O. Zabriskie, N7ARE	N/A
12/20/17	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
01/17/18	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
01/17/18	(Wed.)	St. George[2]	Gary O. Zabriskie, N7ARE	N/A

[1]Preregistration required. Check with the contact person before the test session.
[2]More information at http://www.dixieham.org/meetings.html
[3]New location is the Taylorsville City Hall, 2600 Taylorsville Blvd, Room 110
[4]More information at http://www.utaharc.org/Exams/
More details at http://user.xmission.com/~uarc/testinfo.html.

"Force of Fifty" Complete Work in Puerto Rico

(From *ARRL Letter*, October 19)

The 22 "Force of 50" radio amateurs, who deployed to Puerto Rico earlier this month as American Red Cross volunteers, have ended their mission and will be back on the US mainland by week's end. They had been in Puerto Rico for about three weeks.

"The Force of 50 volunteers demonstrated an extraordinary range of skills possessed by this accomplished team," said ARRL CEO Tom Gallagher, NY2RF. "There was no task that they wouldn't tackle. It also demonstrated the generosity of these volunteers, who not only performed their roles as communicators, but also engaged the population with their many acts of personal kindness."

Val Hotzfeld, NV9L, who filed situation reports documenting the team's activities, said the volunteers accomplished everything they went to Puerto Rico to do, "and then some." She said that the Red Cross felt they had exceeded all expectations.

"We opened a lot of people's eyes when we started going to the ESF-2 communications task force meetings. They had no idea of our capabilities," Hotzfeld told ARRL. "When they heard what we'd accomplished, we were swarmed; everybody was wanting us."

Hotzfeld said the volunteers' initial mission was to provide a way to gather outbound health and welfare messages and put them into the Red Cross's Safe and Well System using *Winlink*. However, the mission changed once they were on the ground, when they discovered the needs were much greater.

"No one had any communications, so the mission morphed to communications," she said. "But, we did both." She said the Red Cross recognized the value of ensuring communication for hospitals, and other volunteers handled Safe and Well messages.

She said the volunteers possessed a wide range of talents, from medical to mechanical, not just communications. For example, Andy Anderson, KE0AYJ, set up the helicopter landing pad at Guajataca Dam, Hotzfeld said, and provided communication where there was none.

Ten SHARES (Shared Resources) HF Radio Program operators will replace the Amateur Radio volunteers who had worked on behalf of the Red Cross. These SHARES operators are federal employees who happen to be radio amateurs and volunteered for the duty in Puerto Rico. Hotzfeld said they will be stationed in four different zones, with two operators at headquarters in the San Juan Convention Center. "The hospitals did not want us to leave," Hotzfeld said. "They were begging us to stay." She noted, though, that the hospitals also have access to satellite telephones.

"I was so proud of our guys," Hotzfeld said in summary. "They were rock stars."

Kits Now Available

If you've recently visted the table of the "Book Lady" at a UARC meeting, you may have noticed that there are now some simple kits available. They include clocks, power supplies, digital meters, and even QRP transceivers. In many cases all that you need to do is find a box or case to put the PC board in. Check it out and let your officers know if there are other devices that you would like to see carried.

Member of the Month

Marv Zitting, W7MR

By Linda Reeder, N7HVF

This month we are featuring Marvin Can Zitting, W7MR. Marv had an interest in amateur radio when he was 13 years old. In 1943 during World War II Marv, at age 13, was out walking where the army had ground scraps. He found on the ground something that he thought to be a capacitor, so he picked it up and took it home. It was *not* a capacitor; it was a giant blasting cap, and it blew up in his right hand. It caused considerable damage to his hand and eyes. Marv is now legally blind with 20/2200 vision.

Marv's parents, knowing of his interest in amateur radio, took him to meet Charles Deremer, W7FST. Charles had a neon sign with his call sign in big letters mounted high on an antenna post. You could see it for miles around. This sign was given to Charles by a doctor in Salt Lake, because Charles was running messages to the doctor's son who was in the army in Japan. The doctor was so impressed with Charles' work with ham radio he gave him this sign. After meeting Charles and seeing all of his equipment and his operations, Marv knew this is what he wanted to do.

Marv's first call sign was W7MWR. Marv has had a number of call signs over the years. In those days, if you had a station somewhere other than the address on your license, you had to get an additional station license with its own call sign. Therefore, when Marvin was living with his aunt while he was attending the University of Utah, he had to get a second call sign. Here are the call signs that Marv has had: W7MWR, W7OAD, K7BE, VK1ICK and W7MR. (VE1ICK is his Australian call sign.)

Marv also had W200MR for a special event station celebrating the 200th anniversay of the signing of the U.S. Constitution. They made over 1000 contacts. Marv has made contacts all around the world, but his only license for a foreign country is in Australia.

Marv graduated from the University of Utah with a degree in physics.

Marv built a two-tube crystal-controlled transmitter and a three-tube receiver. Later he built a DX contest radio. Marv received many awards. He has Worked All States, Worked All Continents, DXCC, Brass Pounders League, and A-1 Operator's Club.

Through his years of hamming Marv has talked to some very interesting people such as Art Bell, W6OBB, who had a radio program coast to coast, Barry Goldwater, K7UGA, U.S. Senator, and King Hussein of Jordan, JY1. Marv has operated the W1AW station at ARRL Headquarters, and W6LO on the Queen Mary ship .

Marv worked for KWHO as chief engineer and sales person for nine years. While he was working there he built the second FM stereo radio station in Utah. The next nine years Marv worked for Parker Packing Company. He was the Customer Service Manager and Training Director. He trained sales persons and engineers on how to use seals. He presented a four-day seminar in major cities in the United States.

Marv has three favorite place he likes to go. Marv likes to go to the Empire State Building when it was the tallest in the world, Washington Memorial Monument, and the Statue of Liberty. When Marv traveled he always took his handheld transceiver with him so he could talk on local repeaters whereever he went.

After working for this company for nine years Marv became self employed. He now works on-line trading foreign exchange. When Marv was in Singapore he went on a one-hour hike up a hill and could see China in the distance.

Marv's wife Rhea, W7MRS, has her Extra Class license. They have 10 children. Five girls and Three boys became Extra Class ham operators in their teens years. One boy and one girl decided not to become amateur radio operators. Marv and family always had their own Field Day up in the mountains. One year they were the top scoring class 1A station in the nation. Marv said the success of families staying together is that they work together, worship together, and play together. Amateur radio made this possible.

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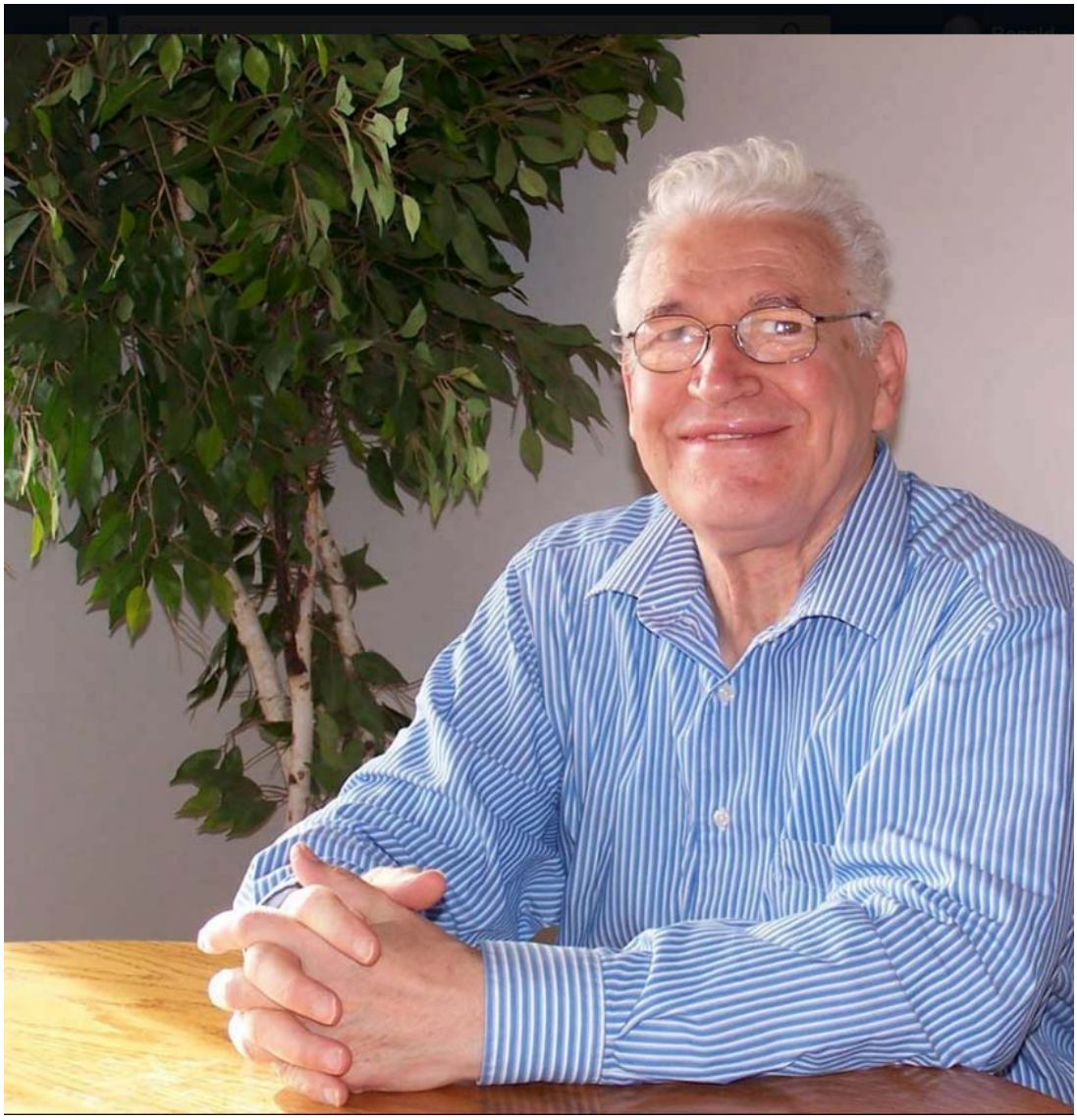
Marv we appreciate all of the contributions you have made to amateur radio.



Marv Zitting, W7MR