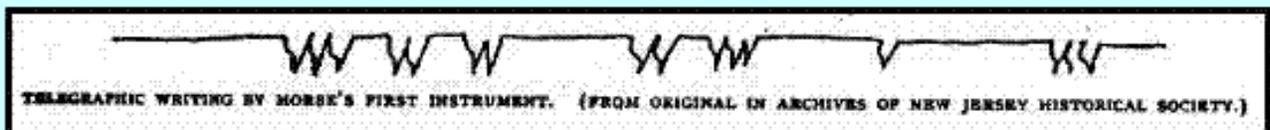


The *Microvolt*

April, 2016

Morse Code as of 1844

		Figures	Punctuation
A •—	N —•	1 •—••	& • •••
B —•••	O • •	2 ••—••	(.) ••—•••
C •• •	P •••••	3 •••—•	(,) •—•—
D —••	Q ••—•	4 ••••—	(?) —••—•
E •	R • ••	5 —•••	(:) —••• •
F •—•	S •••	6 •••••	(;) ••• ••
G —•••	T —	7 —••••	(—) •••• •—••
H ••••	U ••—	8 —••••	(!) —••••
I ••	V •••—	9 —•••—	(') ••—• •—••
J —••—•	W •—•—	0 —••••	(/) ••— —
K —••—	X •—••		(•••••—•
L —•—	Y •• ••) ••••• •• ••
M —•—	Z • •••		(") ••—• —•
			(") ••—• —•••



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.

UARC 2016 Board

President: Clint Turner, KA7OEI	801 566-4497
Executive VP: Lonnie Oaks, K7LO	801 255-1225
Vice Pres: Bruce Fereday, KF7OZK	801 883-9428
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: Rick Asper, AC7RA	801 865-1693
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

Contents

April Meeting: Antennas.....	3
Latest News.....	3
License Examination Schedule.....	7
Member of the Month.....	7

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



The Microvolt

The Official Publication of the Utah Amateur Radio Club, Salt Lake City, Utah
Volume 59, Issue 4, April, 2016

April Meeting: Antennas

You've got your ticket. And a radio. You want to use it. Maybe you've already been using it. After all that's what ham radio is all about....communicating. So how does your radio do that? Simply put, it generates RF energy and sends it out the antenna to the other radio's antenna. Your antenna is the last thing the RF sees going out and first thing it sees coming in. The antenna is a vitally important part of your radio. So lets find out more.....

At the April 14 UARC meeting Dave Felgar, NJ7A, will be giving a presentation on antennas. Dave has had many years of experience with many antennas and will be telling us about what to do and not do.

The meeting will be on Thursday, April 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 is from the March meeting on the history of "Morse Code." The 1844 code is what was known as "The Morse Code" for most of the 19th century and continued to be used on wire

telegraph lines in North America until they fell out of use in the 1960's. It's now known as "American Morse." You may have noticed it's *not* the one we use in amateur radio. For radio purposes it was replaced by what is now called "International Morse" and was developed in Europe.

At the bottom is the output of a “recorder” capturing an even earlier code that was truly the invention of Mr. Morse. One through five dots represented either the digits 1-5 or 6-0, depending on spacing. The numbers were converted to words using a numbered dictionary!

Field Day Help Needed

One of the club’s most popular events each year is its entry in the nationwide Field Day contest, a competition among portable and mobile stations. We typically set up three portable HF stations at a good site in the mountains up Payson Canyon. We then spend 24 hours trying to work as many other portable and mobile stations as possible. We typically make about 2000 contacts including ones with almost all of the states and a few foreign countries.

It takes a lot of help to make it all happen smoothly and the officers are looking for volunteers for a variety of jobs. These include:

- Making sure the location of all needed equipment is known and there is a way to get it to the site
- Making sure club trailers are road-worthy and the generator has fuel
- Towing trailers to the site
- Setting up tents and operating positions
- Erecting antennas
- Operating the stations (making the QSOs)
- Logging the stations being worked
- Tearing down and packing up at the end of the event

There is a particular need for operators who can operate CW and those who can operate in the wee hours of the morning. Anyone who can do *both* of those together will be *highly* respected.



Field Day always takes place on the fourth Saturday of June and the following Sunday. That puts it on June 25 and 26 this year, although some families will be camping on the site earlier in the week and some setup activity will begin as early as Thursday the 23rd. Everyone is welcome to come for whatever part of the activities fits their schedules and leave when they must.

At the April meeting we will have some forms available to make it easy for you to sign up for any jobs you can help with. They will be available at the Secretary’s desk.

For more information on the rules and object of the Field Day event see: <http://www.arrl.org/field-day>.

7th Call Area QSO Party

The annual 7th Call Area QSO Party (“7QP”) is coming up on the weekend of May 7 and 8. This is an event where stations outside 7-land try to work as many 7th area stations and counties as possible, while those *inside* the 7th district try simply to work as many stations as possible.

This is a great opportunity for W7’s to be on the receiving end of pileups! Everyone who can get on HF is encouraged to participate. One popular activity is finding a site right on a county line or corner, allowing folks to get multiple county credit in a single QSO.

The folks in charge of Utah's involvement in 7QP have given us a short slide show which we will run at the April UARC meeting. For more information about the QSO party, go to: <http://www.7qp.org/>.

Rocky Mountain Division Convention May 13-15.

The ARRL Rocky Mountain Division Convention will be held this year on the weekend of May 13-15 at the Keystone Convention Center in the mountains of Colorado. This event draws from the four states that compose the Rocky Mountain Division: Colorado, New Mexico, Utah, and Wyoming.

This year's event boasts a list of nationally famous speakers. Gordon West, WB6NOA, will be the luncheon speaker, Rick Roderick, K5UR, the new President of ARRL, is the Friday Night keynote speaker; Chris Imlay, W3KD, ARRL General Counsel speaks at the Saturday banquet; and Riley Hollingsworth, K4ZDH, formerly in charge of amateur rules enforcement at the FCC will speak at the Sunday morning breakfast.

The convention will also include over 100 technical forums, including many on emergency communications, digital voice modes, software-defined radio, remote control, accounts of Dxpeditons, and propagation. Other features will include awards, exhibits, transmitter hunt, and vendors' displays,

It will be possible to register online, but the deadline is April 29. Reservations for meals must be made in advance. For more information and to register online, see <https://hamconcolorado.org/>

On the Thursday before the convention, May 12, a session of "DX University" will be available at the same venue. Sessions will run from 1 to 9 P.M. and will teach basic skills of DXing. A separate fee is involved, but online registration can

be accomplished on the same web site as for the convention.

Award Nominees Needed

Fellow Rocky Mountain ARRL Members, Time is slipping away fast and the Division Convention will be here very soon. During the Division Convention, we recognize those deserving members for their outstanding contributions to our ham community.

The deadline for submitting nominees for The Rocky Mountain Division Young Ham of the Year, The Technical Achievement Award and The Ham of the Year is April 1. Please visit the Division Website:

<http://www.rockymountaindivision.org/wp/awards/>

Here you can print out and mail in your submissions or submit them directly via the "Click here to submit your nomination electronically" link.

Thank you for your support and commitment to the ARRL and amateur radio in the Rocky Mountain Division.

73,

Dwayne Allen, WY7FD
ARRL Director, Rocky Mountain Division
WY7FD@arrl.org

Jeff Ryan, K0RM
ARRL Vice-Director, Rocky Mountain Division
K0RM@arrl.org

Great Salt Lake Hamfest Needs Helpers

The "Great Salt Lake Hamfest," the first hamfest held along the Wasatch Front in several decades, will take place on Friday and Saturday, July 8-9 in the southern part of the Salt Lake Valley.

Volunteers are needed for everything from helping with registration to sponsoring forums and contests.

ARRL Utah Section Manager, Mel Parkes, NM7P, believes that a hamfest right in the populated area of the state will draw more attendees than recent hamfests and division conventions held in other areas such as Ruby's Inn.

For more information see the hamfest website at <http://www.ncvec.org/>. On the right-hand side of the home page are forms for prospective volunteers and forum presenters.

At one time a meeting for volunteers and prospective volunteers was scheduled but was canceled. We do not know if another such meeting might be in the works.

New Extra Class Question Pool Available

A third version of the question pool for Extra Class license examinations was released on March 5. The new pool will go into effect for all examinations given after July 1, 2016. The new pool supercedes two earlier versions that were issued in January and February, respectively. Substance of the new release is the same as the two earlier ones, but the questions have undergone corrections and editorial changes.

Question pools are created by a "Question Pool Committee" of three amateur operators. They are chosen by the "National Conference of Volunteer Examiner Coordinators" (NCVEC), an organization of the 14 VECs that are currently active coordinating exam sessions throughout the country. Suggestions for additions or improvements to the question pools can be made by amateur operators. Extra Class operators may make suggestions about any pool; other operators can contribute for those pools for license classes below the one they hold.

For more information, including the full question pools, see <http://www.ncvec.org/>.

ARRL Signs Agreement with RFinder

ARRL recently announced a new agreement with RFinder, a supplier of worldwide repeater information and coverage maps. RFinder offers subscriptions enabling customers to access repeater information and maps via the web or using cell phone apps. ARRL will make RFinder its "preferred online resource of repeater frequencies" and RFinder will give frequency coordinators free access to the system for updating of coverage information when repeater locations or heights above average terrain (HAAT) change.

The addition of coverage maps to RFinder is relatively new and is a result of an agreement with CloudRF, an English firm run by Alex Farrant, M6ZUJ. CloudRF creates the information in KMZ files which are viewable using Google Earth.

A suscription to RFinder's data costs \$9.95 per year.

August UHF Contest Canceled

For many years ARRL has sponsored a UHF contest on the first weekend of August, and many Utah UHF and microwave enthusiasts have participated in the event. Apparently there have been many complaints from ARRL members about the scheduling. Some do not like it in the hottest part of the year. Another complaint was that it comes to close to other VHF and UHF events.

The Contest Revitalization Committee is considering changes to the contest and/or scheduling it in a different part of the year. It welcomes comments from potential participants on the nature of the replacement.

Armed Forces Day Radio Test

The annual communications exercise in honor of Armed Forces Day when amateur stations can

QSO with military stations will take place this year on Saturday, May 14.

Full information about times and frequencies will be posted by April 12 at:

<http://www.usarmymars.org/home/announcements>

License Examination Schedule

Opportunities to test for new or upgraded amateur licenses

Date	Day	City	Contact Person	Phone
04/02/16	(Sat.)	Salt Lake City ¹	Gordon Smith, K7HFV	(801) 582-2438
04/09/16	(Sat.)	Hurricane ²	Gary O. Zabriskie, N7ARE	N/A
04/16/16	(Sat.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
04/16/16	(Sat.)	Logan	Richard D. Elwood, KE7GYD	(435) 753-4360
04/20/16	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
04/20/16	(Wed.)	St. George ²	Gary O. Zabriskie, N7ARE	N/A
04/26/16	(Tue.)	Salt Lake City ³	Garth Wiscombe, W7PS	(801) 558-5936
05/14/16	(Sat.)	Hurricane	Gary O. Zabriskie, N7ARE	N/A
05/17/16	(Wed.)	Provo	Steve Whitehead, NV7V	(801) 465-3983
05/17/16	(Wed.)	St. George ²	Gary O. Zabriskie, N7ARE	N/A
05/31/16	(Tue.)	Salt Lake City ³	Garth Wiscombe, W7PS	(801) 558-5936

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/>

Member of the Month

Robert Jelf, KG7OHV

By Linda Reeder, N7HVF

This month we are featuring Robert Jelf, KG7OHV. Robert said he has been interested in amateur radio for many many years, but the challenges of learning the Morse Code kept him away.

For six years Robert served in the US Navy. Then Robert got a job at the Las Vegas Nevada Police Department as a motorcycle officer. When Robert had been working there for eight years he was injured in a motorcycle accident while on duty. He had to get a service dog because of it. In 1988 Robert and his family moved to Salt lake City,

Utah, and he became a minister for his church. He became “Reverend Robert Jelf” and served as minister for 22 years. In 2010, Robert decided it was time to retire. They found a junior minister to take his place.

A friend told Robert that the Morse Code was no longer required to obtain an amateur radio license. Robert was so excited he decided it was time to get his license. In October of 2014 he received his Technician license and two weeks later, his General license. Then, a few weeks later, Robert qualified for the Extra Class license. In that same

month Robert's wife, Mary, and their daughter, Sapphire, received their Technician licenses. Mary's call sign is KG7QNG and Sapphire's call sign is KG7RPZ.

Robert and Mary have nine children: four boys and five girls. They also have 12 grandchildren and one great grandchild.

Robert is very active in amateur radio. He is a member of the Mesh group and is an expert in Mesh Networking and digital radio. Robert says with digital radio you can cut through the noise on the low bands and receive and send your signals by hooking it up to a computer. This is really great when working emergencies.

Robert has two HF Yaesu 857 radios and two quad-band digital handheld radios. He also does digital radio and Mesh networking on UHF and IRLP.

Robert enjoys mobile communications and has a setup in his vehicle. They have demonstrated Mesh Networking and digital radio to the scouts in the "Scouting For Food" drive. Last year on September 17 they demonstrated how Mesh Networking can help the Wasatch-100. There is a picture of Robert manning the finish line station for the Wasatch 100 at Soldier Hollow with his service dog, Teal. You can view that picture on the *ARRL Letter* for Sept 17, 2015. Robert and the Mesh group will be demonstrating Mesh Networking and digital radio at the Great Salt Lake Hamfest coming up on July 8th and 9th at the at the Larry Miller Campus of Salt Lake Community College, 9750 S. 300 W.

The thing that Robert likes best about amateur radio is the people. He enjoyed attending Field Day last year, helping set up the antennas and taking them down when Field Day was over.

Robert is an antenna man. He loves building them. He likes going to the meeting before the meeting to eat and visit with the people. Robert and his

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wife, Mary, helped out at the ARRL hamfest at Ruby's Inn last year. Robert plans on attending the Dayton Hamvention in May of this year. He also wants to participate in a DXing contest. There is an international DX convention in California in April of this year that he plans on attending.

Robert is a member of UARC, VHF Society, ARRL, MARS, ARES, and, of course, the Mesh Networking group. Other hobbies Robert enjoys are Disney Land memorabilia and chickens.

Robert we appreciate your contributions to amateur radio and wish you the best.



Robert Jelf, KG7OHV with Teal
(Photo by K7RLS)