



UARC Steak Fry was held July 10<sup>th</sup>, 2004. Many thanks to Jerry Bennion (I) and the cooks shown here for a successful Steak-Fry. Roy Eichelberger was in charge of planning the Steak Fry. Thanks to him and all those who helped.

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# Microvolt

OCTOBER, 2004

Please Send Dues to:

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UARC

c/o Dick Keddington

1732 Woodside Dr #32

Holladay, Ut 84124-1624

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## Prologue

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 first Thursday of the month at 7:30 PM in the University of Utah Engineering and Mines Classroom (EMCB) building, Room 101.

**Membership:** Club membership is open to anyone interested in amateur radio; a current license is not required. Dues are \$15 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 \$15 may obtain a membership without a *Microvolt* subscription for \$9. Send dues to the Club Secretary: Dick Keddington, KD7TDZ, 1732 Woodside Dr #32., Holladay, UT 84124-1624. ARRL membership renewals should specify ARRL Club #1602.

**Contributions:** Monetary contributions are gladly accepted. Send directly to the Club Treasurer: Mark Hodgen, 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-) has autopatch facilities on both the Orem exchange (covering Santequin to Lehi) and the Salt Lake City exchange (covering Draper to Layton). The 449.10 repeater has autopatch facilities into Salt Lake City only available to UARC members. Due to the volume of traffic, only mobiles should use this autopatch. Autopatch use is open to all visitors to our area and to all club members. Non-members who wish to use the autopatch are encouraged to help with the cost of maintaining the equipment by joining the club.

**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.

**Publication:** The *Microvolt* is the official publication of the Club. Deadline for submissions to the *Microvolt* is the 10th of each month prior to publication. Submissions by email are preferred ([gopenshaw@msn.com](mailto:gopenshaw@msn.com)), but other means including diskettes and typewritten submissions can be mailed directly to: Gary Openshaw, 861 Roosevelt Ave., Salt Lake City, UT 84105. All submissions are welcome but what is printed and how it is edited are the responsibility of the Editor and the UARC board. 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, 1732 Woodside Dr #32., Holladay, UT 84124-1624.

## UARC 2004 Board

President: Glen Worthington, WA7X	272-8825
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Historian: Ron Speirs, K7RLS	968-4614
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Club Trustee: Brett Sutherland, N7KG	298-5399
Engineer: Randy Finch, K7SL	277-7135
ATV Engineer: Clint Turner, KA7OEI	566-4497
Board Liaison &	
Autopatch Engineer: Gordon Smith, K7HFV	582-2438
Provo Autopatch Host &	
ATV Engineer: Dale Jarvis, WB7FID	224-3405
Repeater Monitor:	

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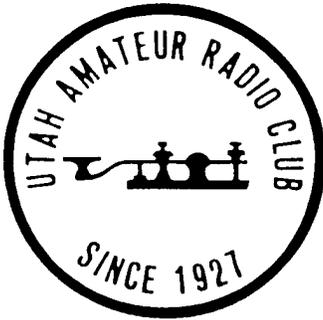
For late breaking news listen to the UARC Information Net Sundays at 21:00 on 146.62 or set your browser to:  
[www.xmission.com/~uarc/announce.html](http://www.xmission.com/~uarc/announce.html)

We are grateful to the management of XMission, our Internet Service Provider (ISP), for the donation of our Web-Page service.



# The Microvolt

The Official Publication of the Utah Amateur Radio Club, Salt Lake City, Utah  
Volume 48, Issue 9, October, 2004.



## QST from the Prez

**Glen Worthington, WA7X**

Wow, this year is going fast! It's getting time to begin thinking about elections again. I know that there are many who would be great to serve in

the UARC leadership next year so if you are interested please let one of the board know.

By the time you get this we should be prepared for the annual Homebrew night, one of my favorite meetings. This is where the talents of members come to light in the practical part of building in our hobby. As a lead-in to the homebrew night we had a great time with Junk Box Wars last month. Due to the home game playing at the U we had a lower than normal attendance and had to recruit some additional players for the contest.

For those of you not there we had the following rules;

### Junk Box Wars Contest Rules

1. Teams will consist of two main members who design, build, and test. Additional help to remove components from circuit boards or used hardware will be permitted to speed contest time allowance.

2. Today's project will be to build an HF band 1.8 to 29.7 MHz simple CW transmitter. The builders can choose any band and hopefully just radiate on one.
3. Points will be awarded for;
  - a. Stability (and reliable oscillation) 10 points for rock solid.
  - b. Power output and received signal strength (because some power may be in harmonics or spurious emissions). 1 point per dBmw into 50 ohms up to 33 dBmw. Any over 33 dBmw will receive 25 bonus points.
  - c. Least circuit reference material used (pinouts excepted). Begin with 30 points and lose 5 points per reference page used.
4. Power will be limited to 14 volts DC up to 1 amp
5. A 10-foot piece of hookup wire will be the limit on radiated antenna.
6. Time limit to build limited to 35 minutes, but a 5-minute circuit clean up will be allowed to fine tune the system.
7. Since 3.58 MHz Crystals are common in junk boxes, one will be provided to each team as a "seed" though this is not a restriction on band. Also appropriate inductors, with a capacitor value to resonate at this crystal frequency will be provided.
8. While one member is building the other will be asked to discuss the proposed design so that the audience may understand the theory of choices.

On one team we had Clint Turner, KA7OEI, and Weston Taylor, KD7CWZ. Let's call them the blue team. And on the other team,



Ron Jones, K7RJ, and Chuck Johnson, WA7JOS. Let's call them the red team.



Each team took a different approach. The red team built a standard bipolar transistor Colpitts crystal oscillator and drove an additional stage of a bipolar transistor and matched it with a hand wound toroid transformer. They succeeded in getting 3 milliwatts out and a total score of 43.

The blue team used a TTL crystal oscillator driving a bipolar intermediate stage driving a final stage from a high-powered transistor pulled from a TV monitor. The blue team did use a circuit reference manual and had a minor deduction for that (the red team was all original design). The blue team was able to get over 2 watts output (on multiple bands simultaneously) with a total score of 95.

At the end we held a drawing from the audience and gave away both of the projects. We videotaped the event from at least 4 perspectives and will attempt to edit it into a useful VCD for all to view.

I believe the 40-plus who got to attend were well entertained. Afterwards, we decided that with the end of the big game it might be easier to just have pizza delivered to our venue. This worked out great and many took advantage of the meeting after the meeting onsite.

Hope to see you all at the Home Brew night!

73  
Glen  
WA7X



## UARC Steak-Fry

UARC would like to thank all those who helped with the Steak Fry in July up at the Spruces. All your work was appreciated. The food was great and all had a great time. Thanks again to Roy Eichelberger, W7ROY, and his wife for all his work and preparation, and The Bennions, again, for cooking the food.

## Member of the Month-Sept.



Since we did not include Mike Richmond's, KF7IQ picture in last month's *Microvolt*, we wanted to put his picture in this month.

## Member of the Month

**Linda Reeder, N7HVF**



This month we are featuring John Kleingeld, W7NOA. John has been in the hobby since 1996.

It was Ken Nelson, K7EN, who convinced John to get his license. Ken worked with John at the Murray post office. They were both letter carriers.

John worked for the post office for 33 years.

Anyway, John told Ken that he had always wanted to get into amateur radio. John said that he is really good in electronics, but Morse code was a stumbling block for him. Ken told John that he didn't have to do the code to get a Technician license. John was shocked to hear about this new FCC ruling. So he went for it and obtained his Technician license in 1996.

When he was first licensed his call sign was KC7SGT. In September, 1998, he received his vanity call W7NOA. John kept his eye on this call sign because he wanted his call sign to be named after the NOAA weather agency. NOAA stands for National Oceanic Atmospheric Administration. John is interested in weather and astronomy. He is also interested in photography.

John has been interested in radio for many years. In fact, he started out in CB radio in 1968. Back then you actually had to have a license. His CB license callsign was KFN3819. The FCC did away with CB licensing in 1972.

John likes IRLP, the best about amateur radio. John has made contacts all over the world. His first contact was Guam. He has also talked with Australia and New Zealand. John said if he could just contact 6 more states he could claim worked all states award by way of repeaters through IRLP. The funny thing is the states he hasn't contacted are the ones around here such as Montana.

John has been a member of UARC ever since he became a ham. John really enjoys the UARC meetings. He also enjoys the people. John really enjoys field day. He has been a member of the VHF Society.

Now that John has retired he has done a lot of traveling. In March he went on a trip to Ireland.

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

73 N7HVF Linda Reeder

## October Meeting-Homebrew

Please remember to start making your Homebrew projects that you will need by the UARC Meeting on October 7<sup>th</sup>. This is one of the best meetings of the year. We will see you there.

## November Meeting

Remember nominations and elections are coming up in November. If you are interested in serving please contact Glen Worthington, WA7X. It is nice to have new hams take part and serve so the same people do not have to carry the load all the time.

## Help Wanted: UARC NET

UARC needs help with the Information Net on Sunday evenings at 9:00 P.M. Net Control Operators are needed, as well as someone to do Other Club Information. Please call Mike Youngs, KK7VZ, 298-7282 or E-Mail him at [youngs@qwest.net](mailto:youngs@qwest.net), and be involved. Please plan on joining the great Net Control Operators for next year.

## Repeater Etiquette

I wanted to relate something I have heard multiple times recently on the club's repeaters. In a roundtable, a breaker attempts to get into the QSO by either throwing out a call, or a break. The next person in the roundtable says something along the lines of "acknowledging the break" or "hi so and so, hang on a minute". The breaker is left standing while the person who picks it up finishes his thought. Sometimes the breaker is left waiting longer than necessary.

While causing a breaker to wait isn't illegal, the subject bears discussing.

1. The breaker may have been trying to report a legitimate urgent matter and being delayed could impede needed help.

2. The breaker may be trying to relate something pertinent before he has to QRT or before he goes out of range.

While I am sure that causing a breaker to wait doesn't cause a problem most of the time, it could. Fact is, we have a hobby where one of the purposes of the service is to have a trained body of operators. Not turning the frequency to breakers sets a poor example and is a bad habit.

I would also like to mention intentional interference. It is good practice to know how to listen to the input of a repeater so that when interference is heard, you can switch frequency rapidly and get an idea of whether or not the offender is in your geographical area. Often people report signal strengths based on the repeater output, not the input. It is the signal of the jammer that is of interest, not the signal of the repeater. When you do have information regarding a malicious interferer, it is appropriate to communicate that information to club officers, the trustee, or and Official Observer as soon as possible. Under no circumstances should it be communicated on air. It is club policy to ignore interferers on the club's repeaters on air.

Fortunately, we have great repeaters and great operators locally. Hats off to all of the folks who strive to become better operators no matter how long they've been in the hobby.

---Brett Sutherland, N7KG [n7kg@arrl.net](mailto:n7kg@arrl.net)

## Handi-Hams

Handi-Hams is a nonprofit organization that helps disabled individuals who have obtained their amateur radio licenses. There are instructors for Technician, General and Extra. Handi-Hams also offers an operational skills class for individuals who have already obtained their amateur radio licenses. However, if an individual has a Technician license and would like to learn proper operational skills before moving on to General or Extra, he is welcome to take this class.

Gary Gordon, K6KV, a volunteer instructor from Saratoga, California, brings all kinds of teaching aids to help blind and other students better understand radio concepts. Besides components to feel, such as variable capacitors and inductors, he also brings homemade models such as a miniature 4-element yagi antenna. To demonstrate electrical principles, Gary uses accessible aids such as talking voltmeters and a homemade tactile analog voltmeter whose "needle" can be felt.

In one demonstration, by connecting a one-Hertz function generator to a breadboarded half-wave power supply, students can comprehend concepts such as rectified sine waves and filtering, by feeling the needle of the tactile voltmeter. In another experiment, the tactile voltmeter is used to explore the differences between sine waves and square waves.

To further explore their differences, these waves are fed into a speaker, to show how sine and square waves of the same frequency sound different because of the square wave's harmonics. Next, the concept of harmonics is explored by using a homemade one-string guitar. Students really appreciate these teaching aids, since they make the material more fun, and easier to remember.

Handi Hams encourage their students to please *study, study, study*, before coming to camp. There is so much material to learn and one could not expect to learn it all in one week. We really care about our students and want them to succeed. It would make Handi-Hams very happy if everyone actually went home with an amateur radio license!

The operational skills class helps individuals sharpen their operational skills such as being net control operator or taking messages in emergency situations.

This year the operational skills class participated in something they have never

done before. Jim Gilbert, K0BFT, is a naturalist who took temperatures of various strata in Lake George. In each case he measured the temperature and the depth of the water. He had special instruments that he used to take these measurements. There were two radio operators in the radio room logging this information while they were on the pontoon boat taking these measurements. He even let the students take some of the measurements. This was a fun experience.

One other exciting event that happened was Dave Weber N0LSQ from Freedom of Speech along with his son Phillip Kcblejl, JD presented the latest and the greatest technologies for the blind. They had Jaws and the Braille-Note. The item that really interested me was the identifier. It would scan a can of coke and tell you everything you ever wanted to know about that coke but were afraid to ask. Anyway, it cost 1300 dollars so I guess I will have to wait awhile.

Of course we had our recreational activities: the trip to Itasca State Park and riding on the pontoon boat. On the pontoon boat we had a Kenwood Tsbleej with a Hamstick antenna. We made 28 contacts while on the boat from different states. Maybe if we had had a little more time we would have worked all states.

Handi-Hams, you are fantastic! Keep up the good work.

73 N7HVF Linda Reeder

## **Mac Petersen, W7WKF**

**McCarroll "Mac" Petersen W7WKF 1928 - 2004.** On Sept. 18, 2004, Mac Petersen passed away after a courageous battle with cancer. Mac was born Dec. 4, 1928 in Salt Lake City. He was a former UARC President, the inventor of the Steak Fry, and very active in Field Days in past years. Our condolences to his family.

## Exam Schedule

10/09/04	(Sat.)	Tremonton	Robert A. Anderson-AA7TR	(435) 257-2154
10/20/04	(Wed.)	Provo	Steve Whitehead-NV7V	465-3983
10/20/04	(Wed.)	St. George	Ronald C. Sappington-WI7Z	(435) 673-4552
10/26/04*	(Tues.)	Salt Lake C.	Eugene McWherter-N7OVT	484-6355
11/03/04	(Wed.)	Farmington	Fred Villanueva-N7FV	939-4046
11/17/04	(Wed.)	Provo	Steve Whitehead-NV7V	465-3983
11/17/04	(Wed.)	St. George	Ronald C. Sappington-WI7Z	(435) 673-4552
11/18/04	(Thu.)	Roosevelt	R Chandler Fisher-W7BYU	(435) 722-5440
11/30/04*	(Tues.)	Salt Lake C.	Eugene McWherter-N7OVT	484-6355
12/04/04	(Sat.)	Salt Lake C.	Gordon Smith-K7HFV	582-2438
12/11/04	(Sat.)	Logan	Heidi Black-AC7ZC	(435) 753-7487
12/11/04	(Sat.)	Tremonton	Robert A. Anderson-AA7TR	(435) 257-2154
12/15/04	(Wed.)	Provo	Steve Whitehead-NV7V	465-3983
(Last Tuesday test in Salt Lake City omitted in December.)				
01/19/05	(Wed.)	Provo	Steve Whitehead-NV7V	465-3983
01/19/05	(Wed.)	St. George	Ronald C. Sappington-WI7Z	(435) 673-4552
01/25/05*	(Tues.)	Salt Lake C.	Eugene McWherter-N7OVT	484-6355
01/25/05	(Thu.)	Roosevelt	R Chandler Fisher-W7BYU	(435) 722-5440
02/05/05	(Sat.)	Salt Lake C.	Gordon Smith-K7HFV	582-2438

\*Only Technician elements (1 and 2) given at this session

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