



New UARC Board Front Row Left to Right: Roy Eichelberger; Glen Worthington; Dick Keddington; Mark Hodgen; Telvin Mills; Back Row Left to Right: Bryan Mogensen; Keith Howard. Missing: Gary Openshaw; Gordon Smith; Brett Sutherland

The

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# Microvolt

January 2004

Please Send Dues to:

UARC

c/o Dick Keddington

1732 Woodside Dr #32

Salt Lake City, Ut 84124

**SEND TO**

*The Microvolt* (USPS 075-430) is published monthly except August for \$15.00 per year or \$1.50 per issue by the Utah Amateur Radio Club, 3666 South State Street, Salt Lake City, UT 84115-4848. Periodicals Postage Paid at Salt Lake City, Utah. POSTMASTER: Send Address changes to *The Microvolt*, c/o Gregg Smith, 7546 S. Uranium Drive, West Jordan, UT 84084-3942.

## 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., Salt Lake City, UT 84124. ARRL membership renewals should specify ARRL Club #1602.

**Contributions:** Monetary contributions are gladly accepted. Send directly to the Club Treasurer: Mark Hogden, 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., Salt Lake City, UT 84124.

## UARC 2004 Board

President: Glen Worthington, WA7X	272-8825
Executive VP: Roy Eickelberger, W7ROY	571-2447
Vice Pres: Gordon Smith, K7HFV	582-2438
Secretary: Dick Keddington, KD7TDZ	274-9638
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Asst. <i>Microvolt</i> Editor: Bryan Mogensen, KD7LEA	281-1752
Program Chair: Keith Howard, KA7RLB	463-0106
Program Chair: Telvin Mills, KB6BYU	968-5089
Imm. Past Pres: Brett Sutherland, N7KG	298-5399

## Committee Chairpersons and Members

"Book Lady": Fred Desmet, KI7KM	485-9245
Historian: Ron Speirs, K7RLS	968-4614
Field Day Chair:	
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:	

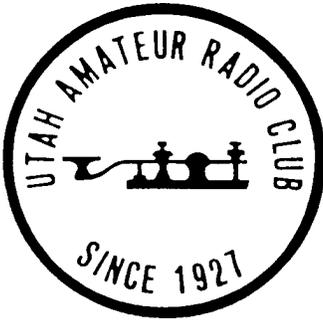
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For late breaking news listen to the UARC Information Net Sundays at 21:00 on 146.62 or set your browser to:  
[www.xmission.com/~uarc/announce.html](http://www.xmission.com/~uarc/announce.html)

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





## QST from the Prez

**Glen Worthington, WA7X**

I was recently contacted by Brett Sutherland N7KG, about running for UARC president. Brett is a good salesman, a very good salesman, and with some persuasion and a commitment on his part I was sold. What really convinced me is the rest of the board, hams who I know will make this an exciting year!

Having been in amateur radio for 38 years plus now I know just how fun the hobby can be (remember it is just a hobby). I love the hamventions and have been to Dayton numerous times, along with the technical, social interactions and community service we as hams can provide. The diversity within our ranks is wonderful. Traffic handlers, HF contesting, VHF contesting (see you January 24-25!), MARS, repeaters, ATV, SSTV, packet, microwaves, rag chewing, antennas, transmitters, handhelds, mobile, beacons, moonbounce, Dxpeditons, swap meets, and digital modes. Every aspect is fun and sometimes life saving.

We are facing a world where there will be an ever-increasing demand for RF spectrum and we will have to be vigilant at preserving the privilege of using this public commodity. The bad news, everybody wants spectrum as devices become cheaper and cheaper and demand for wireless is intensified by WiFi, cellular phones and FRS

radios. As Brett mentioned in last months message to write your Representatives about the BPL, which will interfere with HF communications if used in its current form. The good news, as an autonomous communications infrastructure we can (and do) perform vital communications and support of Homeland security as well as many hours of volunteer efforts for communities in which we live.

Please feel free to give me your input and suggestions to make the UARC a fun organization to belong to.

73

Glen WA7X

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**Bob Wood, W7OAD  
UARC Member**

## Member of the Month

Linda Reeder, N7HVF



This month we are featuring Telvin Mills KB6BYU. Telvin has been in amateur radio for 20 years and has his Extra Class license. KB6BYU is the call sign he received when he got his Novice license when he was living in Monterey, California. It was the LDS church that got him interested in the hobby. They were encouraging the members of his ward to get their ham licenses. The classes were being taught on base at the naval postgraduate school. They have a ham radio club and he was very active in that club. Two months after he received his Novice license he obtained his Technician license. Back then, when a person upgraded, he had to go to the nearest FCC field office to take the test. So Telvin had to go to the San Francisco FCC field office to take the test. It wasn't until years later when he moved to Salt Lake City, Utah that he upgraded to Extra. Three years ago he got his General (!) and two years ago he obtained his Extra. Telvin was working for a book keeping company before he was transferred to Salt Lake City Utah. Telvin now works for Gellan Behavioral Health. Telvin and his wife Sherilyn have four children, two girls and two boys. His youngest son is studying for his Technician license, so, hopefully, there will be a new ham in the family soon.

The thing that Telvin likes best about amateur radio is HF and contesting. Telvin also enjoys radio-controlled airplanes, flying gliders and electric powered planes.

Telvin is a member of UARC. He has just been elected to be one of the chairpersons for UARC for the year 2004. Telvin, congratulations. We know you will do a good job.

## UARC Elects New Officers For 2004

**Gordon Smith, K7HFV**

UARC officers for 2004 were elected at the annual election meeting, which took place Thursday, December 4. No nominations were made from the floor at either the November or December meetings, so the nominating committee's choices were elected by acclamation.

The 2004 slate of officers reflects the largest turnover UARC has seen for a number of years. The only 2003 officers continuing in their positions are Vice-President Gordon Smith, K7HFV, and Assistant Editor Bryan Mogensen, KD7LEA.

The newly elected officers are as follows:

President: Glen Worthington, WA7X  
Executive Vice-Pres.: Roy Eichelberger, W7ROY  
Vice-President: Gordon Smith, K7HFV  
Secretary: Dick Keddington, KD7TDZ  
Treasurer: Mark Hodgen, AC7XR  
Program Chairpersons: Telvin Mills, KB6BYU &  
Keith Howard, KA7RLB  
*Microvolt* Editor: Gary Openshaw, KC7AWU  
Assistant Editor: Bryan Mogensen, KD7LEA

These officers plus the Immediate Past President, Brett Sutherland, N7KG, make up the Board of Directors.

Brett was also elected to the position of trustee for the W7SP station license. As such, he also becomes chairman of the Repeater Committee.

Finding people willing to run for office is never an easy job. We owe a debt of gratitude to Gary Openshaw, KC7AWU, who chaired this year's Nominating Committee.

## Getting to Know Some of the New Club Officers

Here are a few comments from the new UARC Club Officers:

### Roy Eichelberger W7ROY

I am 54 years old have been a ham since 1980 when I got my Novice. In 1981 I upgraded to Tech. And last year 2002 I upgraded to General. I have 5 children and 12 grandchildren and two more this next year (2004). I enjoy camping and fishing and of course ham radio. I am not at present on the low bands but hope to be soon. I am active on VHF, 220 and 440 as well as IRLP and do have a lot of fun talking to the world through this mode.  
73'S

### Mark Hodgen, AC7XR

I was first licensed as KA7EGQ in the late 70's. It was the near the peak of a sunspot cycle, and driving around town in a friend's car talking to Japan on the way home from high-school was a daily occurrence I took for granted. I had to ride in the back seat because the Drake Transmitter and Receiver both took up the entire front passenger seat! I'd like to do HF mobile again.

I went through a period of about 15 years with little activity on the radio, and then the radio bug bit me in the summer of 2002. I learned how much fun you can have on the HF frequencies with just a wire for an antenna, and only 5 watts of power! The QRP was not planned – it was just because anything more than 5 watts was setting off the alarm system in the condo I was staying in while working away from home. I started using CW and that is what has made it fun for me! I love to rag-chew. I am also doing a little contesting to help me continue to improve my skills. I enjoy meeting hams, and hearing their stories. I love it when newcomers ask about CW, because that has made such a difference for me (see [www.qsl.net/ac7xr](http://www.qsl.net/ac7xr) for more info about that).

Other interests include fly-fishing, camping, computers, and video. I haven't done much home brewing in a long time, but have started doing that again. Its fun to share that experience with my 12 year-old son who is also licensed (and he loves CW, too – naturally!)

I look forward to getting to know our club members and learning what elements of our hobby/service, they each enjoy the most. 73

### Dick. Keddington, KD7TDZ

I attended East High School in Salt Lake City, and following missionary service in England, I attended the University of Utah, graduating with a business degree in 1966.

Upon graduating from the "U" I accepted a commission in the U. S. Air Force, and retired as a Lieutenant Colonel after 28 years of active and reserve service in medical administration. My active duty years were spent in the Washington, D. C. area and in England.

I currently work in a convenience store, and also serve as a member of the Board of Directors of AVERT, the Association of Volunteer Emergency Response Teams, which encourages and supports the CERT program worldwide.

Locally I serve as an the Emergency Preparedness Director in my stake, and it was my involvement in emergency preparedness and the CERT programs which really sparked my interest in amateur radio, and gave me the incentive to become a ham. My ham ticket was issued in October of 2002, and I am currently working on upgrading from Technician.

Apart from the obvious emergency service potential of Ham Radio, I have found the hobby to be satisfying and fun, and particularly appreciate the association with other hams.

I hope to make a positive contribution to UARC, and look forward to serving you.

### Glen Worthington, WA7X

I have been interested in radio and electronics for as long as I can remember. I interested in amateur or "ham" radio when I was twelve years old and visited a neighbor who was a ham to inquire what it would take to get a license. Sadly, he informed me that I was too young and needed to be at least fourteen. (To my knowledge there has never been an age requirement for amateur radio).

When I turned fourteen I pursued getting a license and found that the local high school was offering a summer class to get a Novice licenses and a 2-meter

AM rig. The course was taught by Don Allen, WA7CRJ, who later became my electronics shop teacher throughout high school. At that time the Novice license allowed voice privileges only on the 145 to 147 MHz segment of 2 meters and code privileges on HF. We were limited to 75 watts input (wattmeters were not plentiful then and measuring final input power could be done with analog metering) and crystal control. (You wouldn't want a Novice with a VFO.) I remember learning the code with a visual diagram that would take you to the letter by following the dots (dihs) and dashes (dahs). Once we mastered the alphabet, numbers and punctuation we could easily do 3 words per minute. Within a day or two all of us could do 5 WPM. At the same time we were studying the theory, both rules and technical principles. There was no study guide of the exact questions, but rather sample questions on what would be covered in the test. In other words no question pool, you just had to know the information. I believe half of the class passed on the first try. The first call in our group was WN7GHI (I can't remember his name) and WN7GIF, GIK, GJK, to name a few. Why the big disparity in calls? I don't know, except for mine. I had forgotten to check the box that I was not an ex-felon and my application bounced and I had to fill in the blank and send it back. It seemed like an eternity, because I was listening to my friends who had received their licenses already. I remember in September when my 9<sup>th</sup> grade year had started, my mother coming to pick me up that day after school and handing me the official envelope from the FCC, signed by Ben F. Waple, Secretary of the FCC.

WN7GKM, wow, and I was on the air! I'm sure I was a pain to those listening on 145.5 MHz the old AM Salt Lake frequency. I just had to upgrade to Technician and use a VFO, so I asked Don Allen what it would take to upgrade. Another test, but that would be easy, just theory, no more code (where have I heard this again). In short order I had a second license WA7GKM, (at that time you could hold both a Novice, good for one year and a Technician) for VHF privileges. Six meters here I come or should I say "you can hear me on your TV"?

Within the next couple of years the FCC introduced "Incentive Licensing", where the new Advanced Class was added to the Novice Technician, General and Extra. Before this the General and Extras (there

were some Class A or Advanced left over from the Fifties) and Conditionals (those living over 75 miles from a regular FCC testing point and volunteer examiners gave the tests to) all had the same privileges. The new program gave each higher grade more privileges.

Only problem: the code. Well if that's what it took I was going to get HF phone privileges, so I began to practice. First test, failed, ugh! I didn't want to do that again. By the way, the FCC examiner gave the code tests first so if you didn't pass you didn't even take the written test. Also, even though the Technician and General theory was the same element, it didn't count towards the General or Advanced unless you took it in front of an FCC examiner. Well, the next time I was prepared and passed. You had to get 65 characters in a row, numbers and punctuation counted as two. I then had the privilege of taking the written General and Advanced tests and got my Advanced in 1968. That was good enough for then because 20 WPM was just too much. Well in 1988 I finally decided I wanted one of these 2X1 calls before they ran out and they were getting real close to the "WA" calls, wouldn't that be cool. Luck was on my side (oh yeah I did study the code too) and I passed in one of the Gordon VE sessions and got the call WA7X (no, not a vanity, just out of the box).

Over the years I did SSB on two meters in 1967 by converting an ARC-1 to a transverter with a Central Electronics 10B phasing exciter. That impressed some of the old timers who were on SSB at the time when I popped up on their frequency! Also in that year I built a Flying Spot Scanner out of my parents' working TV and modulated a UHF oscillator on 70 cm with a hand drawn picture of a duck that said WA7GKM-TV and quack quack. In 1969 I did 10 GHz FM TV video using surplus reflex klystrons, thanks to my Physics teacher, Marion Poulson, W7OSV (SK). Just before I went on an LDS mission I had ordered a T-44 Motorola UHF surplus transceiver and in conjunction with an RCA UHF base station I was going to have a repeater and autopatch. Didn't get it until after I got home. So in 1974 I set up the system on some oddball split (the crystals were free) around 3 MHz on 449.037 as I recall. You may notice that I have one of the earliest coordinated repeaters in Utah on the UVHFS database. Today it is the 449.100 repeater used by UARC. In the mid to late 70's I

had a full duplex autopatch (today it is just half-duplex). I recently attended my niece's wedding and one of her husband's uncles remembered me as having the first cell phone, before they were in common use (about 8 years before).

Today I run U.S. Satellite Corporation, a wholly owned subsidiary of Albertson's, yes, the food stores. My wife, Janet, KI7DX (not a vanity call either), has embraced this hobby (just enough) to make our social life with fellow hams fun. I really appreciate her support!

I do have a web page, mostly maintained by Clint, KA7OEL, and Randy, KG7GI, that you may find of interest since much of it is ham radio related, at [www.wa7x.com](http://www.wa7x.com). Just follow the links to the various pages on beacons repeaters and propagation information.

#### **Bryan Mogensen, KD7LEA**

I am 41 and have been interested in electronics since Jr high. I am married and have three children ages 17, 18, 19. I work for JCPenney as an electrician. I attended one of Ron Speirs' Tech. classes a couple of years ago and then upgraded to General class a year later. I am interested in all aspects of amateur radio. Right now I am building my own 70-ft. tower. As of right now I have a Yaesu VX-5R, Yaesu FT 100D an Icom 910 H with 1.2 gig. Module and I have built a 40-meter Rock-Mite QRP transceiver. My other interests are building model rockets and rocket motors. I am also building a BD-5B homebuilt airplane.

#### **Gary Openshaw, KC7AWU**

I have been licensed for ten years and I have made a lot of new friends and have learned a great deal about amateur radio. I have an Extra class license. I have worked for the Union Pacific Railroad Employees Health Systems for the past 35 years and looking forward to retirement when I can have more time to "Ham it up." My wife, Janice, KD7DMK, came to one of my amateur radio classes I taught and got her license. I have raised four boys; my wife has raised five boys. (Her husband is included.) I have been active in UARC for approximately ten years and have served on the board as Program Chairman; Secretary; and President. I was also field day chairman for one

year and I have been involved at the information booth for several years. Those who have helped at the information booth have received a great deal of information over the past years. I think it was last year when we were told we were supposed to *give out* information rather than receive it. I am happy to try my luck as the *Microvolt* editor and hope you will join me in making this the best year ever by submitting articles and suggestions for the *Microvolt*. Thanks and 73.

## **January's Meeting: Amateur Satellites**

Much of the world's communications have gone to satellite over the last several decades. Even with limited budgets, amateur radio has its own set of satellites. Our January meeting will feature Randy Kohlwey, N7SFI, who can tell us all about our amateur space communications possibilities. There is a variety of satellites available on different bands and modes. Come hear what you need to work them and what's in store for future amateur birds.

The meeting will take place on the evening of New Year's Day, January 1, 2004. Yes, we know it's a holiday, but we suspect most folks will be finished celebrating by Thursday evening. We guarantee the parking lot will not be crowded.

That's Thursday, January 1, at 7:30 P.M. in room 101 of EMCB on the University of Utah campus. Of course there will be the "standard" features of monthly meetings as well:

- Availability of ARRL books from Fred, the "book lady";
- A chance to sign up for badges, hats, and jackets;
- An opportunity to join UARC or renew your membership
- The chance to meet face-to-face the people you talk to on the air
- The "Elmer Hour," a chance, after the meeting, to get your questions answered by those who have been in the hobby a while; and
- The "Meeting(s) after the meeting": A chance to enjoy pizza or other gastronomic delights with other hams. One group goes to Litza's Pizza, 716 E. 400 South. Another goes to a restaurant that varies from month to month, but will be announced at the meeting.

## UTAH AMATEUR RADIO EXAMINATION SCHEDULE

01/21/04	(Wed.)	Provo	Steve Whitehead, NV7V	465-3983
01/21/04	(Wed.)	St. George	Ronald C. Sappington, WI7Z	(435) 673-4552
01/27/04*	(Tues.)	Salt Lake C.	Eugene McWherter, N7OVT	484-6355
01/29/04	(Thu.)	Roosevelt	R Chandler Fisher, W7BYU	(435) 722-5440

## UARC Financial Statement

Administration	\$152.61
ARRL Dues Paid	78.00
Books	3612.80
Storage Shed	29.81
Capital-Other (TS-450B)	500.00
Club Meetings	260.21
Field Day	1019.09
Grants	50.00
Ham Hot Line	306.36
Insurance	325.00
Microvolt Postage	1019.70
Microvolt Printing	2422.71
Misc	45.78
NSF checks LOSS	15.00
Returned Check Charge	5.00
Repeater Phone	881.85
Repeater-Other	228.17
Steak fry	984.06
Sales Tax	306.41
<b>TOTAL EXPENSES</b>	<b>12242.56</b>
<b>TOTAL INCOME - EXPENSES</b>	<b>-757.73</b>

## A Big Thank You.

I would like to thank all those who have served so diligently on the UARC Board last year and some have served many years. Your service and time rendered to the Club has been countless and all of your accomplishments have helped the club immensely. In behalf of the new UARC Board we would like to thank you for an outstanding job well done. Best wishes on your new endeavors.

## Editor's note

I am an inexperienced editor as you can probably tell by this first *Microvolt* of the year. I will be depending on articles from the membership of UARC. Linda Reeder, N7HVF has consented to assist me in obtaining articles for the *Microvolt*.

If you have any suggestions or constructive criticisms, I would welcome them. My E-Mail address is [gopenshaw@msn.com](mailto:gopenshaw@msn.com). This is the club's newsletter and any articles or suggestions would be appreciated. Otherwise you will have to take whatever is written.

Thank you for your cooperation and patience.

73 Gary Openshaw, KC7AWU