New UARC Board for 2002

Photo: Ron Speirs, K7MYS

UARC 2002 Board. Front row- left to right: President: Mark Richardson,W7HPW; Microvolt Editor: Bruce Bergen, KI7OM; Assistant Microvolt Editor: Bruce Leonard, KJ7HZ; Executive VP: Brett Sutherland, KC7WRR. Second row - left to right: Program Chair: Lauri McCreary, K7LMM; Program Chair: Steve Baxter, K7SRB; Secretary: Gregg Smith, K7APW; Treasurer: Chuck Johnson, WA7JOS; Vice President: Gordon Smith, K7HFV.

Volume XLVI Issue 1, January 2002

The MICROVOLT

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U.A.R.C.
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7546 S. Uranium Dr.
West Jordan, UT 84084-3942

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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 UT. POSTMASTER: Send address change to " *The Microvolt*", c/o Gregg Smith, 7546 Uranium Dr., West Jordan, UT 84084-3942.

Prologue

The Utah Amateur Radio Club was organized under it's 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 Infinia Medical Building located at 1255 East 3900 South in Holladay, across the street from St. Marks Hospital.

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 duesto the Club Secretary: Gregg Smith, K7APW, 7546 S. Uranium Dr., West Jordan, UT 84084-3942 ARRL membership renewals should specify ARRL Club #1602.

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 the 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 Santaquin to Lehi) and the Salt Lake City exchange (covering Draper to Layton). The 449.10 repeater has autopatch facilities available to UARC members into Salt Lake City only. 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 information, testing, meeting information, 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 (bbergen@xmission.com), but other means including diskettes and typewritten submissions can be mailed directly to: Bruce Bergen, KI7OM, 3543 Fieldstone Cir, Salt Lake City, UT 84121. 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: Gregg Smith, 7546 S. Uranium Dr., West Jordan, UT 84084.❑

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❑

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For net times and frequencies, testing details and 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 ❑

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:
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The Microvolt

The Official Publcation of the Utah Amateur Radio Club, Salt lake City, Utah

Volume XLVI, Issue 1, January 2002

Photo: Ron Speirs, K7MYS

QST From the Prez

Fellow Amateurs,

During this time of the year we often reflect on the past and make plans for the future. I guess that I will not break with tradition that I think is a good one. Keeping with an Amateur theme, we celebrate the 80- and 100-year anniversaries of two radio feats that shaped the modern world. The years have a way of distancing and making less significant the accomplishments of those that have gone before. It is therefore appropriate to review just what took place on the cold windswept coast of St Johns's, Newfoundland, Canada. It was the December 12, 1901, two days earlier Guglielmo Marconi had sent aloft a balloon filled with hydrogen gas trailing a copper wire. The wire broke and the balloon drifted out to sea. The next day the experiment was repeated with the same results. On December 12 a bamboo and silk kite was sent aloft, this time the wire held. At 11:30 AM a telegram was dispatched to Poldhu, on the southwest coast of England. It was the order to commence transmitting. The Poldhu operators began keying the spark transmitter, Guglielmo Marconi strained to hear the clicking signals from across the ocean. The odds were against him, his assistant warned him that the winds were increasing and that the kite was about to break free. About 12:30 Guglielmo Marconi heard the three distinct clicks of the Morse letter "S". For the first time in history the ocean had been crossed by a radio signal! Long distance radio communications had been proven possible.

To us this accomplishment may seem like a small thing. But in its time it was enormously difficult. I don't know of anyone left that can still recall these events first hand, but most of can recall the events of 1969 and the incredible sense of excitement and accomplishment we all felt when Neil Armstrong set foot on the moon. Recall those feelings and you will be able to relate them to those of the events of 1901.

Arthur C. Clarke once said, a high enough technology would appear as magic to a lesser advanced individual, that is much the way Marconi would view one of our advanced synthesized transceivers. But I think it would not be very long before Marconi would recognize the principles that he pioneered. We stand on the shoulders of the accomplishments of those before us.

The other radio achievement: On November 15, 1921 the ARRL sent Paul Godley to England, on December 7 at 1:42 AM he clearly heard 1AAW, and in the hours that followed he logged the calls of 30 amateur signals from the US, the strongest signals coming from 1BCG in Connecticut. Paul later lamented that he wished he had brought transmitting equipment with him. Amateur radio had spanned the Atlantic for the first time! There are many "firsts" that can be credited to Amateur Radio - today we can span the miles to farthest corners of the globe with an ease that would astound our earliest radio pioneers.

As we look into the New Year let's do it with a renewed enthusiasm, remembering the foundations

on which we stand, honoring those that have laid them.

We have a great responsibility to uphold our proud Amateur tradition. Always remember and put it into practice.

The Radio Amateur is:

- **CONSIDERATE…** never knowingly operate in such a way as to lessen the pleasure of others.
- **LOYAL…** offers loyalty, encouragement and support to other amateurs, local clubs, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.
- **PROGRESSIVE…** with knowledge abreast of science, a well-built and efficient station and operation above reproach.
- **FRIENDLY…** slow and patient when requested; friendly advice and counsel to the beginner; kindly assistance, cooperation and consideration for the interests of others. These are the hallmarks of the amateur spirit.
- **BALANCED…** radio is an avocation, never interfering with duties owed to family, job, school, or community.
- **PATRIOTIC…** station and skill always ready for the service to country and community.

-Amateur Code, Paul M. Segal, W9EEA, 1928

73 and Happy New Year

Mark
W7HPW ❑

Yes, well actually the XYL wasn't too enthusiastic when I told her that I'd recommended her for the position of club newsletter editor - but I think she'll come around.

Blast From The Past

I ran across this letter from a fellow ham here in Salt Lake. He had waited five months when this letter was written and still had not received his license. And we complain now when we don't see our results over the internet in less that a few days :)

Alan Seyboldt - N7OI ❑

Salt Lake City, Utah
July 27, 1937

Mr. Maxwell Burggraaf
1175 Augusta Wy.
City

Dear Mr..Burggraaf:

Kindly excuse the delay of this transmittal as I have been waiting for my general license. My present call sign is WA7UFO Tentn.

I passed the General examination last March 10 and at this date I hav'nt received my License.

I wrote the office in Denver inquiring about the Examination and Mr. Hastings advised me I passed the General Exam. and he was forwarding my letter of inquiry to the Washington office, He wrote me July 5 th. so guess will have to wait it out Hi.

The dues inclosed are for Mrs. Olson and my-self.

Thanking you for the interest you have extended in the Amateur Radio classes.

I remain very sincerly yours
W.E. Olson

W.E.Olson
7399 Banbury Circle
Salt Lake City 84121

Code Class Announced

Having trouble learning the code? Want to get together with others that are working on it and some who have already had the experience? Then this might be just what you're looking for.

Gary Openshaw, KC7AWU, is going to be offering an informal code class at his home at 861 Roosevelt Ave.(1460 South) in Salt Lake City. The class is scheduled to begin Thursday, January 10 at 6:30 PM. He can be reached at his home phone number 484-3407 or his work number 595-4381. Gary has helped many new hams (and would-be hams) to master the code and gain HF privileges. This should be a great opportunity for those who are having some difficulty with technique or motivation. ❑

ARRL Section Manager Comments

Photo: Ron Speirs, K7MYS

As your ARRL Section Manager I have been invited to provide a few comments each month for the club newsletter. I will try each month to list items of interest for everyone and hope that any who have questions or concerns about ham radio will feel free to contact me so I may be of assistance in any way possible. First I would like to extend my congratulations to the new UARC Club Officers. Each year we elect those who we think will do the best to provide new and interesting activities for our club. More important though is how and what are YOU going to do this year to help the officers and your club. Give it some thought and volunteer to help out with a committee or activity that is of interest to you.

Are you a member of the American Radio Relay League??? If not join ARRL and support your club! When you join ARRL through your club, $15.00 of your initial membership fee is given to your club. What a great way to support your club and also become part of the largest amateur radio organization in America. Your club treasurer should have the special forms to permit you to join through your club.

Have you been thinking of upgrading to Extra? Now is the time to do it. On 1 July 2002 a new larger and more in-depth question pool will be released; so, if you have been thinking about upgrading to extra do it before July. I believe this month's newsletter will have an ARRL Article explaining the new question pool.

The Utah Hamfest Committee has begun the process of planning the 2002 Utah Hamfest that will be held at Ruby's Inn on 12,13, & 14 July, put those dates on your calendar now and start planning to attend this special annual event. See the Hamfest web site at: "http://www.utahhamfest.org/" for more specific details.

Put 2 March 0800 on your calendar, Utah VHF Society Swap Meet. It will be held at the Utah State Fair Park again this year. If you haven't paid your annual dues and want your name and call to appear in the annual directory please mail your $15.00 dues to the VHF Society Treasurer, Brent Thomas, AC7H, at VHF Society PO Box 482, Bountiful, UT 84011-0482.

Well that about does it for this month, Happy New Year and let me know if I can help you in any way, AC7CP@aol.com.

Mel Parkes, AC7CP
Utah ARRL Section Manager ❑

Featured Member of the Month

Photo: Ron Speirs, K7MYS

Featured as this month's member is Joseph Grange KD7EOC, who has had his tech plus license since 1999. He became interested in amateur radio in the '60s while working in Lancaster, California on aircraft as an electrician. Joseph was really interested in electronics and found that there were several hams who worked in the same facility. In fact, he was preparing to take the test when he decided to move back to Ogden to work for Union Pacific Railroad. He found himself busy with work and raising a family and forgot about amateur radio for awhile.

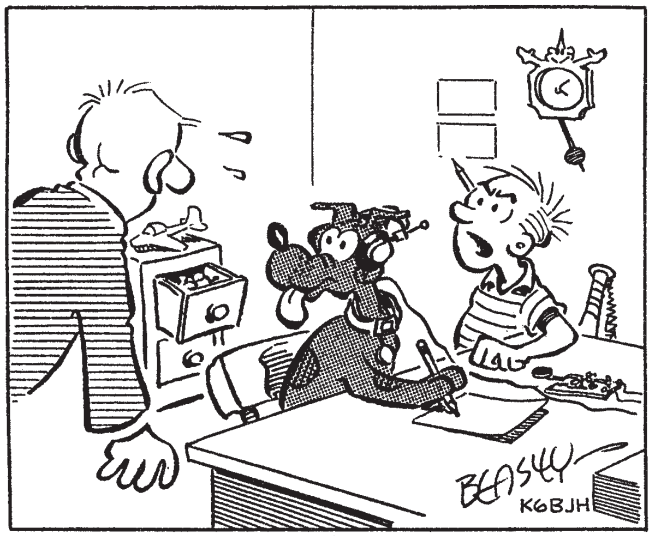
It wasn't until Joseph starting working for the Chevron refinery and became good friends with Joel Neal, KC7UBP, who also works there that Joseph renewed his interest in amateur radio. At the same time he received a calling in his ward to be in charge of emergency preparedness. So, it was time to get serious about becoming licensed. Joel became his elmer and helped him with the morse code. Joseph said he practiced the code so much that his dog could have passed the test. He took a class at his stake center passing the test there. He remembers writing in his journal "this is a red letter day". A year later his wife, Mary Jane, KD7JAV, received her technician license.

Joseph and Mary Jane have nine children, four boys and five girls. Some of the children are from a previous marriage, because he had been windowed.

There are many facets in amateur radio that interest Joseph. He enjoys learning about antennas, and he would like to work amateur satellites and packet radio. He is also working on upgrading to general. Oh yes, his favorite UARC meeting is home brew night. Joseph loves to see the projects that others have built. He is really involved with scouts and would like to help them become enthused about amateur radio. Joseph says it is really a challenge because they think cell phones are the in thing. Even though his amateur radio interests cover a full spectrum, his favorite thing about the hobby is meeting people. As a member of UARC and Salt Lake County ARES he said has made so many wonderful friends as a result of his activities in amateur radio.

Joseph, we wish you the best in all of your endeavors.

73 N7HVF Linda Reeder □



AW, HE'S DUMB --- HE CAN'T GET PAST 3 WPM, AND I KNOW HE CAN'T PASS THE THEORY!

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Field Day Chair:
Open

Steak Fry Chair:
Open ❑

Utah QSO Party/Olympics QSO Party

Utah QSO Party/Olympics QSO Party, sponsored by the Utah DX Club, 0000Z Feb 9 until 0000Z Feb 11. Single op, multi-single, mobile. 160 80 40 20 15 10 6 2 meters. Send QSO number and UT county. If you're outside of Utah, send signal report and your state/province/DXCC country. Single ops are limited to 24 hours. Single ops and multi-single are limited to one transmitted signal at a time. CW QSOs must be made in CW subbands, except on 160 meters. Work stations once per band/mode, work UT stations again as they change counties. A UT station on a county line counts for 1 QSO but multiple counties. CW --1.805 and 40 kHz up; phone --1.850 3.850 7.230 14.250 21.300 28.450; Score 1 pt/QSO on phone and 2 pts/QSO on CW. Final score is QSO points × UT counties (max 29). UT stations multiply by states and VE sections (max 58). Awards. The Utah DX Club requests that all logs be sent via email. You can also reserve your county by emailing uqp@vcr.com. Website: www.vcr.com/uqp

Clark Dowding
Bountiful, Utah
Amateur Radio N7TDT
N7TDT@arrl.net ❑

AC Power Line Noise Stop the Madness

It's just plain awful. The buzzing racket that just won't go away except on rainy days and Mondays, constantly covering up the weakest of signals (the ones you really want to hear). Line noise is an insidious form of amplitude-modulated arcing noise produced by corona discharge around high voltage insulators and arrestors attached to the local power service delivery grid. Although some types of buzzing noises can be produced in your own house and even in your own equipment, most crackling and banging noises are from overhead power lines, usually the high voltage (3KV-10KV) wires.

Can it be dealt with? You bet, and here's how. First, recognize that electric power companies are busy places with lots of responsibilities. If you call and whine with your problems they may help you and they may not. They're not really responsible for small noises you have tolerate and there are usually more important priorities for work crews. So it's a big help to them and to yourself if you can provide them with critical information that will help locate the problem and hasten the cure.

First, listen to the noise on a receiver switched to the AM mode and rotate an antenna around if available, searching for the noise peak on the S meter. Getting a fix on the location of the noise is extremely valuable information. After locating the direction or if no directional capability exists, walk or drive out in the immediate vicinity or peak direction with a portable SWL receiver or AM BCB receiver. Listen for the loudest peak of the noise as you travel back and forth, trying to center the peaks on a certain location. If you are able to reach a verdict on a certain pole or locale, use a pair of binoculars and see if you can find an insulator on the pole's cross-arm that is either arcing or is discolored from arcing, to the coloration of the rest. If the pole has a guy wire give it a shake and see if the noise changes in pitch or stops altogether. Record the pole number and notify the local power company of your findings. Never, ever, ever try to climb the pole and fix the problem yourself. It's illegal and dangerous almost beyond belief! When contacting the power company ask the switchboard operator who handles noise complaints and follow the company's procedures. Sometimes they will ask you to fill out a noise form with pertinent information. Do it, and try to be personable and diplomatic. Remember - they don't HAVE to help you, and they're human. They may just write you off if you're a noisy nuisance. You need them but they don't need you, and they don't have competitors. Be patient and helpful anywhere you can.

Another trick that can be employed in your search for the noise is to look for it at dusk when arcing is more visible. A corona discharge is often a faint blue haze around a dirty or broken insulator. If anything like that is evident, record the street location and the pole number (the latter is usually found on a metal band wrapped around the pole about 6 feet above the ground).

Want to protect against further noises or future trouble? Here's a trick method of performing a power line noise audit. Use a CB radio in the car on a quiet channel during the daytime and go up and down all the streets in your vicinity out to a distance of about 1 mile from your station. Hunt for small noises and record their positions, pole numbers, etc. Forward the information to the power company and see if they will act on the report over a period of weeks. A simple undertaking like that will provide you with years of quiet enjoyment with only a small time investment. Better yet, it's all free - even the instructions!

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New Amateur Extra Class Question Pool Released

NEWINGTON, CT, Nov 30, 2001--The National Conference of Volunteer Examiner Coordinators' Question Pool Committee has released a revised and expanded Amateur Extra class (Element 4) question pool into the public domain. The new question pool becomes effective July 1, 2002, and must be used to generate all Extra class written examinations administered on or after that date. It replaces the Extra class question pool released April 15, 2000--the day Amateur Radio "restructuring" became effective. The new Element 4 pool expands the number of questions by more than 20 percent--806 questions--as opposed to 665 in the current Extra class pool, and it contains more technical material. More than half of the questions cover electrical principles, circuits, signals and emissions. QPC Chairman Scotty Neustadter, W4WW, expressed his appreciation to those in the amateur community who contributed to the Element 4 revision. "There are too many to mention individually, but the Committee and the NCVEC deeply appreciate their suggestions and input," Neustadter said. "To a major degree, the changes and improvements in the pool are the result of their efforts." The 50 questions in an Extra class examination are drawn from the question pool consistent with FCC rules and according to a formula that specifies the number of questions to be asked from each of nine topic areas. Applicants must correctly answer at least 37 questions to pass. The new Element 4 question pool is available on the ARRL Web site. The just-released Extra class question pool will remain valid through June 30, 2005. The Question Pool Committee now will turn its attention to developing an outline for the Technician class (Element 2) question pool, which will be revised during the fall of 2002. A draft Element 2 syllabus is scheduled for public release and comment next spring. The QPC invites suggestions for the Element 2 syllabus and question pool revision. The Question Pool Committee welcomes questions and comments. ❑

The Lithium-Ion Battery in Everyday Use

This article appeared in the November 1999 edition of the "USECA Express", the newsletter of the Utica Shelby Emergency Communications Association, Joe Januies -K80EF Editor. By Isidor Buchmann, founder and CEO of Cadex Electronics Inc., in Burnaby(Vancouver)British Columbia, Canada. Copyright 1998.

A few years ago, the Nickel Cadmium (NiCd) was the only suitable battery for applications such as cellular phones, laptop computers and video cameras. Since then, new battery chemistries have emerged that provide twice the energy density. One such battery is the Lithium-Ion (Li-ion). Will the Li-ion eventually replace the classic NiCd? The answer is no - at least not for now. Every invention that solves one problem creates new ones.

Compared to the mature and rugged NiCd system, the Li-ion is fragile and requires a protection circuit to maintain safe operation. The load current is moderate and charging must be done according to strict standards. In addition, the Li-ion is subject to aging whether used or not. Signs of reduced performance are visible after one year; a typical service life of a Li-ion is about two years from date of manufacture.

One major advantage of the Li-ion is the absence of memory. No scheduled cycling is required to prolong the battery's life. In addition, self discharge is less than half compared to the NiCd, making the Li-ion well suited for modern fuel gauge applications.

History

Pioneering work for the lithium battery began in 1912 by G. N. Lewis but it was not until the early 1970 when the first non-rechargeable lithium batteries became commercially available. Attempts to develop rechargeable lithium batteries followed in the eighties, but failed due to safety concerns.

Lithium is the lightest of all metals, has the greatest electrochemical potential and provides the largest energy content. Rechargeable batteries using lithium metal as electrode are capable of providing both high voltage and excellent capacity, resulting in extraordinary energy density. After much research during the eighties, it was found that occasional shorts from lithium dendrites would cause thermal run-away. The cell temperature would quickly approach the melting temperature of the lithium which resulted in violent reactions. A large quantity of rechargeable lithium batteries sent to Japan had been recalled in 1991 after a battery in cellular phone exploded and inflicted bums to a man's face.

Because of the inherent instability of lithium metal, especially during charging, research shifted to a non-

metallic lithium battery using lithium ions from chemicals such as Lithium-Cobalt Dioxide ($LiCoO_2$). Although slightly lower in energy density than with lithium metal, the Li-ion is safe, provided certain precautions are met when charging and discharging. In 1991, Sony commercialized the Li-ion and other manufacturers followed suit. Today, the Li-ion is the fastest growing battery chemistry in the world.

Charging the Li-ion battery

The Li-ion charger is a voltage-limiting device similar to that of the Valve Regulated Lead Acid (VRLA) charger. The main differences of the Li-ion charger are higher voltage per cell, tighter voltage tolerance and the absence of trickle or float charge at full charge. Whereas the VRLA offers some flexibility in terms of voltage cutoff, the manufacturer of Li-ion cells is very strict about the voltage choice. The voltage threshold of the Li-ion with the graphite electrode is 4.10 V whereas the coke electrode and spinel is set to 4.20 V. The tolerance of +/- 0.05 volts per cell.

Since higher voltage thresholds provide increased capacity, it is in the manufacturer's best interest to choose the highest voltage threshold possible without affecting safety and compromising service life. However, the higher the charge voltage, the greater cell corrosion. To minimize deterioration by corrosion, the charge current is cut off once the battery has reached full charge. Correct voltage setting should be observed when servicing Li-ion batteries on a battery analyzer. This task may be difficult because most battery manufacturers do not specify which version Li-ion is used. If the voltages are set incorrectly, the graphite cell will be slightly overcharged if allowed to reach 4.2V. Likewise, a coke cell will yield lower capacity when discharged to only 3.OV instead of 2.5V. At moderate temperature, little damage occurs when occasionally charging to a higher voltage threshold, but repeated overcharging will hasten corrosion and shorten service life.

Protection Circuit

Commercial Li-ion batteries contain several built-in protection devices. Typically, a fuse opens if the charge voltage of any cell reaches 4.30V or the cell temperature approaches 100 C (212 F). In addition, a pressure switch in each cell permanently interrupts the charge current if a certain pressure threshold is exceeded, and internal voltage control circuits cut off the battery at low and high voltage points. Some batteries feature a low voltage cutoff switch which permanently disconnects the pack if a cell goes below 2.5V. This precaution is done to prohibit a recharge if a battery has dwelled in an illegal voltage state. Charging such a battery could cause lithium metal formation because the electrochemical structure of the cell has been permanently altered.

Most manufactures do not sell the Li-ion cells by themselves but make them available in a battery pack, complete with protection circuit. This precautionary procedure is understandable when considering the danger of explosion and fire if the battery is charged and discharged beyond its safe limits.

A major concern arises if static electricity or a faulty charger manages to destroy the battery's protection circuit through the battery's contacts. Such damage often causes the solid-state switches to fuse to a permanent ON position. A battery with fused switches can no longer be used safely. If charged beyond safe voltage limits, the battery may heat up, then bulge and in some cases vent with flame. Shorting the battery can also be hazardous.

Conclusion

The Li-ion receives good grades in performance and reliability. Billions of dollars are invested in tooling for increased production. Delivery shortages are easing and prices are becoming more affordable. As a result, more portable equipment is being fitted with the Li-ion battery.

The Li-ion has found a strong market niche with portable devices requiring long run time. Because of the aging aspect, the Li-ion is most beneficial for applications with a hectic user pattern. Where the Li-ion falls short is on high current applications and operations that require a full discharge before recharge. Typical uses that fall into this category are power tools and heart defibrillators.

Another field where the Li-ion has proven less favorable is in applications that require only occasional use. On a laptop that is mostly powered by AC, for example, the Li-ion battery ages in time without being able to deliver the full benefit. For these applications, other battery types may serve better.

The Lithium polymer systems in development are struggling to meet and surpass the performance of the Li-ion battery. Limited cycle life and high internal

resistance are the main drawbacks of today's Lithium polymer. Once mass produced, the Lithium polymer is said to be lower priced than the Li-ion. In addition, the Lithium polymer can then be shaped into virtually any form. One day the battery may be part of the protective housing or serve as a soft carrying case. ❑
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Rumors of My Death...

Bob Wood, W7OAD, who operates the Communications Products store in Midvale, tells us he was surprised to hear from some of his customers that he was going out of business. It was news to him, and it became more puzzling as the same statement came from several customers. Bob isn't sure where the rumor started, but he assures us it is not true.

Not only is Bob not going out of business, he is planning expansion, both in space and product lines. He will be adding some of the better products for remote control of model aircraft to his existing offering of amateur radio products. Communications Products continues to be the only store in Utah carrying the major lines of amateur transceivers. ❑

Attention
UARC Jackets and Hats Now Available

Official Club apparel is now available through Joe Flurer, KD7EGY, owner of Custom Design Marketing.

Hats are available with the UARC logo for $10.65. If you add your call sign to the back of the hat, the price is $13.85. Jackets with the UARC logo on the back and your call sign on the front are $48.92. If you add a small UARC logo to the front, the price is $52.11. Golf shirts are also available with a small UARC logo on the front for $28.71. All of the above prices include sales tax.

You can order your apparel at club meetings or by contacting Custom Design Marketing, 6049 S. Highland Drive, 278-5258. REMEMBER... a portion of all sales goes back to the Club to support the repeaters. Wearing the apparel also helps promote the Club. You can reach Joe via e-mail at cdmdigitizing@earthlink.com ❑

December UARC Meeting

Photo: Ron Speirs, K7MYS

"The Three Wise Men": Glen Worthington, WA7X, Gordon Smith, K7HFV, and Clint Turner, KA7OEI.

The board elections were not really the main feature of the December meeting. The featured attraction was a panel of experienced hams who were be able to answer questions from the audience. Glen Worthington, WA7X, Gordon Smith, K7HFV, and Clint Turner, KA7OEI, discussed a broad range of subjects from antennas, grounding, transmission lines, SWR, and a variety of subjects thrown at them from the audience. Thanks Guys! ❑

Submission Schedule of Editorial Content for *The Microvolt*

The Microvolt editorial team has made a commitment to providing the club membership with a quality publication that will be in your hands prior to the meeting of the publication month. This means you should be able to count on being reminded of upcoming meetings and events before they happen - what a revolutionary concept! In order for this to happen we have to have two things: quality material submitted to the associate editor, Ted Cowan, KC7PM, and submitted prior to the deadlines listed below.

Meeting	Submission Deadline
Thu Jan 3	Tue Dec 11
Thu Feb 7	Tue Jan 15
Thu Mar 7	Wed Feb 13
Thu Apr 4	Tue Mar 12
Thu May 2	Wed Apr 10
Thu Jun 6	Tue May 14

This schedule will be revised and published in subsequent issues of *The Microvolt*. We sincerely hope that this will help those who wish to make

submissions make our deadlines - I know our spouses and families will appreciate having a bit of sanity in the home.

Thanks for your understanding.

The Microvolt Editorial Team - Bruce -KI7OM., Ted KC7PM, and Bruce, KJ7HZ ❑

January Meeting: New York After 9-11

UARC's first meeting of the new year will take place on Thursday, January 3, 2002. The program will give us an unusual opportunity: to hear from someone involved in the New York cleanup after the September 11 attack. Joel Neal, KC7UBP, Coordinator for Salt Lake County, had the opportunity to go to New York and assist. At the meeting, Joel will be presenting stories and pictures from his trip. This program promises to give us insight into the realities of emergency communications.

The meeting will be at 7:30 P.M., at the Infinia Medical Center, 1255 E. 3900 South.

- 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;
- 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.

Gordon - K7HFV ❑

Examination Schedule for January

01/09/02 (Wed.) Mantua
Contact: Jim Jones, KJ7VO
Phone: (435) 723-1947

01/16/02 (Wed.) Provo
Contact: Steve Whitehead, NV7V
Phone: 465-3983

01/29/02* (Tues.) Salt Lake City
Contact: Eugene McWherter, N7OVT
Phone: 484-6355

02/02/02 (Sat.) Salt Lake City
Contact: Gordon Smith, K7HFV
Phone (H) 582-2438 (B) 534-8116

*Only Technician elements (1A, 2, and 3A) given at this session.

For more detail either call the contact or checkout the information on our webpage
http://www.xmission.com/~uarc ❑

Good Instructions

Anyone who has bought a complicated transceiver in the last few years is well aware of how important a good instruction manual is. Clint Turner, KA7OEI, was surprised at the quality of the instructions he recently received with a dual-tube rechargeable fluorescent lantern. Here is what they said:

CAUTIONS

1.You must charge current 5 hours before using it.

2.When you use the function of searchlight, you find out the tube is in poor light obviously. Turn the tube off and charge current not less than 20 hours within 48 hours or it will damage the tubes and battery.

3.If you haven't used it for a long time, charge it not less than 5 hours every 2 months. It is good for prolonging the using life of the battery and prevent it from shriveling and losing efficacy.

4.You must place the lamp upward and mustn't put it downward when you charge it. Otherwise the liquid will overflow. The liquid of the built-in battery will damage the circuit board.

5.First turn on one tube then the other when you use the double tubes for searching. It can prevent voltage of battery is not enough and make the tube start too long or it doesn't work from damaging the tubes. ❑