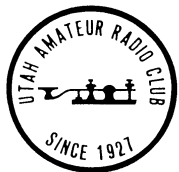


Ron Speirs, KC7MYS

Aubrey Stewart, W6ODG, and the Amazing Kachina 505 DSP at the September Meeting

Volume XLIV Issue 11, December 2000



The MICROVOLT

Periodicals Postage Paid

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U.A.R.C.

c/o Gregg Smith

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 St. 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

UARC 2000 Board

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 Bonneville 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 dues to the Club Secretary: Gregg Smith, KD7APW, 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 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 (wmgooch@concentric.net), but other means including diskettes and typewritten submissions can be mailed directly to: Manford Gooch, 6344 S. Shenandoah Park Ave., Holladay, 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, 84084-3942.□

President: Maurine Streckenfinger, K7HOZ	254-1536
Exec VP: Alan Seyboldt, N7OI	572-8112
Vice Pres: Gordon Smith, K7HFV	582-2438
Secretary: Gregg Smith, KD7APW	255-0344
Treasurer: Chuck Johnson, WA7JOS	268-0153
<i>Microvolt</i> Editor: Manford Gooch, AB7PM	272-7380
Asst. <i>Microvolt</i> Editor: Bruce Leonard, KJ7HZ	576-9162
Program Chair: Dick Abbott, K7MZ	943-0370
Program Chair Darryl Hazelgren, AF7O	942-3817
Imm. Past Pres: Gary Openshaw, KC7AWU	484-3407

Committee Chairpersons and Members

"Book Lady": Fred Desmet, KI7KM	485-9245
Historian: Ron Speirs, KC7MYS	968-4614
Field Day Chair: Open	

Repeater Committee

Trustee: Tom Schaefer, NY4I	501-0899
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: Allen Wright, N7QFI	268-8482

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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:

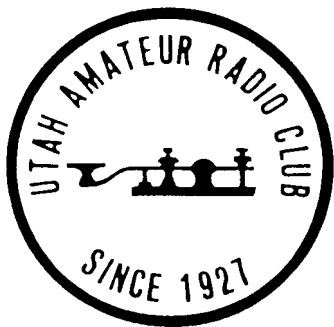
www.xmission.com/~uarc/announce.html □

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The Microvolt

The Official Publication of the Utah Amateur Radio Club, Salt Lake City, Utah

Volume XLIV, Issue 11, December 2000



QST FROM THE PREZ

I have enjoyed this year so much and it has every thing to do with all of you, the members of UARC. I want to thank each and every one of you, this has truly been a wonderful experience. I especially would like at this time to thank the Board that has served with me this year, they have worked so hard to make this a great year.

Alan Seyboldt, our Executive Vice President has been a good friend and has worked hard for the Club, especially toward making Field Day a great success. Thank you, Alan.

Gordon, what would we do without Gordon? For years he has worked to strengthen and improve UARC. He has headed up to the repeaters countless times, headed our test sessions for I don't know how many years, and so many other things as well. Thank you, Gordon.

Gregg Smith has a very big responsibility. The job of Secretary is extremely time consuming, and he manages to do it all with a smile. He has

become a very good friend. Gregg, Thank you.

Chuck is our Treasurer. That is also a lot of work. I have served with him for several years now and have come to have great respect and admiration for him, and I also consider him a good friend. Thank you, Chuck.

Most of you have never met Manford Gooch, our *Microvolt* Editor. He travels so much that he is unable to make the meetings. Last year we asked so many people if they might be willing to take on this job, which is huge, and Manford was the only one who agreed. He knew nothing about desk top publishing, but learned by spending many all night sessions at the computer. I wish all of you could meet him, you would be very impressed. Manford, thank you. You are a class act.

Bruce Leonard is our Assistant *Microvolt* Editor, and every month he is right there as soon as the *Microvolt* is printed and gets it right to the Post Office after sticking on over 500 labels, and stacking and bagging them. I had that job for 3 years so I can understand what is involved. I love your attitude Bruce. Thank you. You are a good friend.

Our two Program Chairmen, Dick Abbott and Darryl Hazelgren, have done an outstanding job this year. They have brought us some of the most interesting meetings I have been to... and Field Day ! Dick was Field Day Chairman, and it became the best ever. I have never had such fun (we also took 7th place in the 6A). Dick and Darryl, thank you just doesn't seem enough.

Also, I can't leave out Linda Reeder for being in charge of the Ham Hotline. She is such a hard worker and always can be counted on to do a

great job. Ron Spiers, our Historian, takes pictures, keeps minutes, and is always there to help. Fred Desmet, our book lady is like the Everready battery, he just keeps going, and going and going. He is also a great salesman, as you well know if you have tried to walk past the book table without buying a book. Thanks Fred. There are so many others that have made this year a success that it would take the entire newsletter to name them all.

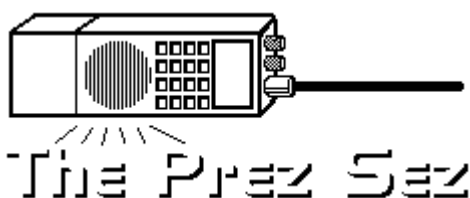
I have waited until last to come to Gary Openshaw, our past President. I can't even begin to say what he has done for me. Gary has been there every step of the way this year. He has worked so hard to make me look good. I have leaned on him so many times. Gary, my friend, Thank you !!

I am looking forward to the next Board. I am sure they will be terrific. I like to see new ideas, and our new Board, whoever they may be will have plenty of them, I'm sure.

Once again, THANK YOU everyone, it has been a great ride.

See you at the meeting,

73', Maurine ☐



Featured Member of the Month

This month we are featuring Dick Abbott K7MZ. Dick has been in amateur radio for 15 years. Before he got into the hobby, he bought a CB handy talkie to take with him when he went to St. George in case the car broke down, but no one would answer him. He thought it might be his antenna. He got another antenna, and then he got involved in single sideband.

Ray Pettersen, Ka7RJM, told Dick about

UARC, and he started attending the club meetings. Dick received his Novice class license in April 1985, his General in June of 1985, his Advanced in February 1986, and his Extra in June 1988.

His favorite facet of amateur radio is DXing and contesting. He likes to talk to people from foreign countries. He also likes to contact people who are on DXpeditions. Dick is also involved in emergency communications. He is a member of ARES and RACES. He is also a member of UARC and is one of the Program Chairpersons.



Dick Abbott, K7MZ

Dick was Field Day Chairperson this year. He had six stations: two beginner stations, two intermediate stations, and two advanced stations. This was great. It got everyone involved in getting on the air. Dick says that there should be a different Field Day Chairperson every year. This would give a variety of people an opportunity to learn how to put up a station and take it down when a real emergency arises. More people would then be available to assist in an emergency.

Dick says he wishes he had more time to learn more technical things, but his job and family keep him busy. Dick and his wife Anita have two boys, and he works for the State Fair where he is the comptroller. He is in charge of making sure all of the machines are up and running, and he also does the accounting. During the fair he puts in 16 hours a day.

Dick, you did an excellent job as chairman

for Field Day, and you and Daryl Hazelgren, AF7O, have done a great job as Program Chairpersons. Thanks for your hard work.

73,
Linda Reeder, N7HVF

December Meeting

Joel Neal, KC7UBP, Emergency Coordinator for Salt Lake County, will be telling us about the Amateur Radio Emergency Service, ARES, at the Utah Amateur Radio Club meeting to be held Thursday, December 7, at 7:30 P.M. The meeting will also feature elections for 2001 officers.

Providing emergency communications is one of the Amateur Service's mandates in the "Basis and Purpose" section of our rules. Amateurs have a long history of stepping in when normal communications are disrupted. But we are most effective when we are prepared -- when we have readied our equipment and practiced our procedures. ARES is the organization that helps us do that. Come and learn how you can participate and be the most help to your community if the need arises.

The December meeting is also the time we decide the future of our club for the coming year, through election of officers. At least one candidate for each office is now nominated. Some came from the nominating committee and some nominations were made from the floor at the November meeting. At the December meeting nominations from the floor will again be opened before the vote for each office. This means there is still time to nominate someone (or volunteer) if you don't like all the candidates that are nominated, or if you simply know someone who could do a good job in one of the officer positions.

Here are those people currently nominated:

President: Dick Abbott, K7MZ
Executive Vice-President: Dave Player, KC7NGH
Vice-President: Gordon Smith, K7HFV

Secretary: Gregg Smith, KD7APW
Treasurer: Chuck Johnson, WA7JOS
Program Chairpersons:
Linda Reeder, N7HVF
Ron Speirs, KC7MYS
Microvolt Editor: Tom Schaefer, NY4I
Assistant Editor: Bruce Leonard, KJ7HZ

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 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.

Thursday, December 7, 7:30 P.M. Don't miss it! Check page 2 of this issue or the Club web page for more place and time information.□

Stocking Stuffers, Etc.

[The following advertisement, explaining some of the hyperbolic prose, was received from ARRL and is presented for the information of our readers. Many of the following items may be available through the Book Lady at the December meeting, thereby saving "shipping and handling", etc. Ed.]

ARRL's new Amateur Radio Lanyards. They're great for showing off call sign badges or volunteer credentials! Only \$2.95 each plus shipping.
<http://www.arrl.org/catalog/?item=LNVD>

New Editions:
ARRL Handbook CD-ROM--2001
Passport to World Band Radio--2001
Call Book CD-ROM--2001

Stocking Stuffers:
ID Badge Lanyard
License Plate Frame

Calendars
History of Collins Amateur Radio
Equipment
MINILOG
ARRL Repeater Directory

WHAT'S NEW!

* ARRL Handbook CD-ROM

Includes the complete text, photos and illustrations of the 2001 edition ARRL Handbook. Explanations of radio and electronic theory, along with an array of useful projects and references. Written and edited by hams, for hams!

QUICK ORDER

<http://www.arrl.org/catalog/?item=1883>

* Passport to World Band Radio

New 2001 edition includes listings for shortwave programs, from BBC news reporting to the musical heights of the Andes. What's on. What to buy. How to get started. Includes Passport's Blue Pages for 2001a channel-by-channel guide to World Band Schedules. Published by International Broadcasting Services, Ltd.

QUICK ORDER

<http://www.arrl.org/catalog/?item=PWB1>

* Radio Amateur Call Book CD-ROM

New Winter 2001 edition with fully updated listings for over 1,600,000 hams. Find listings quickly by name, call sign, and location.

QUICK ORDER

<http://www.arrl.org/catalog/?item=FHC1>

ARRL STOCKING STUFFERS!

In the spirit of the holiday season...here are some gift ideas that will bring a smile to every ham!

* ID Badge Lanyard

Stand out in a crowd with this brightly colored "Amateur Radio" lanyard, with badge clip

QUICK ORDER

<http://www.arrl.org/catalog/?item=LNVD>

* License Plate Frame

Frame your automobile license plate with your support for Amateur Radio!

QUICK ORDER

[Http://www.arrl.org/catalog/?item=7989](http://www.arrl.org/catalog/?item=7989)

* Calendars

Hang one up in your shack! 15-month (2001/2002) calendars depict notable contests, phases of the moon (and perigees/apogees), meteor showers, and holidays.

Published by CQ in two styles:

Amateur Radio Calendar -

<http://www.arrl.org/catalog/?item=CAR1>

Radio Classics Calendar (gear) -

<http://www.arrl.org/catalog/?item=CRC1>

* A Pictorial History of Collins Amateur Radio Equipment

The most complete history of Collins equipment, told with hundreds of photos. A beautiful gift book!

QUICK ORDER

[Http://www.arrl.org/catalog/?item=7830](http://www.arrl.org/catalog/?item=7830)

* MINILOG

Pocket-size logbook meets the needs for compactness and convenience. Great for mobile and portable stations.

QUICK ORDER

[Http://www.arrl.org/catalog/?item=7539](http://www.arrl.org/catalog/?item=7539)

* ARRL Repeater Directory 2000-2001 edition.

The latest source for VHF/UHF repeater listings. Pocket-sized and ready to go wherever you go!

QUICK ORDER

<http://www.arrl.org/catalog/?item=7911>

Visit the ARRL Online Store for more publications and gift ideas.
<http://www.arrl.org/shop>

TO ORDER:

Phone toll-free 1-888-277-5289 (US) Monday through Friday from 8 AM to 8 PM Eastern time. [Outside US telephone (860) 594-0355].

QUICK ORDER via the ARRL Web
<http://www.arrl.org/catalog>

ARRL

2001 UARC Board Nominees

[Consistent with the practice of the previous editor, the official language of the Club's bylaws are included in the following presentation. The descriptions come from Section I of the bylaws. Section II is also informative and is presented in full:]

Section II.

The Board of Directors shall be the governing body of the Club and as such shall formulate and be responsible for all matters of policy. It shall review all reports of conduct unbecoming a member of the Club and, if sustained, submit the matter to the body of the Club at a regular meeting. In the event of the inability of the President of the preceding year to serve as a member of the Board of Directors, the Executive Vice-President of the preceding year will fill the vacancy. Decisions of the Board of Directors shall be reached upon majority vote; thereupon the President shall execute the decisions so made or the policies so formed.

The Board of Directors shall actually meet in regular or special meeting in order to transact business. The newly elected Board of Directors shall take office immediately following the election meeting. The new President shall call a regular organizational meeting of old and new officers within ten days of the election meeting. The Board of Directors shall normally meet in regular meeting, duly called, once each month.

President:

D) President: The President shall be the administrative head of the Club; shall preside at all meetings; and shall conduct same according to the rules adopted. The President shall enforce due observance of the Articles of Incorporation, and its Bylaws; decide all questions of order; The President alone shall sign all official documents that are adopted by the Club; and shall act as its spokesman and representative at meetings with other organizations and committees unless some other member is delegated so to act in any instance by him/her or the Board of Directors. A pronouncement shall not obligate or commit this Club unless this obligation or commitment has

been specifically authorized by the Board of Directors. The President shall perform all other customary duties pertaining to the office of President. All candidates for the office of President shall have held membership in the Club continuously for at least one year immediately prior to the election date. For election eligibility purposes, membership is considered continuous if it contains only one lapse not exceeding ninety days.

Dick Abbott K7MZ



Dick was born in Salt Lake City, but spent many of his early years traveling with his mother and father while his father was in the Army. After his father went overseas during World War II, the family moved back to Salt Lake City, where Dick spent most of his childhood.

After completing a two-and-one-half year mission to Mexico, Dick returned to Salt Lake City and graduated from the University of Utah in 1966 with a B.A. In Business Management. He continued on to receive a Masters Degree in Business Administration in 1967. After working in industry for about ten years he returned to get a B.A. in accounting. He has worked for businesses in Phoenix and Salt Lake City. He is a CPA and spent nearly five years in a public accounting firm. He is currently the Chief Financial Officer for the Utah State Fairpark where he has been for the last five years.

Dick has been married for 30 years and has two sons, one living in Virginia and another son who is on a mission in the San Francisco area.

Dick had a 33 year stint with the U.S. Army reserve from the time he enlisted as a private until he retired as a full colonel in 1997. He served as a Medical Group Commander and the Chief of Staff for the

426th Medical Brigade.

He started his interest in Ham Radio in 1985 as a Novice and received his Extra Class license in 1988. He enjoys Field Day (even after the 6A event), DXing, and contesting. He has served the club as Executive Vice-President, Program Co-Chairman, and Field Day Chairman.

Dick would like to continue with interesting meetings, promote integration of new members into Club activities and projects. He wants to continue the "Elmer Hour", and promote an increased interest in the technical aspects of the Hobby.

Executive Vice-President:

E) Executive Vice-President: The Executive Vice-President shall possess all the powers and assume all the duties of President in the event of absence, disability, refusal, or failure to act, of the President. The Executive Vice-President shall, further, assist the President in all functions of that Office; and shall perform such other duties as are properly assigned to hem/her by the Board of Directors.

Dave Player KC7NGH



I first became interested in ham radio when I was a teenager but didn't do anything about it until I was in my late forties. I became licensed on October 3, 1995 and also became a member of UARC that same day.

I've been involved in the building of the Club station, Field Day activities (running the talk-in station for the past four years), communications at special events and various other Club functions.

8

The Club has introduced me to many facets of ham radio and also has contributed to the forming of many good friendships through the years.

I feel the need to pay back the membership in some way and accepting the responsibilities of an officer of the Club is the best way I can think of to do this. If elected Executive Vice-President, I will do my best to benefit the Club and assist the other Board members in any way I can.

Vice-President:

F) Vice-President: The Vice-President shall possess all the powers and perform all the duties of the President in the event of the absence, disability, refusal, or failure to act, of the President and the Executive Vice-President. The Vice-President shall act as Liaison Officer as required and act as Chairman of the Bylaws Committee. The Vice-President shall perform such other duties as are properly assigned by the Board of Directors.

Gordon Smith K7HFV

No Individual Photo Available at Press Time

I was first licensed almost 40 years ago as a teenager, and ham radio continues to be my favorite hobby. I joined UARC in the early 1960s and had become Microvolt editor by 1963. After something over 15 years in that position, the other officers started looking for positions that might keep me occupied but in which I couldn't do as much damage. At various times I have been Assistant Editor and Vice-President. I seem to remember being President one year which is odd, because I can't ever remember agreeing to run for that office.

The two Vice-President positions are officially the line of succession in case the President dies, resigns, moves away, or just refuses to perform his duties. Since most of our presidents have been healthy and quite capable of doing the job, the reality has usually been a little different. In practice, the vice-presidents take on some of the jobs that aren't explicitly given to another officer. For my part, I have been running the series of UARC-sponsored exam sessions since ARRL-coordinated exams became possible in the early 1980s. We offer tests on the first Saturday of each month for all classes of amateur license. We pioneered (in Utah, at least) the notion of giving the code tests through headphones (to eliminate room echoes), and regenerating the code on a local, sine wave, soft-keyed oscillator, to eliminate tape print-through and allow a choice of pitches. If elected, I hope to continue that series, and to continue contributing to the Club's web site and to the The Microvolt.

Secretary:

G) Secretary: The Secretary shall keep an accurate record of all official meetings of the Club, which may be read upon request. The Secretary shall keep a copy of the Articles of Incorporation and Bylaws present at all times; shall keep these in good order; shall effect all changes and additions in same; shall permit same to be consulted by members upon request. The Secretary shall be responsible for safe keeping of the Articles of Incorporation and the Bylaws. The Secretary shall keep a roll of all members, and the current status of these members; shall keep a roll of members present at meetings; and shall accept all applications for membership; shall carry on all necessary correspondence for the Club; shall read all communications.

Gregg Smith KD7APW

**No Individual Photo Available
at Press Time**

I have had an interest in Ham Radio for many years. In 1998 I finally studied and obtained my license. The aspects of this hobby that I enjoy are the friends and associates I have met, the projects I have built, the security of knowing there are Hams inside my radio who will always help in case of an emergency. I have enjoyed serving as the Club Secretary during the year 2000. A special thanks to my Dad, Roy, K7YPG, for introducing me to Ham Radio and to my son Jordan, KD7COO, who assists me at the meetings. PS. ****SEND IN THOSE CLUB DUES****

Treasurer:

H) Treasurer: The Treasurer shall keep an accurate and current record of all monies received and disbursed by the Club; shall read all bills; shall receipt for all bills paid and monies received. The Treasurer shall pay no bill without the approval of the Board of Directors; shall submit at the end of each quarter an itemized statement of all receipts and disbursements. The Treasurer shall deposit all monies received in the bank approved by the Board of Directors. The Treasurer shall be the Property Officer and have custody of, and safeguard, keep in good order; and report who is in possession of Club property when the final statements are presented. At the expiration of the Treasurer's term all the property and records belonging to the Club will be turned over to the new Treasurer.

Chuck Johnson WA7JOS

**No Individual Photo Available
at Press Time**

I have been pleased to serve as the Treasurer of UARC for the past several years. During those years, I have restructured the licensing system, invented the Internet, reinvented

government, reformed the health care system, revitalized Social Security, and brought economic prosperity to Hams everywhere. If you re-elect me to another term, I promise two Icoms in every pocket, and two Kenwoods in every garage.

All the way with CLJ!

Program Chairpersons:

1) Program Chairpersons, under the direction of the Board of Directors, shall be responsible for the presentation of the technical program features of the meeting; they shall endeavor to promote generally increased knowledge of the radio technique among its members; they shall organize Club member activities, plan and recommend contests for the operating benefit, and advance Club interest and activity as approved by the Club. They may call upon any member to assist them in their various projects.

Linda Reeder N7HVF



I have been in amateur radio since 1985. It was the engineers at KSL who got me into the hobby. I have my Extra class license. I am a member of UARC, and I have been chairperson before. If any of you has ideas on who you would like to have as guest speakers at our meetings please let me know. Remember it is your Club. I can be reached at 364-7006, or work number 468-2750 or the Ham Hotline 583-3002. You can also email me at n7hvf@arrl.net

I am the Ham Hotline Lady -- the one people talk to when they call the Ham Hotline with questions about amateur radio. I am also a member of the VHF Society, Handihams, the YLRL and the YL systems. I play the Newsline for the UARC Information Net on Sunday evenings. I also write

the Featured Member of the Month column for the *Microvolt*.

I really enjoy this hobby, and I love to help out in any way I can.

73,
Linda Reeder, N7HVF.

Ron Speirs KC7MYS

No Individual Photo Available at Press Time

I was interested in amateur radio when I was younger, but I did not know how to get into the hobby. In 1995, my son Daland, KC7LNR, got his license, and I felt that I ought to get mine too. My Tech license was received in August, 1995. I have enjoyed participating in Field Day, Club meetings and projects. Recently I have been acting as Historian for the Club. My current amateur interests are satellite, repeater, HF, packet, and I plan to get set up soon for PSK31.

I graduated from the University of Utah in Electrical Engineering, and I am currently working for GE, OEC Medical Systems. My other interests are photography, music, electronics, and skiing.

Microvolt Editor:

J) Editor: The Editor shall carry out all duties pertaining to, and be responsible for, the maintenance and the publication of THE MICROVOLT, the official paper of the Club. The frequency of the publication shall be determined by the Board of Directors in accordance with U.S. Postal regulations. The date of mailing should be at least one week prior to each general meeting. The Editor shall mail

all notices of meetings, shall carry on all correspondence necessary to the office; shall maintain a mailing list. The Editor shall submit monthly bills for the maintenance and publication of the Club paper, and shall be reimbursed for the expenses in connection therewith.

Tom Schaefer NY4I

No Individual Photo Available at Press Time

As a past President of UARC, I have been very active in the Club for the past four years. I have extensive writing and computer skills which qualify me to produce the *Microvolt*. In fact, I created the January 2000 issue of the *Microvolt*.

I also am active in maintaining the UARC web site which helps in producing articles for the printed version of the *Microvolt*. I would appreciate the opportunity to serve the Club in producing this fine publication.

Best Regards,

Tom Schaefer
801-736-2062
Principal Applications Engineer
Salt Lake City

Assistant Editor:

K) Assistant Editor: The Assistant Editor shall assist the Editor in maintaining and publishing the official Club paper and perform such other duties as properly assigned him/her by the Board of Directors. The Assistant Editor shall assume all duties of the Editor in event of the Editor's absence, disability, refusal, or failure to act.

Bruce Leonard KJ7HZ

No Individual Photo Available at Press Time

Hello, I'm Bruce Leonard, KJ7HZ, and I'm running for Assistant *Microvolt* Editor again because I really like the job. I enjoy helping out the Club when I get the chance. During the past year I've gotten quite adept at dealing with the Post Office so it would very easy for me to continue in this position - hi hi. I've been a Ham since 1994, and I still enjoy the hobby. This past year's board has been a great bunch of people, and I look forward to working with a new set of people again in the coming year.

73,
KJ7HZ□

Limited AO-40 Use Possible in Near Future

(November 24, 2000) AMSAT-NA President Robin Haighton, VE3FRH, says plans are in place to make AO-40 available for a limited period of general amateur use "possibly within a week or two." Launched November 16, the next-generation Amateur Radio satellite formerly known as Phase 3D remains for now in a geostationary transfer orbit while initial housekeeping and checkout procedures are under way. The satellite's final high elliptical orbit will not be established for another nine months.

Just when and how the "limited operation" will occur is up to the ground controllers, Haighton said. The provisional operation would involve "one or two bands at a time," he said. Since the satellite's solar panels will not be deployed until AO-40 is in its final orbit, full power will not be available.

Details of the limited test period will be announced via AMSAT bulletins and via the AO-40 telemetry beacon on 2 meters, which also is transmitting text messages. (For more information on receiving AO-40 telemetry, visit the AMSAT-NA "AO-40 Telemetry" page,

<http://www.amsat.org/amsat/sats/ao40/ao40-tlm.html>.)

In a bulletin released Monday, AMSAT stressed that the Phase 3D/AO-40 controllers were closely monitoring the power budget and the satellite's current orbital parameters. "These two areas will be among the most important factors that determine what happens with P3D in the near future," the AMSAT bulletin said.

From all indications, most AO-40 systems are working properly at this point, with the possible exception of the 70-cm transmitter. According to a status report from Phase 3D Project Manager Karl Meinzer, DJ4ZC, "a problem with the 70 cm transmitter" led controllers to shift the telemetry downlink from 70 cm to 2 meters (145.898 MHz). Meinzer said AO-40's two 2.4 GHz transmitters were operated and are okay.

Haughton said the most likely configurations for the limited test period would be Mode U/V (Mode B)--70 cm up and 2 meters down--and Mode L/S--1.2 GHz up and 2.4 GHz down, SSB and CW.

AMSAT says there's still a lot of work to do until AO-40 will be fully ready for general Amateur Radio use. AO-40's geostationary transfer orbit puts it some 500 km from Earth at its nearest point, and 35,000 km at the farthest. AMSAT says that AO-40's attitude is being changed to prepare for the first motor burn. Meinzer's report says the 400-Newton motor will be used to put AO-40 into a 50,000 km apogee. The first orbital maneuver should be completed in a few days. Other orbital adjustments will follow over the next 270 days.

AO-40's solar panels will not be deployed until the satellite is in its final orbital configuration. Once that happens, the satellite should become available for full Amateur Radio use.

ARRL Newsletter □

UARC Jackets and Hats

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 □

Board To Consider Morse Code Policy Review

The ARRL Board of Directors will review the League's position on the Morse code as an international licensing requirement when it gathers for its annual meeting in January. Because the issue is expected to come up at the IARU Region 2 Conference next October, the ARRL Executive Committee decided at its November 11 meeting in Irving, Texas, to place the issue on the Board's January agenda.

The ARRL's Morse policy was formalized by Board resolution in 1993. It supports the retention in the International Radio Regulations of the provision obliging administrations to require that applicants demonstrate ability to send and receive Morse code before they may operate below 30 MHz. Consistent with that policy, ARRL International Affairs Vice President Rod Stafford, W6ROD, cast the lone dissenting vote earlier this year at the IARU Region 3 Conference in Australia on a motion calling for the eventual elimination of Morse as an ITU requirement for HF operation.

In January, the Board may decide to reaffirm this policy, to modify it, or to seek additional input from members. In the past, a majority of members has supported the policy.

ARRL Newsletter □

Intermountain Area Amateur Radio Organizations

Amateur Radio Explorer Post 1973, Utah

National Parks Council, is a coed Explorer Scout post open to all young men and women ages 14-20. The post is supported by a committee of hams over the age of 21. The post meets on the third Wednesday of each month at 7:00 at the UVSC Provo campus, and holds a net on its own repeater, 145.470- (PL 100), 8:30 PM, the first Wednesday of each month. Post members provide communications for various parades and Boy Scout functions and participate in other ham groups. Contact person is Post President Greg Card, KC7TWN, Committee Chairman John Hamner, KB7YOY, or Advisor Terry Gardner N7QGA, 785-7517, terrygardner@hotmail.com Post home page is www.n7bsa.org.

Borderline Amateur Radio Club (BARC) based in the Uintah Basin operates repeaters located in North Eastern Utah. The club repeaters are Blue Mtn. 147.100 (wide coverage), Grizzly Mtn. 147.040 (linked full time with the SDARC repeaters), and the Duchesne rpt. 147.260. Other local repeaters are the Tabby Mtn. 147.240 (wide coverage linked with 147.140 machine covering the Wastach front), Roosevelt rpt. 145.490 (linked full time with the SDARC repeaters), and Blue Mtn. 449.950 (pl 136.5). All VHF repeaters follow the state band plan and are pl toned for 136.5. The club holds a weekly net on Monday evenings 2100 hr. (Mtn. time) on the 147.100 rpt. Contact person - Jay Hansen / K A 7 B P B e m a i l ka7bpb@ubtanet.com. Club home page can be found at <http://ecso.com/barc/>.

BARC or The Bridgerland Amateur Radio Club Monthly club meetings are held each second Thursday of the month at 7:30pm at the Hyde Park City offices building, 113 E. Center St., Hyde Park (except June, July and August). They hold a net at 9:00 PM on the 146.72 repeater on Mt. Logan (hard linked to 147.26 on Promontory) every Tuesday. Their contact person is Tyler Griffiths, N7UWX at (435)752-7269.. Postal mail address for the club is: BARC, P.O. Box 111, Providence, UT 84332. WebPageURL is <http://www.w7ivm.org/>

BYUARC (Brigham Young University Amateur Radio Club) is open to all alumni, faculty, staff and student of BYU. The club maintains the 145.33(-) repeater that has a closed autopatch (members only). The dues of \$15.00 cover Autopatch usage for a whole year. The club also has a shack with a variety of equipment. Members have the

opportunity to provide emergency communications for the campus. Meetings are held the first Thursday of each month, and the location varies. The information line for the club is (801)378-COAX, or you can contact the president Alan Pippin, KC7YIZ, kc7yiz@byu.edu. Club webpage URL is: <http://byuarc.clubs.byu.edu/>

The Cache/Box Elder Volunteer Examiner Team headed by Niko, AA7OL offer ARRL VEC exam sessions in Mantua (between Brigham City and Logan) every second Wednesday 7:00 PM (Local Time). The team maintains a website at <http://www.geocities.com/aa7ol> and can be reached by phone at 435-512-5919 (Niko) or 435-723-1947 (Jim).

Colorado Connection Repeaters, Inc. The Colorado Connection, is a unique statewide two meter linked FM radio system with additional coverage into adjacent states including eastern Utah. The Colorado Connection is not a club with dues and membership, instead it is an organization of volunteers funded thru donations. Currently the repeater system provides coverage to about 80-90% of the state's population and about 50-60% of the area. More information can be obtained on their excellent webpage at <http://www.colcon.org/index.html>.

The Davis County ARES conducts a Net each Thursday night at 7:00 P.M. on 147.42 simplex.

DCARC (The Davis County Amateur Radio Club) meets the 2nd Saturday of each month at 10:00 A.M. The Davis Club operates the 147.04 and the 449.925 (normally cross-banded to 147.42 simplex) repeaters. For further information please contact President: Bob Craven, N7GTE, 298-7477. The Club WebpageURL is <http://www.dcarc.net>

Dixie Amateur Radio Club (DARC) meets every third Wednesday in the basement of the Washington County Administration Building, in St. George, UT. Sunday Night Net 7 PM local time on 146.910 with an alternate frequency of: 145.450. Contact Person; President Bob Palambo K9ZWH P.O. Box 422 Santa Clara, UT 84765. E-mail, palambo@infowest.com Club Wepage: <http://www.infowest.com/DixieSun/suar/index.html>

Eagle Rock Amateur Radio Club Idaho Falls,

Idaho operates the 146.640 and 146.740 repeaters. Club meetings are held the 1st Wednesday of each month in Room 22 of the John Sessions Building on the Eastern Idaho Technical College at 7:30 P.M.. A net is held every Tuesday night 9PM MST on the 146.640 MHz Repeater. Contact person is club president, Chuck Olsen, N7PME, phone (208) 523-7948, email hamradio@ida.net. Club Webpage is <http://www.ida.net/org/hamradio/>

Emergency Response Radio System (LDS Church Welfare Square Station KD7DUB). Utah Area North, Emergency Response Radio System Net is held each Thursday at 2100 Hrs local 0300 UTC on the 145.45 Mhz Repeater System. Contact person is David R Haag, KC7PVD, ERRS Communications Board, Welfare Square, email kc7pvd@erda.net.

The Elko Amateur Radio Club (Nevada) holds its monthly meeting the fourth Saturday, 10:30 Pacific, at 557 W. Silver St., Suite 202, Elko.. They conduct a weekly net on Wednesday at 19:30 Pacific on the 449.75 (down 5 mhz) in the Elko area and 146.91 in the Battle Mountain area.. Contact person for the club is Bill Hance, KD7CWA, phone (775) 777-3344, Email bhance@rabbitbrush.com. Email for club business is ki6v@sierra.net Club Webpage URL is <http://www.expaga.com/page/earc>.

The Evans & Sutherland Radio Club is currently inactive. The club callsign is KC7LCX. Trustee and President is Alan Brubaker, KO7X. For more information contact Alan Brubaker at 600 Komas Drive, Salt Lake City, telephone (801)588-7212 or email alan@es.com.

Grand Mesa Repeater Association (Not to be confused with the Grand Mesa Repeater Users Group). <http://www.gmra.org> Operates the 449.300 Mhz (107.2 PL) on the Grand Mesa, (just east of Grand Junction) Public Open Machine. They support several other repeaters on the Grand Mesa; Abajo Peak, UT; Bald Mesa, UT; Baxter Pass, CO and operate as an affiliate of the Cactus Radio System (Private System). Gary Hanson, KB0SW, the president can be contacted at kb0sw@gmra.org

Grand Mesa Repeater Users Group, Grand Junction CO, operates repeaters located on the western slope of Colorado with coverage of west

central Colorado and eastern Utah. Repeater Frequencies are 145.145, 145.22, 146.82, 147.39 and 147.57 (simplex remote) that are linked together on a full time basis. 147.12 and 147.36 are linked part time from their end. Contact Person: Robert Kirner - N0MBJ Mail:3087 Bookcliff, Grand Junction, Co. 81504. Webpage URL is: <http://www.bewellnet.com/fgriffie/>

The High Valley Net from Heber City, which has in the past met every Monday at 9:00PM on the 147.18 repeater, is currently inactive. Their contact person is KB7RAC, Brian Menzel.

Idaho Society of Radio Amateurs has two chapters serving South Central Idaho: The Magic Valley Chapter and Mount Harrison Chapter. Magic Valley is a general purpose organization and Mt Harrison exists to support several repeaters including: 146.06 in Jerome, 146.16 in Twin Falls, and 146.16, 449.20, on Mt Harrison near Burley. They also support the ATV Repeater on Mt Harrison with a 434 Mhz Uplink and 1253.125 MHz Downlink. Contact person for the Magic Valley Chapter is W15E, Joe Herring Twin Falls (208)736-7027. The club's monthly meeting is 7:00 PM the 2nd Wednesday in Shields Building, Room 102, College of Southern Idaho in Twin Falls. ISRA has a Webpage with links to both chapters at www.ltlink.com/~wb7cyo.

IREAN or Intermountain Repeater Emergency Amateur Network based in Salt Lake City, Utah is a collection of 222 MHz repeaters spread across the state. It is an open 222 Mhz linked repeater system for amateurs of all license classes. The IREAN system also provides open autopatches, frequency-agile remote bases, voice messaging and telemetry of weather and site conditions. Contact person is Bruce Larner WB6CDN, Riverton, 801-278-3516. IREAN maintains the following repeaters Riverside 223.9, Little Mountain 224.5, Kaysville Peak 224.0, and Ensign Peak 224.82 and a link to the SINBAD system. Monday and Tuesday at 19:55 scheduled announcements are made immediately prior to the Mt Harrison and Utah VHF Society Nets respectively. The organizations webpage URL is: <http://www.asd-webtec.com/irean/>.

JARS - Juab Amateur Radio Society of Nephi has a club call sign of KD7AGX. The Club newsletter the JARS Roundtable can be viewed on the Club's

website:

<http://members.xoom.com/kf6lor/jars.html> Dues range from \$3 to \$5 depending on the status of the prospective member. They hold a weekly net on 2 meter simplex, 144.330, at 20:00 Mountain Time on Thursdays. Club contact person is A. J. Grantham, KF6LOR, who can be reached at (435) 623-1179, and emailed at kf6lor@broadcast.net.

KC Amateur Radio Club, Kanab, UT. Contact person is Joyce Ross N7KDU President. Her address is 57S. Dry Gulch, Kanab, Utah 84741. The club meets on the second Tuesday of each month at 7:00 PM. The meeting is held in the Social Hall of St. Christopher's Catholic Church. Harvey Zilm AB7UT is secretary-treasurer and can be reached for info at harveyz@xpressweb.com.

Las Vegas Radio Amateur Club, Las Vegas, Nevada. meets the second Tuesday of each month at the Nevada Power Company building on Vest Sahara, near the intersection of Sahara and Jones. Meetings at 7:00 pm. On nonmeeting nights, the club sponsors a net on the clubs' K7UGE repeaters. Located atop the Tropicana Hotel, the frequencies are 146.940 (100.0 Hz) and 449.700 (127.3 Hz). To find more information on the LVARC, visit our web site at <http://www.lvrac.org>. The club also has an email reflector for general information, announcements, and discussion. To subscribe, follow the link on the web page, or, if you lack full Internet access, send a blank email to: lvrac.org-subscribe@listbotcom. The club also maintains an answering machine. The telephone number (702)243-8672. To correspond to the club via the postal service, write: PO Box 27342; Las Vegas NV 89126. Contact person is Tom Allen, N7GBJ (702)362-8107. If any of the above modes communications are foreign to you, remember, you are a HAM, listen to the QSTm on 146.730 (no CTCSS, - offset).

Las Vegas Repeater Association (LVRA) owns and operates VHF and UHF amateur radio repeaters throughout Southern Nevada. The following are its open repeaters: 146.88 (PL 100, linked to the Snowbird system), 145.11, 147.99, 449.150 (PL 127.3 & linked to Arizona). The coverage and linkages of these repeaters are detailed on their web page: <http://www.hxo.com/>. Contact association President Craig Brunson n7tsz@anv.net

MARA or Mercury Amateur Radio Association is a world wide group of radio amateurs dedicated to training and traffic handling for emergency operations. They conduct VHF nets each Wednesday at 9:00PM. They also conduct health and welfare traffic net on 3.873 MHz (80 meters). The Salt Lake area is on the 146.74 repeater and their contact persons is Willy Peake N7VVL at 446-1144. The Ogden area is on the 145.49 repeater. The Utah county area is on the 45.37 repeater with Walt Nicholes, President, WA7YPL, 224-0668, w nichole@nuskin.net or nicholes@inet-1.com, as their contact person. The Provo/Utah Country group maintains a webpage at <http://physc1.byu.edu/~peterson/marautco.html>. Their general site is <http://www.mara.net>.

Northwest Colorado Amateur Radio Association draws its membership from Jackson, Routt, Moffat and Rio Blanco Counties in the Northwest corner of Colorado. They support The Mt Weavers repeaters 147.210+, and 449.650-phone repeaters, plus packet and Colorado Connection links at this location. In addition they operate Magnetic Mt. Repeater 146.730- and packet system on 441.050. Their website can be found at: <http://www.cmn.net/~ssarc/>

OARC or Ogden Amateur Radio Club meets the 3rd Wednesday of each month in Ogden at 7:00PM. The meetings are held at the Red Cross building at 2955 Harrison Blvd. Members and nonmembers are invited. Dues are \$15.00 per year and can be sent to P.O. Box 3353, Ogden, UT 84409. OARC supports the 444.60, 146.82, 146.90 and the linked 146.92 repeaters, all with a PL of 123.0. The OARC Web Page URL is <http://www.softcom.net/users/ke7wi/oarc.html>. The contact person is Greg Moore, KD7BPQ who can be reached at 782-3064.

Payson High School Amateur Radio Club (KC7PJY) is composed of students who are interested in radio communications at Payson and Springville High Schools in the Nebo School District. The Club holds the call sign of KC7PJY. Club advisor is Bob Strange, K7VVU, 754-3535 and can be reached via email: srobert@admn.phs.nebo.edu. Coadvisor is Reed Thomson, N7YVJ.

Rainbow Canyons Amateur Radio Club of Cedar City meets at 7:30 PM the 3rd Tuesday of each month in the FAA Building (north door) at the Cedar City airport. They sponsor the 146.94 Frisco Peak WR7AAA repeater (part of the linked Snowbird system), and the 146.76 Iron Mountain repeater. Club president is Russ Chaffee, N7BO. The URL for their webpage is: <http://www.netutah.com/rcarc/>.

RMRA: Rocky Mountain Radio Association is open to all Utah hams and they support the 447.900, 448.800, 448.400, 448.700 + 6 mtr gateway repeaters. Contact Marc Peterson KB7YJJ at 977-9845 for information. They also house other affiliated repeaters: 447.450 linked to 146.660 Manti system.

[For periodic updates of this list, see UARC web page information on page of this issue. Ed.]□

FCC Order Declines to Include CC&Rs in PRB-1

The FCC has denied an ARRL Petition for Reconsideration calling on the Commission to declare that PRB-1 applies to amateurs living in areas governed by CC&Rs or condominium regulations just as it does to hams regulated solely by local zoning laws. The FCC Order also seeks to "amplify" the definition of the oft-cited "reasonable accommodation" phrase in PRB-1 with respect to local land use and zoning.

The FCC Order said the League failed to demonstrate any "significant change in the underlying rationale of the PRB-1 decision" that would necessitate revisiting the issue.

"The Order provides some additional clarification on the extent of PRB-1 preemption, but it falls short of providing the relief that ARRL was seeking," said ARRL Executive Vice President David Sumner, K1ZZ. Because Deputy Wireless Telecommunications Bureau Chief Kathleen O'Brien Ham issued the November 13 Order under what's known as "delegated authority," the ARRL was mulling whether to submit an application for review by the full Commission.

Sumner said the ARRL believes the issue is

"critically important." He said the League continues to gather additional information and to plan on how to present its arguments more persuasively before the FCC.

The FCC Order said that even if the Commission does have authority to address CC&Rs within the context of Amateur Radio facilities, "this alone does not necessarily warrant revisiting the exclusion of CC&Rs" from PRB-1. The ARRL has argued that the FCC has Congressional authority to prohibit restrictive covenants that could keep property owners and even renters from installing antennas to receive TV, satellite and similar signals. The same principle, the ARRL asserts, applies to Amateur Radio.

The FCC Order says, however, that ham antennas are not like over-the-air reception device antennas, "which are very limited in size in residential areas." Regardless of the extent of the FCC's discretion with respect to CC&Rs generally, "we are not persuaded by ARRL's arguments that it is appropriate at this time to consider exercising such discretion with respect to amateur station antenna preemption," the Order said.

In its initial denial a year ago, the FCC strongly encouraged associations of homeowners and private contracting parties to "follow the principle of reasonable accommodation" with respect to Amateur Radio.

The FCC Order also took the opportunity to clarify by example what PRB-1 means by "reasonable accommodation" in terms of amateur antennas. The Order says the FCC does not believe that zoning that provides for extreme or excessive prohibition of amateur communications "could be deemed to be a reasonable accommodation." As an example, the Order said, "we believe that a regulation that would restrict amateur communications using small dish antennas, antennas that do not present any safety or health hazard, or antennas that are similar to those normally permitted for viewing television" is not reasonable accommodation or minimum practicable regulation.

On the other hand, the Order said, communities wanting to "preserve residential areas as livable neighborhoods" would be free to adopt

zoning that forbids antennas "commonly and universally associated with those that one finds in a factory area or an industrialized complex." The FCC conceded that while such rules could constrain amateur communications, "we do not view it as failing to provide reasonable accommodation to amateur communications."

The FCC Order also stuck to the earlier conclusion that the current standards for "reasonable accommodation and minimum practicable regulation" spelled out in PRB-1 "are sufficiently specific to cover any concerns related to unreasonable fees or onerous conditions."

The Order said the FCC continues to believe that it should "not specify precise height limitations below which a community may not regulate, given the varying circumstances that may occur."

The Order combined the FCC's response to the ARRL petition with its response to a similar filing from Barry N. Gorodetzer, N4IFE, and Kathy Conrad-Gorodetzer, KF4IDH, of Ft Lauderdale, Florida. The FCC Order is at:

[Http://www.arrl.org/announce/regulatory/rm8763.html](http://www.arrl.org/announce/regulatory/rm8763.html).

ARRL Newsletter □

Examination Schedule

11/28/2000*⁺ (Tues.) Salt Lake City
Contact: Eugene McWherter, N7OVT
Phone 484-6355

12/02/2000⁺ (Sat.) Salt Lake City
Contact: Gordon Smith, K7HFV
Phone 582-2438; 534-8116

12/09/2000 (Sat.) Logan
Contact: Gary T. Roberts, AG1T
Phone 435-787-8374

12/09/2000 (Sat.) Ogden
Contact: Stephen M. Stanford, WB7TSQ
Phone 393-3912

12/13/2000 (Fri.) Mantua
Contact: Niko Takahashi, AA7OL

Phone 435-512-5919

12/20/2000 (Wed.) Provo
Contact: Steve Whitehead, NV7V
Phone 465-3983

NOTE: No last-Tuesday exam in Salt Lake City during December

01/10/2001 (Wed.) Mantua
Contact: Jim Jones, KJ7VO
Phone (435) 723-1947

⁺Pre-registration required. Contact the contact person prior to the examination date.

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

For more detail either call the contact or refer to the information on the UARC webpage:

<http://www.xmission.com/~uarc> □

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Bob Wood W7OAD, UARC Member

Contesting Calendar

CQ WW SWL Challenge-CW	0000Z, Nov 25
CQ WW DX Contest-CW	0000Z, Nov 25
LI/NJ-QRP Doghouse Sprint-CW	1700Z, Nov 25
ARRL 160 m Contest-CW	2200Z, Dec 1
EA DX Contest-CW	1600Z, Dec 2
TOPS Activity Contest 80m-CW	1800Z, Dec 2
QRP ARCI Homebrew Sprint-CW	2000Z, Dec 3
ARRL 10m Contest-CW/SSB	0000Z, Dec 9
ACB PARTY Contest-CW/SSB	2100Z, Dec 15

OK DX RTTY Contest	0000Z, Dec 16
Croatian CW Contest-CW	1400Z, Dec 16
Intl Naval Contest-CW/SSB	1600Z, Dec 16
Original QRP Contest Winter-CW	1500Z, Dec 30
Stew Perry Topband Distance-CW	1500Z, Dec 30
AGB NYSB-CW/SSB	0000Z, Jan 1
ARRL Straight Key Night-CW	0000Z, Jan 1
SARTG New Yr Contest-RTTY	0800Z, Jan 1
AGCW Happy New Yr Contest-CW	0900Z, Jan 1
AGCW QRP Winter Contest-CW	1500Z, Jan 6

For more comprehensive listings and rules see:

www.sk3bg.se/indexeng.htm and
www.contesting.com/links/calendars

Ham Call Signs Turn up in Kids' Book

When Laurel Parker, KA1WJL, spotted the Amateur Radio call sign N1IQB in a children's book, *The Wanderer*, it piqued her curiosity. So, she wrote to Newbery Medal-winning author Sharon Creech and to Wayne Grabowski of Spencer, Massachusetts, who holds N1IQB, to find out more. As Parker explained in a note to the ARRL: "Neither of them knew each other, and the author had just more or less made up the call and hoped that if it did belong to someone that they would be flattered that their call had been used. The other call that she used (WB2YPZ) is not an active call at this time." *The Wanderer* is a tale of growing up and self-discovery surrounding a young teenaged girl, Sophie, who journeys across the Atlantic on a sailboat accompanied by her adoptive mother's three brothers and two nephews.

ARRL Newsletter

FCC Intervenes in Power Line Interference Case

The FCC has written a Wisconsin electric utility as a result of complaints of suspected power line interference filed by two Iowa amateurs. The FCC intervened after Alliant Energy of Madison indicated that it already considered itself to be in compliance with applicable state and federal laws. The FCC explained the utility's obligations under its Part 15 rules and gave the company 30 days to look

into the situation and report back to the complainants.

The FCC's intervention October 27 stemmed from harmful interference complaints filed by James L. Spencer, W0SR, and Frederick M. Spinner, W0FMS, both of Cedar Rapids, Iowa. The ARRL also has been in touch with Alliant Energy on behalf of the two ARRL members in an effort to resolve the matter.

In response to an inquiry from ARRL Lab Supervisor Ed Hare, W1RFI, Steven Baker, Alliant's general manager for customer operations, said his company "cannot financially justify making major system changes or investments to address problems, which are understood to be incidental radiators with no harmful interference as per FCC requirements." Baker said several of the RFI problems in Spencer's area were traced to "fish tank heaters, doorbell transformers and other devices" not under the utility's control.

"The nature of the RFI in Mr. Spencer's case is intermittent and at frequencies which have no effect on the public general broadcast frequencies," Baker said. Spencer told the ARRL that he's been working for several years to resolve power line noise problems and has logged dozens of contacts with the utility. While he reported getting good customer service early on, he says the level of service has declined lately. Spinner, who contacted the utility more recently, said he's received no indication that Alliant intends to correct his problem and, in fact, suggested that he might have to live with it.

The ARRL has offered to assist all parties in reaching a satisfactory resolution. The FCC also suggested that Alliant contact the ARRL for additional guidance on dealing with RFI involving amateurs.

The FCC Consumer Information Bureau's Sharon Bowers told Alliant that even interference to a limited range of frequencies constitutes harmful interference to a licensed service. The FCC pointed out that the utility must not cause harmful interference to licensed services, and, if it does, should locate and correct problems within a reasonable time. The Commission requested that Alliant advise the complainants within 30 days of the steps it is taking to correct the reported interference problems.

Last year, the FCC intervened in the wake of longstanding RFI complaints from several West Coast amateurs who claimed they were receiving harmful interference from Pacific Gas and Electric power lines or equipment.

The ARRL Technical Information Service offers more information at:

[Http://www.arrl.org/tis/info/rfi-elec.html](http://www.arrl.org/tis/info/rfi-elec.html).

ARRL Newsletter ▢

Power Line Interference

Power-line noise is easily distinguished because it is a buzzing, humming, roaring sound in your radio. It is noise that radiates from the power lines when you are unfortunate enough to live within five or six hundred feet of a high-tension power line. Especially a feeder line.

I'm going to give you some ideas as to the causes of power-line noise and how you should go about locating the source, and then what you can do to eliminate it.

I am making the assumption that you have completely eliminated the possibility that the power-line noise is coming from your home. If you haven't, then you should take the necessary steps to eliminate the problem at home.

The best way to do this is to get a good battery-operated portable, tune in the offending noise, then turn off the main power switch in your home. If the noise is still there, then it's time to start hunting. If the noise disappears, then start checking your house, one circuit breaker line at a time until you find it.

I have found the best method to track down the noise is to get a small portable scanner that covers 440 Mhz AM and a four- or five-element 440 Mhz Yagi. This combination cannot be beat. When you find the noise on the portable scanner at some frequency above 100 MHz, you can usually be sure that the power-line interference is within a span of no more than six or eight power poles from your antenna.

Power-line noise is identified as either corona or spark gap type. The corona discharge is that halo around the big insulators most prevalent

early on a foggy morning. Generally the higher the voltage on the lines, the stronger a corona discharge will be. This is rare, and there is little that can be done to prevent it. If you see only one or two halos, they may be caused by sharp projections on a piece of metal. Call your power company.

The second type of power-line noise is the spark-gap type. It is the culprit that usually causes most of our problems. The good news is that your local power company can eliminate it. But first it has to be located. There are several spark-gap problems that you may encounter. The most common is the constant buzzing, frying, humming, or roaring sound that is usually heard during the day. You will almost always find that it comes from a specific direction. This type of noise will sometimes become intermittent at night because humidity is usually higher after sundown. And it will almost always completely disappear during and right after a rain. This noise is usually the result of cracked or burned insulators, loose aluminum clamp that holds the jumper wires to the power lines, or it is hardware becoming loose on the pole. This type of noise is usually louder during dry weather and during the summer months.

One of the most difficult to locate and correct is that caused by ground loops, where the noise is on the ground lead at the pole. This is usually caused by improper placement and connection to the ground lead at the top of the pole. This can be the loudest noisemaker of all.

A leaky transformer sometimes causes noise that is more apparent during heavy-loading evening hours. But more often the fuse used to isolate individual lines located near the top of the pole is the culprit. This noise is usually caused by a cracked insulator or by accumulation of dirt on the insulator. Sometimes you will find corroded switch connections. This type of noise is sometimes louder during a heavy rain. This may come to you as a surprise; pole transformers rarely generate power-line noise. Noise from a transformer-bearing pole usually comes from sparking between pieces of the hardware used to mount the transformer to the pole.

Power-line noise comes from sparks that jump gaps in the hardware used to mount cross-arms, transformers, and other hardware to power-pole tops. Even though the hardware is sufficiently

tightened at installation time, this hardware will become loose as the wood expands and contracts with temperature and humidity changes. Keep in mind that loose clamps and connections, oxidized tie wires, and dead end insulators cause the majority of power-line interference.

Corrosion can build up on power-pole hardware and cause sparking. This is almost always present as the power pole and hardware age. Power-line insulators may break down under the aging influences of the sun, precipitation, dust and pollution, especially if in the area where acid rain is prevalent. As a result, a carbon track will form across the insulator, and the result will be power-line leakage that will generate intense spark-gap noise.

The greatest majority of power-line interference is gap-type discharge. Metal parts become isolated by corrosion, forming a spark gap, and as soon as moisture appears this gap is shorted out, and the noise eliminated. Gap discharge occurs on insulators, tie wires used to make ground connections, and in the fabrication of the jumper wire clamps that connect the jumper wires to lines. When one of these clamps becomes loose you have gap-type discharge and noise. You may find gap-type discharge between lightning arrestors and neutral or ground wires and their associated hardware. The spark radiates noise over a broad frequency spectrum.

Most power-line spark-gap noise is caused when sparks jump from one piece of metal to another or from a piece of metal to the ground line on a pole. Most of these hardware pieces are the ones used to mount cross-arms, insulators, transformers, and other items to the power pole. Almost all power-line noise is at a frequency of 120 cycles.

Now how to get it fixed. After you have eliminated the possibility that the noise is in your house, you need to take your scanner and directional antenna and start your search. Your first step would be to determine the direction your interference is coming from. Once you have located the source of the noise, call your power company. Give them your name, address, and phone number. Then explain that you have an electrical noise and that you have determined that it is originating on pole number xxx, in or near your

subdivision. If the poles are not numbered, give them a description of where it is located and tell them you will meet the power company representative and guide him.

The first telephone call to the power company may or may not get results. If it doesn't try again. Explain your problem very thoroughly and by all means be polite. Explain your situation; again describe the noise-producing area and the method you used to find the noise. Again leave your name, address, and telephone number so the power company representative can contact you before making a visit to your home and the trouble area.

When the representative from the power company makes his visit, be patient and understanding. But, here is where it pays to be persistent. If, despite your best efforts the power company fails to respond in a timely fashion, file a complaint with the FCC, Field Operations Bureau, Washington, DC 20554. Let the FCC know how the noise is affecting your operation. Send a copy of the letter to the power company and to the state agency that oversees utility companies. Also send a copy of the letter to the ARRL RFI Task Group.

Summary

1. 95% of power-line source interference is gap-type discharge. Metal parts become electrically isolated by corrosion. During and after a good rain, this gap is shorted out and noise eliminated.

2. This type of noise occurs on insulators, tie wires, lightning arrestors, and between neutral or ground wires and hardware.

3. Noise can travel through the power-lines or the neutral wire into your receiver power supply.

4. Noise can be caused by induction when the power-line is close to the receiving antenna.

5. Noise can be caused by radiation when energy is radiated from a distant power-line and re-radiated from a nearby fence, power-line, or other metal object.

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