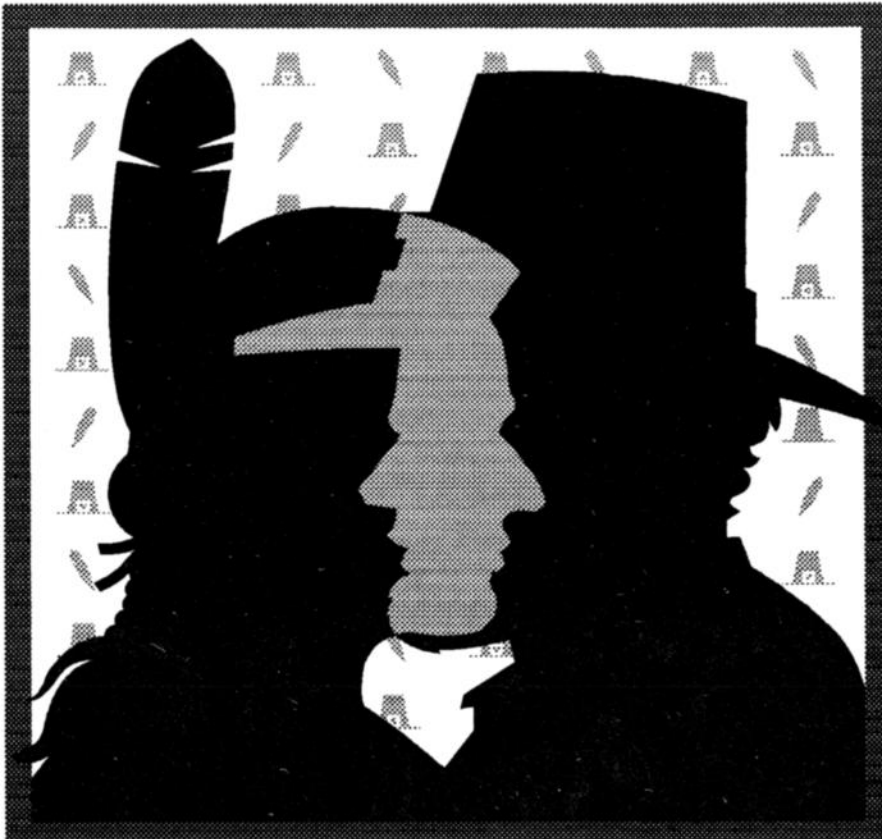


11/96



ARRL  
CLUB  
#1602



# THANKSGIVING

## ISSUE

Published by the  
Utah Amateur Radio  
Club HAM  
HOTLINE-583-3002  
The MICROVOLT  
632 University Street,  
Salt Lake City, Ut.  
84102

# the MICROVOLT

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bbergen@xmission.com

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(HM) 268-4410

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582-2438

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583-3002

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SLC, UT 84109 485-9245

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Board Liaison Gordon Smith K7HFV 582-2438  
Repeater Engineer-Randy Finch K7SL 277-7135  
Autopatch. Eng.-Gordon Smith K7HFV  
Asst. Rep. Eng.-John Parken KA7GZH

1996 WIMU Chair-Duane Anderson KJ7HO

Past President-Ray Allen N7TEI 593-0949

Repeater Monitor-Allen Wright N7QFI  
268-8482

Printing By-Don Baumgartner WN7D  
BEEHIVE PRINTING  
3326 S. 275 East  
SLC, UT 84115 485-9178

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. 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 Exhibition hall located on the Salt Lake County Fairgrounds just south of Murray City Park. Club membership is open to anyone interested in amateur radio; a current license is not required. Dues are \$13 per year, including a MICROVOLT subscription. Those living at the same address as a member who has paid \$13 may obtain a membership without a Microvolt subscription for \$9. ARRL membership renewals should specify ARRL Club #1602. UARC maintains the following repeaters: 146.62 (minus) and 449.10. 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 minus offset) 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. 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 and maintaining a club membership. THE MICROVOLT: The Microvolt is the official publication of the club. Deadline for submissions to the Microvolt is the 10th of each month prior to publication, except Aug. All submissions are welcome but what is printed and editing are the responsibility of the UARC board. Reprints are allowed with proper credits to the MICROVOLT, UARC, and authors.

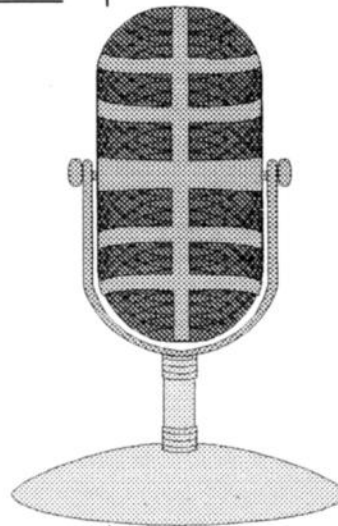
# THE MICROVOLT



Publication of the Utah Amateur Radio Club  
**VOLUME XL ISSUE 11      NOVEMBER, 1996**

## THANKSGIVING ISSUE

HAPPY  
*Thanksgiving*  
ONE  
AND ALL



Susie likes to assist others whenever she can.

Like the time when Bill KQ00 from Idaho after attending UARC ham club meetings and also the meeting after the meeting was on his way home when his car broke down. Susie went and got him some oil which is a hard job that late at night.

Susie thanks for all you do to enhance the hobby.

73 N7HVF Linda Reeder

FEATURE OF

THE MONTH



This month we are featuring Susie Squire KC7CBR. Susie is a widow and has six children four girls and two boys. She works as a custodian for the LDS Church in Layton.

Susie's friend Mark Lund AB7GJ got her into amateur radio.

At first she wasn't interested, but Mark kept prodding her along. Finally, she decided that she was going to surprise him, but somehow the cat got out of the bag. Anyway, Susie obtained her Technician no-code license in May of 1994. Her favorite facet of the hobby is talking to people and meeting the people she talks to on the air.

In December of 1994 Susie was elected secretary of the Davis County Amateur Radio Club for 1994. She takes minutes at all of the meetings and whatever else needs to be done. Susie is a member of UARC. She enjoys going to the UARC meetings and going to the meeting after the meeting. She enjoys getting together with all the people she meets on the air.

*Ham Hotline*  
*(801)583-3002*

**Fall  
Events**

\*\*\*\*\*

NOV 7:

HOME-BREW, Election Nominations and Microvolt Editor's birthday

DEC. 5:

Elections and Plans for The New Year

**DON'T  
★FORGET★  
TO VOTE!**



**CORRECTED  
UTAH AMATEUR RADIO  
EXAMINATION SCHEDULE**

May 14, 1996 (For more details see the listing of "Programs by City" at the end.)

Date	Location	Contact Person	Home Ph. Bus. Ph.
------	----------	----------------	----------------------

11/02/96 (Sat.)	Ogden	Matt George, AB7GM	393-9159
11/20/96 (Wed.)	Provo	Steve Whitehead, NV7V	465-3983 225-5200

only Novice and Technician elements (1A, 2, and 3A) given at this session.

Send additions or corrections to Gordon Smith, K7HFV.

**EXAMINATION PROGRAMS BY CITY**

City: Brigham City	Contact Person: Bob Anderson, AA7TR
VEC: ARRL	Phone: 257-3021
Location: Basement of Zion's Bank at Main and First North	

**THE MICROVOLT**

Schedule: Twice annually, spring and fall. Details vary.  
Code tests at 6 p.m. Written tests at 7 p.m.

City: Farmington	Contact Person: Brent Thomas, AC7H
VEC: ARRL	637 East 2150 South Bountiful, Utah 84010
Home Ph: 298-3322 Bus. Ph: 538-	

3700

Location: Davis County Jail Complex,  
800 West State St.,  
Farmington  
Service entrance

Schedule: First Wednesday of Jan., Mar., July, and Sept.,  
7 p.m.

City: Logan	Contact Person: Paul Hansen, WO7N
VEC: ARRL	1676 East 1600 North Logan, Utah 84321
Home Ph: 753-4843 Bus. Ph: 752-6425	

Schedule: Second Saturday of April and October, 9:00 a.m.

City: Ogden	Contact Person: Matthew George, AB7GM
VEC: ARRL	473 Hiland Road Ogden, UT 84404
Phone: 393-9159	

Recorded exam information: 627-6064

Location: Weber State College, Science and Technology Building, Rm 228

Schedule: First Saturday of May and November, 8:00 a.m.

City: Provo	Contact Persons: Steve and Linda Whitehead
VEC: W5YI	497 South 700 East Payson, Utah 84651
Home Ph: 465-3983 Bus. Ph: 225-	

5200

Location: Provo Campus of Utah Valley State College

Schedule: Third Wednesday evening of each month

Notes: Do not confuse this location with the larger Orem campus.

City: Salt Lake City	Contact Person: Gordon Smith, K7HFV
----------------------	-------------------------------------

VEC: ARRL

632 University Street  
Salt Lake City, Utah 84102  
Home Ph: 582-2438 Bus. Ph: 532-3400

Ext. 8116

Location: Blue Cross/Blue Shield Cafeteria  
2455 East Parley's Way, main (west) building,  
West door Schedule: First Saturday of Feb.,  
APR, June, Aug. and Dec.  
20 w.p.m.: 8:00 a.m.  
13 w.p.m.: 8:30 a.m. 5 w.p.m.: 9:15 a.m.  
No code test needed: Any time

between  
8 and 10 a.m.

Notes: Preregistration is required.  
The owners of the building require that  
the door be kept locked. Those who preregister will  
receive the code required to get in. Preregistration also  
speeds the session and gets licenses on the way faster  
after the session. It takes only a few minutes by phone or  
on the air. Gordon usually  
monitors 146.62.

-----  
City: Salt Lake City Contact Person: Eugene  
McWherter, N7OVT  
VEC: W5YI 536 E. Leland Avenue  
Salt Lake City, Utah 84115

Home Ph: 484-6355

Location: Granite High Seminary Building  
Approximately 33rd South and 5th East

Schedule: Last Tuesday of each month, 7 p.m.  
Notes: This session is intended primarily for those  
seeking Novice,  
Technician, or Technician-plus licenses. Only elements  
1A, 2 and 3A will be administered. Pre-registration is  
required.

#### THINGS TO BRING TO TEST SESSION

1. Two forms of ID (If licensed, your original and one form of ID)
2. \$6.05 - Cash or Check.
3. A copy of your license, and or copies of your pending 610 form or certificate of credit along with the original.
4. You may bring a filled out 610 form or a form will be available at the test session.
5. Pencils or pens.
6. You may bring a calculator but you must show that it is not pre-programmed.

You may use a typewriter or lap top computer only if you make arrangements in advance.

## THE MICROVOLT WEB- INFO

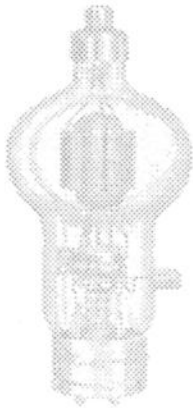
UARC WEB PAGE ADDRESS!  
<http://www.xmission.com/~uarc>

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[HTTP://WWW.MIT.EDU:8001/GEO](http://www.mit.edu:8001/geo)  
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NTIA [HTTP://WWW.NTIA.DOC.GOV](http://www.ntia.doc.gov)

SARAX  
[HTTP://WWW.NASA.GOV/SAREX/SAREX\\_M  
 AINPAGE.HTML](http://www.nasa.gov/sarex/sarex_mainpage.html)  
 WHOWHERE? (FIND PEOPLE YOU ARE  
 LOOKING FOR) [WWW.WHOWHERE.COM](http://WWW.WHOWHERE.COM)



## UTAH AMATEUR RADIO CLUBS

**UARC** or Utah Amateur Radio Club meets the first Thursday of each month except the months of July and August. The meeting is held in the Theatre Building located on the Salt Lake County Fairgrounds (5200 S. and 200 E.) just south of Murray Park at 7:30 PM. There is a newcomer's meeting held prior to the main meeting at 7:00 PM.

The **Davis County Amateur Radio Club** meets the 2nd Saturday of each month at 10:00 AM at the Davis County Sheriff's Office, 800 West State street, Farmington UT. Members and nonmembers are welcome. Dues are \$15.00 per year and can be paid at any club meeting. The Davis Club supports the 147.04 repeater. **DAVIS ARES** conducts a net each Thursday at 7:00 PM on 147.42 simplex. They also have a DAV node for packet on 145.07. For further information please contact Mel Parkes, N5UVP 299-3430.

**OARC** or **Ogden Amateur Radio Club** meets the 3rd Wednesday of each month in Ogden at 7:00 PM. 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, Utah 84409. OARC supports the 146.90 repeater and conducts a net there Tuesdays at 7:30 PM. They also support the 146.82 repeater. The contact person is Jerry Peters WA7ADK who can be reached at 825-8798.

The **VHF Society** is a group dedicated to maintaining a system of repeaters in our area. Dues are \$10.00 per year and can be sent to PO Box 482 Bountiful Utah 84011-0482. The VHF Society holds a swap and traffic net for it's members each Tuesday night at 8:00 P.M. on the

## THE MICROVOLT

146.940 repeater. For further information please contact Eldon Kearl KB70GM at 571-9955.

**Salt Lake County ARES (Amateur Radio Emergency Services)** conduct a net each Wednesday Night at 8:00 PM on the 146.88 repeater. All amateurs are welcome to participate. Their in-person meeting is held the third Wednesday of each month. For more information please contact John Parken. KA7GZH at 278-5846 or Richard Evans N7PGE at 265-9346.

**Utah Valley ARES** holds their general meeting the 1st Tuesday of every month at 7:00 PM. They also conduct a net each Tuesday at 9:00 P.M. on the 147.34 repeater which is also linked to the 224.7 repeater. The contact person is Robert Earl. N7EGG at 225-8870

**MARA** or **Mercury Amateur Radio Association** is a world wide group of Radio Amateurs dedicated to training and traffic handling for emergency operation. They conduct VHF nets each Wednesday at 9:00 PM. 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 person is Willy Peake N7VYL at 466-1114. The Ogden area is on the 145.49 repeater and the Provo area on the 145.37 repeater with Vince Newmeyer N7MLP at 785-5611 as their contact person.

**UPRA (Utah Packet Radio Association)** holds their general meeting on the 2nd Saturday of each month at 2:00 PM at the State Capitol Annex Building north of the State Capital. All amateurs are welcome. The purpose of the club is to educate people who are new to packet and to coordinate packet activities. Their dues are \$15.00 per year and can be sent to PO Box 92 Riverton, UT 84065. Their contact person is Jack Christensen, KC7NX at 277-6629.

**UBET (Utah Box Elder Thiokol)** holds a net every Wednesday at 8:00 PM on the 145.43, 448.300, 149.29 repeaters. This net is followed by a CW net at approx. 8:30. Net control is Phil Siefkas KJ7LM, Garland UT.. They also meet the first Thursday of every month at 7:00 PM in the basement of the Zions Bank on the corner of main and first north in Brigham City. Their contact person is Stew Greenwood AB7BA at 863-2795.

**THE BRIGERLAND AMATEUR RADIO CLUB** meets the 2nd Thursday of the month (except June, July, and August) in the basement of the Sheriffs Office. They hold a net at 9:00 PM on the 147.20 repeater every Tuesday. Their contact person is Dean Stevens N7WVY at 753-2664.

**THE UTAH TCP/IP Users Group Of UTUG** is an informal group that discusses TCP/IP protocols and other packet information. They are geared to all levels of users, new and seasoned. They hold a weekly net Sundays at 8:00 PM on the 146.620 repeater. Their contact person is Matt Simmons KG7MH at 965-1038

The **High Valley Net** from Heber meets every Monday at 9:00 PM on the 147.18 repeater. Their contact person is Doug Neilson, N7PPW at 756-5927 or Joe Chenworth, KG7GY at 564-3598

The **University of Utah Radio Club** is open to University Staff, alumni and students. There is a fully equipped station available 24 hours a day. Their contact persons are Marvin Match KA7TPH at 581-6085 or Clint Turner KA7OEI at 972-5541

The **Salt Lake Community College Amateur Radio Club** is open to anyone. They would like to welcome interested parties to join them. They

5

meet on the South campus in room N285 on the first Saturday of the Month at 3:00 PM. Please contact Keith KI7SL at 957-3247  
Rocky Mountain Radio Assn. is open to all Utah hams and they support the 447.900, 448.400, 448.700 repeaters. Their net is on 447.800 and 52.525 (six meters) every Wednesday night at 8:00.  
Please contact Marc Peterson (KB7YJJ) at 977-1845 for info!



## HAPPY THANKSGIVING FEASTING

IF YOU HAVE ANY  
GREAT IDEAS FOR THE  
MICROVOLT PLEASE  
SEND THEM TO COKIE  
EDDY 8719 NEWELL  
DRIVE, WEST JORDAN  
UTAH 84088

## Special Announcements

### UARC to Hold Beginners' Class

The Utah Amateur Radio Club in conjunction with the East High Community School will be

## THE MICROVOLT

sponsoring a class for those interested in obtaining amateur radio licenses. The class will be held at East High School and will begin October 3 and continue through Dec. 5th. The class will include instruction in the International Morse Code as well as electronic theory and regulations necessary to pass the written portion of the license examination. Material will be sufficient to prepare the applicant for license classes of Novice, Technician, or Technician-Plus.

The class will be held each Thursday evening from 7-9 p.m. except for Oct. 31 (Halloween) and November 28 (Thanksgiving Day) Cost of the course will be \$35, which includes the main text, "Now You're talking" published by the ARRL. To register, contact the East High Community School, 584-2901. Their office is open weekday evenings from 3 p.m. to 7 p.m. starting September 3. The class will also be listed in a brochure distributed to city residents. Those who receive the brochure may register by mail.

## THE ARRL ANNOUNCES THE ARRL SATELLITE ANTHOLOGY 4th ED.

The American Radio Relay League is pleased to announce the ARRL Satellite Anthology 4th Ed., the latest and most up-to-date source of information on current and future Amateur Radio Satellites. This collection of 66 articles from QST, the AMSAT Journal, the World Wide Web and other sources offers the following:

- ⇒ An introduction to, and history of, amateur Radio Satellites, including the RS-Series for beginners
- ⇒ A summary of the OSCAR series of satellites.
- ⇒ How to contact the Space Shuttle and MIR.

## 6

- ⇒ How school children talk to astronauts in space through the SAREX program.
- ⇒ Descriptions of future satellites, which will have the capability of worldwide communications with an HT.
- ⇒ A current listing of software programs to help track and find satellites.

and much more useful information for beginners and the experienced satellite operator alike.

The American Radio Relay League, INC., is the membership association of Amateur Radio Operators in the US. Copies of the book (ARRL order no 5595) are available from American Radio dealers or ARRL Publication Sales, 225 Main St. Newington CT 06111-1494, telephone 860-594-0200 or sales, 860-594-0303 (fax). When ordering from ARRL, include \$4.00 for shipping. (Better yet, ask Fred DeSMitt at the next meeting and avoid the shipping costs!)

Retail-\$12.00

## ARRL ANNOUNCES NEW QRP BOOK

A new book covering QRP projects, construction practices and components has been published by the ARRL. QRP Power is a compilation of the best recent-QRP-related articles from QST, QEX, and The ARRL handbook. It also includes a new article on NNIG's groundbreaking 40-40 transceiver. The authors, Mitchell Lee, KB6FPW, and Dennis Monticelli, AE6C, have experimented with a wide range of enhancements to the original QST article, are highlights of the book.

In chapter one, Rich Arland, K7YHA, provides an introduction to the art of low-power operating. KB1MW/7 and KH6CP cover design and construction practices in Chapter 2. Among the many useful projects in Chapter 3, transceivers and transmitters are a "Build a -One Watt transmitter in a KODAK FILM BOX", by

## THE MICROVOLT

WA3ULH, and "A Small High Performance CW Transceivers," by KK7B. The receivers chapter includes the works of WJ1Z, KA7EXM and KK7B. Chapter 5 accessories and components, includes "Build The Camper's Portable Hamshack," by KD7S, and "Refinements in crystal Ladder Filter Design," by W7ZOI-and much more. The resources chapter includes a list of publications that will be of interest to all QRPers. If you are wondering when you'll ever find the time to organize your photocopies of QRP articles, wonder no more! QRP Power brings together the best recent QRP projects for your reading and building enjoyment. QRP POWER \$12.

## INTERNET QUIK AND EASY



How many of you have wanted to get on the Internet but can not bring yourself to pay the outrageous prices that some servers are asking? I have found the simple solution! If you are interested in getting high quality Internet service at just pennies the price that you would be paying someone else, give me a call and I can set you up! This Internet service would be like \$19.95 a month unlimited access and time Call me at 2801762. I can even have a representative come out and install everything for you!



**HF NETS: (by request)****BEEHIVE** daily 12:30 PM

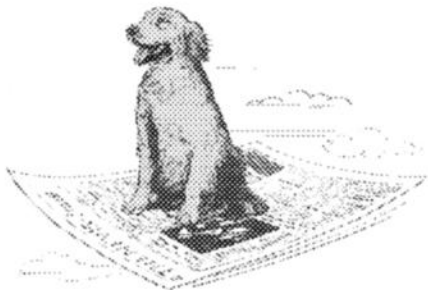
7.272

**UT Code Net** daily 7:30 PM 3.708**FARM** daily 8:00 PM 3.937**MARA Voice** Saturday 7:30 AM 3.918**MARA CW** Saturday 8:00 AM 3.723**RACES\*** 3rd Sat. 8:00 AM 3.918**UT MARA** Saturday 8:30AM 3.873

*\*Note: RACES Net is on VHF in even months, and on HF during off months. You should have a RACES number to check in.*

**CLASSIFIED?**

Someone asked me the other day where our classified section of the Microvolt went. Actually, I only did that once trying it out and hoping I could get more people to try to sell or give away some of their great JUNK. I am sorry to say that the classifieds didn't work as well as I had hoped and I laid it to rest until someone else decided to put more in. I was thinking about just putting the graphic there and then write (NO SUBMISSIONS) underneath it to get ya'all to submit. (HI) Oh well, I tried.



OKAY, GIVE ME "ONE MORE GOOD REASON" NOT TO DO THE CLASSIFIEDS!

**THE MICROVOLT****NEW  
ARRL  
SAFETY**

Without the opportunity to get a Microvolt out to you until September, and just finding this good stuff, I thought, gee,

so it's a tad late. I thought you might like what I found out the web. --Ed Cokie Eddy KC7MDV

webmaster@arrl.org

RF Safety News

Page last revised 2:15 PM ET 9/10/96

**Contents**

Overview: New FCC RF Safety Standards Include Amateur Radio FCC RF Safety Links · ARRL RF Safety Resources:

ARRL News Bulletins · Other RF Safety Resources

New FCC RF Safety Standards Include Amateur Radio From The ARRL Letter for August 9, 1996:

New FCC RF safety standards that become effective January 1, 1997, could affect the way some hams operate. As a result of a Report and Order adopted by the FCC on August 1 (ET Docket No. 93-62, Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation), Part 97 will require hams running more than 50 W PEP to conduct routine RF radiation evaluations to determine if RF fields are sufficient to cause human exposure to RF radiation levels in excess of those specified. "Measurements made during a Commission/EPA study of several typical amateur stations in 1990 indicated that there may be some situations where excessive exposures could occur," the FCC said in ending the blanket exemption for Amateur Radio.

Although all amateur operation must comply with the new regulations for Maximum Permissible Exposure (MPE), amateur operation at power levels of less than 50 W PEP is "categorically excluded" from the requirement to perform a "routine evaluation" of station operation before operating. Where routine evaluation indicates that the RF radiation could be in excess of the limits, "the licensee must take action to prevent such an occurrence," the Report and Order stated.

The FCC said this could mean altering operating patterns, relocating the antenna, revising the station's technical parameters—such as frequency, power or emission type—or "combinations of these and other remedies." Although the new exposure criteria will apply to portable and mobile devices in general, at this time routine evaluation for compliance will not be required of devices such as "push-to-talk" portable radios and "push-to-talk" mobile radios used by Amateur Radio operators.

These transmitting devices will be excluded from routine evaluation.

The FCC encouraged the amateur community "to develop and disseminate information in the form of tables, charts and computer analytical tools that relate such variables as operating patterns, emission types, frequencies, power and distance from antennas."

The Commission said it intends to provide "straightforward methods for amateur operators to determine potential exposure levels" by year's end.

"Exactly what is involved in conducting a 'routine RF radiation evaluation' is not yet clear," observed ARRL Executive Secretary David Sumner, K1ZZ, adding that the FCC has promised to release a revised OST/OET Bulletin Number 65, "Evaluation Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation." The League is now studying the 100-plus page docket, to see if the League should seek reconsideration of any aspects of the FCC decision.

In the Report and Order, the Commission adopted Maximum Permissible Exposure (MPE) limits for electric and magnetic field strength and power density for transmitters operating at frequencies from 300 kHz to 100 GHz.

These MPE limits are generally based on recommendations of the National Council on Radiation Protection and Measurement (NCRP) and, in many respects, are also generally based on the guidelines issued by the Institute of Electrical and Electronics Engineers Inc (IEEE) and subsequently adopted by the American National Standards Institute (ANSI) as an ANSI standard (ANSI/IEEE C95.1-1992). The Commission used the 1992 ANSI/IEEE standards instead of the 1982 ANSI standards that had formed the basis for the existing rules under which Amateur Radio stations were categorically exempted.

ARRL Laboratory Supervisor Ed Hare, KA1CV, said the new regulations will give hams an incentive to demonstrate that Amateur Radio operation is safe.

"Although this means that hams will have to become more educated about RF safety, most amateur stations are already in compliance with the new regulations," Hare said.

Sumner said that for certain unusual situations where there is "uncontrolled exposure" to neighbors and the general public, "amateurs may well have to make changes in how they operate." The ARRL Lab staff and the RF Safety Committee are continuing to evaluate the new requirements.

Hare noted that the administrative burden for hams will be minimal, and the FCC does not require amateurs

## THE MICROVOLT

to submit any documentation to the FCC. "In essence, the FCC is telling amateurs that if they run more than 50 W, they need to learn about RF safety and evaluate how this applies to their own operation," he said.

The new regulations also will require the addition of five questions on RF environmental safety to the amateur examinations for Novice, Technician, and General-class elements 2, 3(A) and 3(B). Sumner noted that the Commission's Report and Order does not take into account the practical problems associated with such a significant revision to the volunteer-administered amateur examinations, and that more time than the Commission has allowed will be required to do a good job.

The Commission acknowledged the updated guidelines generally are more stringent than the current rules and are based on recommendations of the federal health and safety agencies, including the Environmental Protection Agency and the Food and Drug Administration.

The Commission said that the new rules will protect the public and workers from strong RF emissions.

Adoption of the new rules by August 6 was required by the Telecommunications Act of 1996.

The Commission also incorporated into its rules provisions of Section 704 of the Telecommunications Act of 1996 that preempt state or local government regulation of personal wireless services facilities based on RF environmental effects, to the extent that such facilities comply with the Commission's rules concerning such RF emissions. This preemption does not directly affect Amateur Radio, however.

The FCC said amateur stations "present an unusual case with respect to compliance with RF exposure guidelines," in part because they are authorized to transmit from any place where the Commission regulates the service, as well as on the high seas, and the FCC does not pre-approve individual amateur station transmitting facilities and no additional application is made for permission to relocate an amateur station or to add additional stations at the same or other locations.

The FCC also noted that amateur stations "vary greatly" from one location to another, transmit intermittently, and can involve "as many as 1300 different emission types—each with a distinctive on-off duty cycle." The FCC said most amateur stations engage only in two-way communication, thus cutting the transmitting time of any given ham station. "There are many variables, therefore, to be considered in determining whether an amateur station complies with guidelines for environmental RF radiation," the FCC said in the Report and Order.

In comments filed earlier with the FCC, the ARRL strongly opposed adoption of the new requirements. The ARRL said most Amateur Radio users do not possess the requisite equipment, technical skills, and/or financial resources to conduct an environmental analysis. The League has, for several years, recommended a policy of "prudent avoidance" of exposure to electromagnetic radiation as a common-sense approach to potential—but not yet proven—health hazards and against such practices as running high power to indoor antennas or to

mobile antennas that might expose the vehicle's occupants. The ARRL also argued that amateur stations, because of their intermittent operation, low duty cycles, and relatively low power levels, rarely exceed the 1992 ANSI/IEEE standard. Finally, the ARRL noted that unlike other radio services, RF safety questions already are included in amateur license examinations.

The FCC agreed in part. "We concur with the ARRL that amateur operators should follow a policy of prudent avoidance of excessive RF exposure," the Commission said. "We will continue to rely upon amateur operators, in constructing and operating their stations, to take steps to ensure that their stations comply with the MPE limits for both occupational/controlled and general public/uncontrolled environments." But the FCC expressed concern that Amateur Radio operations "are likely to be located in residential neighborhoods and may expose persons to RF fields in excess of the MPE guidelines."

For now, the League advises hams not to panic and to read up on the subject. You can download the complete Report and Order by pointing to [http://www.fcc.gov/Bureaus/Engineering\\_Technology/Orders/fcc96326.txt](http://www.fcc.gov/Bureaus/Engineering_Technology/Orders/fcc96326.txt).

These and other resources are available via the links below.

General information on RF safety is available in the safety sections of the 1996 edition of The ARRL Handbook and in the 15th edition of The ARRL Antenna Book. These materials offer guidelines on how to comply with the ANSI standard the Report and Order refers to.

Additionally, the ARRL Technical Information Service offers an information package on RF safety.

It includes a reprint of the Handbook material, an April 1994 QST article by Wayne Overbeck, N6NB, and a bibliography on the subject. This package is available for \$2 for ARRL members or \$4 for nonmembers, postpaid. Nonmembers should include payment with orders. Contact Bridget DiCosimo, e-mail [bdicosimo@arri.org](mailto:bdicosimo@arri.org) or write 225 Main St., Newington, CT 06111. Other resources are available on the ARRL Web page at <http://www.arri.org/news/rfsafety/>. The ARRL Web RF Safety information will be updated as circumstances dictate.

#### FCC RF Safety Links

\* FCC Office of Engineering and Technology (OET) home page

\* RF Safety Standards News Release

\* OET Report: Measurements of Environmental Electromagnetic Fields at Amateur Radio Stations  
ARRL RF Safety Resources

\* The ARRL Handbook's RF Safety coverage as a Web page or as the Adobe

Portable Document Format file [hbkrf.pdf](#) (63,260 bytes)

\* "Electromagnetic Fields and Your Health" by Wayne Overbeck, N6NB (QST, April 1994, pages 56-59)

ARRL News Bulletins

\* September 10, 1996: ARRL Petitions FCC To Change Safety Rules

\* August 6, 1996: New RF standards Part 1

\* August 6, 1996: New RF standards Part 2

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Other RF Safety Resources

\* A Summary of the Report and Order in ET Docket 93-62 by Wayne Overbeck, N6NB

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### On the Lighter Side...

I have noticed that we have a bunch of people in our club that not only enjoy the technical aspects of our newsletter but also the "fun" stuff that we get. Most of the people that enjoy the lighter side, are women. (THAT DARE MENTION IT) I think the men enjoy it as well, but don't dare mention it. It's a "man" thing, I guess. But this month I thought I would share with you something that men could appreciate and relate to as well as the ladies in our club. Dedicated to someone that I have loved and fashioned my writing after, The late Erma Bombeck.

## Can We Bury The Dead Yet?

-by Cokie Eddy

inspired by Erma Bombeck's article "For Better Or Worse But Not For Lunch"

"What about the frig? Can we bury the dead yet?" my husband always liked to make fun of the stages that the leftovers went through. He knew that when I complained about the trash being at "flood stage", then I would clean out the frig and allow him to bury the remains of the moldy. This is how it usually goes:

### STAGE ONE- DAY ONE

The roast comes off the serving plate, onto a smaller plate. Dave announces that it would make a great sandwich for lunch. I shake my head no and cover it with plastic wrap and put it in the frig next to the peas. I tell him no. That we can warm it up

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tomorrow night. Shredded it can make great fajitas. Dave smiles, knowingly.

#### STAGE TWO-DAY TWO

Fajita night is postponed. Picked up chicken on the way home from the store. Too busy to cook. Can't go to a UARC Meeting and cook, too.

#### STAGE THREE- DAY THREE

My thirteen year old son, Wade asks if he can eat the roast for lunch. I am lucky, most teenagers wont eat leftovers. But I shake my head "no" and hand him the peanut butter. No reason, just "no".

#### STAGE FOUR-DAY FOUR

I am in a hurry, tacos sound much easier. Make tacos and split.

#### STAGE FIVE- DAY FIVE

Boy, leftover tacos sure sound better than the roast that I cooked the other day. It's probably beef jerky by now anyway.

#### STAGE SIX- DAY SIX

"Coke, what's the green stuff pushed to the back of the frig, next to these other little green round things with mold on them? I think they were peas in one life" Dave asks. Wade gets excited and asks if he can take it to school and study it under the microscope.

Dave pulls a freezer sticker out of the drawer and writes: "Roast Beef Born: 1 NOV Died: 6 NOV. Buried: 7 NOV."

Wade calls from the kitchen, "Mom, can I have a leftover taco?" I yell back: (We always yell in my house, no one can ever do anything civilized) "Nope, tacos go great with fajitas!" and the food cycle continues.

*We Have Plenty Of Rosters  
Leftover From The Meeting.  
Please Let Me Know If You Want  
One.*

**PLEASE**

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## COKIE'S CORNER

### It's That Time Again

It's been a great year here at the Microvolt Staff and we want you to know that we have enjoyed working with everyone. The Microvolt has been a great job and experience for myself. I want everyone to know that if I am nominated to the position as Microvolt Editor that I will accept the nomination and will run again. It has been quite an experience, and wasn't as easy as I thought it would be. But my plans to make the Microvolt a bigger and better publication, with TOP quality reading material, (technical and non-technical) were accomplished, meeting a lot of fine people along the way.

I told you when I took this position, I don't know if I will be a GREAT Microvolt Editor, all I know is : I LIKE TO WRITE! I hope you have enjoyed reading the Microvolt as much as I have enjoyed making it. The bad part of creating the Microvolt is, I don't get a Microvolt. I have to fake myself out every Microvolt I get and pretend that it's something I haven't read before. So that I can be surprised. (Weird Cokie...Weird) The creative process of the Microvolt was not easy. Everywhere I turned I was afraid of offending someone or not doing the right thing...pretty soon I had to give up on worrying about satisfying "everybody all-the-time". It is just impossible to do. Gordon heard many of my woes on this or that, and I am thankful that through this term as Microvolt Editor, that I had him to confide in. He gave me the courage to make the Microvolt. I didn't forget a word there, he did, he gave me the courage to DO MY OWN THING. To MAKE the Microvolt.

I have spoken with Maureen Streckenfinger and she says that if she is nominated, (I'LL NOMINATE HER!) she will also run again for Assistant Editor. But she claims that she doesn't want my job. I don't blame her. But anyway, I want to thank everyone for being so nice and welcoming me into your family. I will try to do my best next year, that's all I can promise.-73 de Cokie KC7MDV



## SOMEBODY IS TRYING TO TELL ME SOMETHING!

About a year and a half ago I started to dream about the station I wanted someday. I spent hours looking at catalogs and books. I planned out where my station would go when we finished our basement. I located a good spot for the tower and month by month moved my wife's prize plants to a more appropriate location. I even went so far as to go to Sandy City and have them write in a letter that they would not have any problem with me setting up a 72 foot crank-up tower.

Upon presenting my plot plans to the zoning commission a very nice young lady said; {and I quote} "Surely you are not going to put this up in your yard!" At this point I should have quit and I would have been financially and physically in better shape.

My adventure began when I started to dig the hole which was 5x5x8. I never knew that dirt was so hard to get rid of. I gave it to my neighbors, who asked; "What are you doing?" to that I responded that I was just getting rid of a little dirt. I took it to anyone or anyplace that would take dirt.

Upon reaching the four foot level I came into a small problem. I wanted to run my hard-line in with my rotor cable and switching box cables. I knew that I would dig up a few lines of sprinkler pipe. Since I did not build the house, I did not know where the pipe ran. Looking over the situation I chose the route that would take out the least number of sprinkler pipes. As luck would have it I found all but three, ripping up four in the process. When a sprinkler pipe gets in the way of a trencher, a funny thing happens, the trencher begins to **pull**, then **yank**, then **rip** your lines to shreds before you can tell your mind to let go of the handle which stops the digging bar. Keeping to my original route I knew that I would pass by my beloved satellite cable. I felt that my survey had proved that I would not touch the

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cable. What I did not take into account was that the pleasant fellow that put in the cable could not draw a straight line! Well you are correct in assuming that I did not have very good TV reception for a few days.

At this point I was very tired after taking the trenching machine back. I looked at the snowmobile trailer that I had been putting the dirt on, and relented that I was just too tired to try and find a home for the newly acquired dirt. Looking at the trailer, I noticed that the distribution of dirt was just about over the tire as to balance the load. Straddling the trailer hitch, (my first mistake) I pulled the pin and lifted the lever to unhitch the trailer (my second mistake), at this point I found myself launched into the air and repositioned so as that when I came down my ribs were exposed to the hitch. Three broken ribs later my lesson was well learned.

I hired a friend at this point to take me the rest of the way down to the eight foot level. Day after day the work was going on rather smooth. He progressed about two feet a day and my ribs were very happy to let him. I came home from work one evening to find my friend with a very puzzled look on his face. It was as if he did not want me to know until he had fully grasped what he had. He said to me; "You are not going to believe what I have found". I did not want to know after all the luck that I had up to this point. Finally after composing himself after a generous laugh, he informed me that at the six foot level he had encountered a TRUCK. That's correct a truck buried in my back yard from the 1950's or so.

I just about had him fill it all back in, but I could not have found another sole that wanted to give me that much dirt! Welding torch in hand we cut out the truck and finished the hole. The hole is now finished and my backyard is recovering from me. The moral to this story? If things go wrong as they sometime will, THEY WILL PROBABLY GET WORSE!

--73' Alan Seyboldt KC7MUZ

**THERE WILL BE A 6 METER NET  
WEDNESDAY NIGHTS 9:00 PM AT  
50.125 USB. THIS IS A SWAP AND  
CHAT NET AND EVERYONE IS  
WELCOME!**





## CLASSES

Many thanks need to go to Gary Openshaw for organizing the class to teach new hams, and others who are going to be teaching the classes. The class is being held at East Highschool each thursday eve at 6:30. Six people are learning the Morse Code and plan to try for the Tech +. If you are interested get intouch with Gary.  
 ---73' Alan Seyboldt KC7MUZ

## THE BOARD MEETING LASTNIGHT

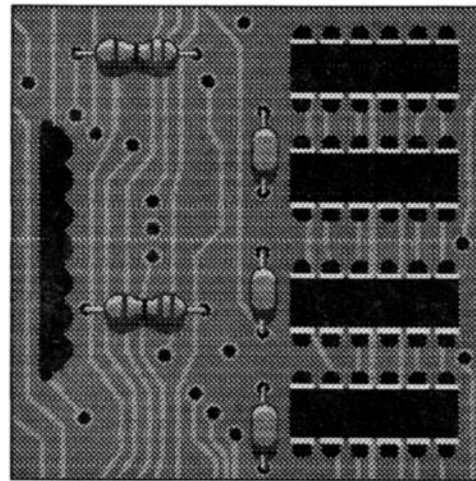
The board meeting last night was great! A lot of people mentioned that they wanted to continue on in their current position, if elected, and Alan Seyboldt KC7MUZ agreed to accept the nomination as President. Bruce Bergen (K17OM) cannot go on as President as he has accepted a position with the Scouts. Cindy Peters (KB7OUT) would like to continue on in her position as Executive V.P., and Gordon Smith (K7FHV) would like to continue on in his position as V.P. Gordon also mentioned that if someone else wants the job, he is okay to give it up. That he is willing to do either. Maurine Streckenfinger (KC7HOZ) has agreed to go on in her position and Linda Reeder (N7HVF) would like to continue as co-chairperson. I believe Gary Openshaw (KC7AWU) would like to continue on as Secretary and Chuck Johnson (WA7JOS) has agreed to go on in his current position.

Jerry Bennion has been released from his bishoprick so he has agreed to run for something. Great! Welcome back, Jerry!

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Past President, Ray Allen (N7TEI) has mentioned that he would accept the nomination for President. Elections this month should be interesting! Good Luck to everyone!

***DON'T FORGET  
THAT THIS  
MONTH IS  
HOMEBREW!***



**SEE YOU THERE!**



Statement of Ownership, Management, and Circulation

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