

Dave Felgar, NJ7A, gave us a presentation on VHF and UHF meteor scatter and weak signal modes.



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The
Microvolt

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Prologue

The Utah Amateur Radio Club was organized under its present name in 1927, although its beginnings may date back as early as 1909. In 1928, it became affiliated with the American Radio Relay League (club #1602) and is a non-profit organization under the laws of Utah. It holds a club station license with the call W7SP, a memorial call for Leonard (Zim) Zimmerman, an amateur radio pioneer in the Salt Lake City Area.

Meetings: The club meets each month except July and August. The meetings are held on the first Thursday of the month at 7:30 PM in the University of Utah Engineering and Mines Classroom (EMCB) building, Room 101.

Membership: Club membership is open to anyone interested in amateur radio; a current license is not required. Dues are \$15 per year, including a Microvolt subscription. The Microvolt and membership cannot be separated. Those living at the same address as a member who has paid \$15 may obtain a membership without a Microvolt subscription for \$9. Send dues to the Club Secretary: Dick Keddington, KD7TDZ, 1732 Woodside Dr. #32, Holladay, UT 84124-1624. ARRL membership renewals should specify ARRL Club #1602.

Contributions: Monetary contributions are gladly accepted. Send directly to the Club Treasurer: 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 (uarc@xmission.com), but other means including diskettes and typewritten submissions can be mailed directly to: Telvin Mills, 6864 Beargrass Rd., West Jordan, UT 84084. All submissions are welcome but what is printed and how it is edited are the responsibility of the Editor and the UARC board. Reprints are allowed with proper credits to The Microvolt, UARC, and authors. Changes in mailing address should be communicated to the Club Secretary: Dick Keddington, 1732 Woodside Dr. #32, Holladay, UT, 84124-1624.

UARC 2005 Board

Table listing UARC 2005 Board members and their contact information, including President Glen Worthington, Executive VP Roy Eichelberger, and others.

Committee Chairpersons and Members

Table listing Committee Chairpersons and Members, including 'Book Lady' Fred Desmet, Historian Ron Speirs, and various engineering and liaison roles.

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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

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Volume 48, Issue 4, April 2005



QST from the Prez

Glen Worthington, WA7X

Each month I reflect on our hobby and all that it involves and, to repeat myself again, that we are very diverse in our skills and abilities. At our last meeting we learned about meteor scatter and I'm sure that it was totally new to many at the meeting. Some of us only know ham radio through two-

meter FM and repeaters and possibly feel that DX is talking to someone over IRLP or Echolink.

One aspect that is fading (especially on two-meter FM) is the use or understanding of CW. It wasn't that long ago that Morse code (the International Morse code to be sure) was an essential element to get any ham license. While no-code licensing certainly has gone a long way to increase our ranks in number, code is a skill that still stands as an identifiable aspect of ham radio. I would strongly urge every licensee who does not currently have a "coded" license to take the time and upgrade. I struggle with the code and don't use it on a regular basis, but I can still sit down and within a short time come back up to speed. I also respect and admire those who have really mastered this skill and watched our Field Day scores soar due to a few masters of this art.

I recently was reading an old periodical and came across this partial article (the follow up was in an edition I don't have) written by Robert Hertzberg, W2DJJ, who has long since been a Silent Key. I edited some of the text to reflect contemporary situations but feel this is a very good article on learning the code.

73 de WA7X Glen

To obtain a license to operate an amateur radio station on any HF band, you must be able to send and receive simple-words at the minimum rate of five-per minute. This actually is a very slow speed, and you should be able to attain it after a couple of weeks of practice.

That last word, practice, is the whole secret of learning the code. No tricky "system" is a substitute for diligent, steady practice. The military services learned that basic fact during World War II, when radio operators had to be trained in a

hurry. They found that they just couldn't beat the clock and the calendar. They fed trainees the code until the dots and dashes, spilled out of their ears . . . literally! . . . but the process still took time.

The letters of the alphabet and the ten numbers are represented in the radio code by combinations of short and long sounds. The short ones can best be described as "dits," and the long ones as "dahs." In printed code charts, the dits are usually shown as heavy dots and the dahs as dashes. Ideally, the dah sound is supposed to be three times as long as the dit sound. The spacing between dits and dahs of the same character is equivalent in duration to that of a dit; between letters three dit spaces; and between words five dits. Actually, it makes little difference how long or short the sounds are, providing the dahs are noticeably longer than the dits. An operator makes the dits and dahs by tapping on the knob of a telegraph "key," which is nothing more than a lever action switch. A person's keying, or "fist," is as individual as his voice and his handwriting. Experienced operators can readily identify friends by their fists even before they transmit their station call letters.

By agreement among nations, the code used for all radio communication is "International Morse." The "Morse Code," also often called "American Morse," is something quite different. In the International Code, the characters consist only of dits, dahs, combinations of dits, combination of dahs, and combinations of dits and dahs, and the spacing of sounds within characters is uniform. In the Morse Code, which is named after the inventor of the telegraph and was used for many years on American telegraph lines, the spacing between sounds is part of some characters. For instance: in both International Morse and American Morse the letter "S" is "dit-dit-dit." In the first code, the letter "C" is "dah-dit-dah-dit," but in the second the same letter is "dit-dit-(space, no sound)-dit." You need a sharp ear to distinguish between "dit-dit-dit" for "S" and "dit-dit-dit" for "C." With teletypewriter machines replacing the old-fashioned clicking telegraph sounder, American Morse has rapidly died out.

"What's the best way to start on the code?" you're probably asking. First, make or buy some sort of a code practice set. It can be a battery-powered audio oscillator with a built-in loudspeaker, or it can be the very simple, cheap, and easily-made buzzer. This consists of a standard radio key (which you'll use later when you go on the air with c.w.), a common house buzzer, and two D cells. The parts are mounted on a piece of scrap wood and wired in series. Adjust the side nuts of the key so that the lever moves freely without binding.



Adjust the back lever nut so that the spacing of the contact points is a little less than about 1/16 inch. Adjust the spring tension nut so that the lever returns to its up position quickly after you take your fingers off the knob. Now you are ready to go. With a copy of the code in front of you, start with the first letter and go through the alphabet. Look at the chart, but do not read the dots and dashes out loud. Where you see a dot, press the key down for an instant; where you see a dash, hold it down a little longer. Sending this way to yourself, you force your brain to associate the combinations of sounds with particular letters.

Learning the code is almost like learning another language. Don't overload yourself the first few times with too much new information for the memory cells in your head. Give yourself fifteen or twenty minutes an evening for about a week. At the end of this period you should be able to tap out all the letters without having to look at the chart.

Of course, sending is easier than receiving, because you know what the text matter is. To get receiving practice you need either a partner or a short-wave receiver. Initially, a partner is more helpful. You should be able to find one among your friends. What, usually happens, if you announce that you're learning the code and intend to go on the air, is that too many assistants volunteer their services!

Two people, sending to each other in turn, can learn the code and build up speed, in one-fourth the time each would require working alone. Don't be surprised if your father or brother or sister show an unexpected interest in the proceedings and invite themselves in. Father-and-son teams are a common sight at VE examiner sessions.

Concentrate initially on the letters of the alphabet. The numbers will come along naturally later, as will the punctuation marks. For text, use any newspaper magazine clipping. When receiving, use a soft pencil or a smooth-writing pen, and write down each letter as you organize it. When you do the sending, watch your partner's "copy." If he writes the correct letter, quickly start the next one. If they write down an incorrect one, merely say "No here it is again," and repeat it.

Do not drag out the dits and dahs, but make them snappy. You'll probably have to experiment with the contact spacing and the spring tension quite a bit until you hit the right combination for easy sending. Incidentally, because most keys are made of brass, hand sending is usually called "pounding brass," and c.w. operators refer to themselves as "brass pounders."

Code "speed" is figured on the basis of words of five letters. A single minute of transmission at 5 w.p.m. would thus consist of only 25 letters, giving you almost 2½ seconds for each. Initially, don't even attempt to time yourself. Just

concentrate on the letters themselves, and speed will build up naturally as you continue your practice.

Don't rush down to the nearest VE session the first time you check yourself out at 5 w.p.m. You need a little margin of safety, because you'll be slightly nervous when you sit down in a strange room and hear tone signals somewhat different from those you practice with. I've heard people say, "Gosh, that code generated at the VE session sure must have been fast"; this, of course, after they flunked. It isn't. It's adjusted very accurately, and if it sounds too fast you just haven't had enough practice.

You want to remember connection with the ham examination: Uncle Sam encourages ham radio, because hams contribute a great deal to the development of radio communication. (In fact, they're responsible for short-wave radio as we know it today.) The VE's, who are hams themselves, will feel disappointed if you don't pass. So clock yourself to at least 8 w.p.m. and you'll find 5 smooth sailing.

If you are forced by unusual circumstances to study the code all by yourself, use the basic buzzer set for sending practice and a short-wave receiver for receiving practice. There are hundreds of stations on the air at all hours of the day and night, and you can easily pick out some slow ones. Also helpful in this connection are code practice programs that can be run on any PC with a sound card. Whatever means you use, steady practice is still the prime requirement.

Einstein On Radio

"I am often asked how radio works. Well, you see, wire telegraphy is like a very long cat. You yank his tail in New York and he meows in Los Angeles. Do you understand this? Now, radio is exactly the same, except that there is no cat."

Attributed to Albert Einstein

Trivia Question

This one should be an easy one. What does the term "73" actually mean when signing off at the end of a QSO?

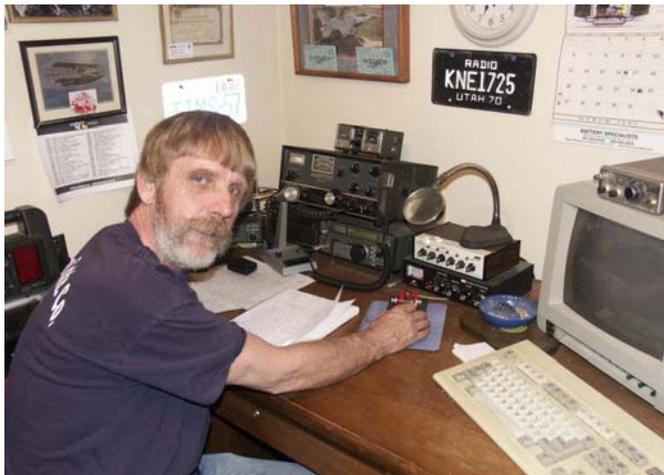
1. See you later.
2. Have a nice day.
3. Best regards.
4. Toodle-oo

Answer can be found elsewhere in this issue.



Member of the Month

By Linda Reeder



This month we are featuring Tim Purser WB7CIW. Tim has his General license and has been licensed since 1975.

Tim started out in Citizen's Band radio. Back then, one had to pay 20 dollars to get a Citizen's Band license. Tim's license number was KNE3725. Tim became interested in CB radio when he heard someone's voice coming over the speakers of his brand new stereo. He did some investigation and found that his next door neighbor's dirty CB radio was causing the interference to his stereo. Tim felt that there had to be something better than CB radio. It was so unregulated and the filthy language that came out of that thing.

Shortly after that Tim learned about an amateur radio class that was being taught by Philip Bullock, K7PB, who worked for the telephone company. So he took the class and received his Novice license. It wasn't very long after he had received his Novice license that he obtained his General class license.

What Tim likes best about amateur radio is CW. Tim says he works CW two to three times a week. He loves to rag chew. Tim says on CW it is easy. Basically, all you have to do is find out their name, call sign, location, weather and occupation. So you don't have to worry about what to say next. Tim has an Icom 735, Swan 270 and a Kenwood TM-231. Tim uses a vertical antenna. There is an interesting story on how he obtained this antenna.

Tim works for Central Electric as an electrician contractor. One day he received a call from a lady whose husband was an amateur radio operator and had passed away. She was hearing some strange electrical sounds and wanted him to come and check it out. He found there was an electrical discharge at the antenna connection. The antenna had been disconnected and bare wires were just hanging there. The lady just gave him the vertical antenna and told him to get it out of her house. So Tim got the antenna free. Tim told me that his boss at

work passed his General class license test three weeks ago and his call sign is KE7CTJ. Tim and his wife Brenda have two grown children, one boy and one girl.

Tim is a member of UARC, ARRL, and the VHF Society. Tim, we wish you the best in all your endeavors.

73, N7HVF Linda Reeder.

April Meeting: Direction Finding

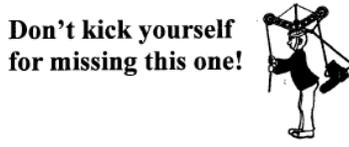
Have you heard hams on the air talking about "DF" and wondered what it was? Perhaps dog food, dirty fighting, or digital fibrillation? Well, it's really direction-finding -- the art of finding the source of an unknown radio signal. DFing is useful for locating intentional jammers, finding the occasional station with a carrier inadvertently stuck on, and finding other stations just for the fun of it in "bunny hunts" (as they've come to be called here in the Intermountain area) or Fox Hunts (as they're known in most of the rest of the country).

Mike Collett, K7DOU, will be our guest speaker at the coming UARC meeting, to be held Thursday, April 7. Mike has over 20 years of experience in hunting down transmitters using a variety of methods. He will share some of the most successful ones with us and tell us which ones are the winners based on convenience, cost, and success rate. He will also enlist the help of some others in the area who have had experience with various systems.

Hunting down transmitters can be fun and valuable, but we need to have more people equipped to do it. The April meeting should be a great opportunity for more people to learn how to get started.

For those who are really serious, you might also want to give Fred, KI7LM, the "book lady," a call and ask him to order the bible of direction finding: "Transmitter Hunting and Radio Direction Finding Simplified" by Joe Moell, KOOV; and Thomas Curlee, WB6UZZ. Fred can be reached at 485-9245.

- The "Meeting(s) after the meeting": A chance to enjoy pizza or other gastronomic delights with other hams. One group goes to Litz's Pizza, 716 E. 400 South. Another goes to a restaurant that varies from month to month, but will be announced at the meeting.
- The "Meeting before the meeting": A similar get-together for those who can leave work early enough to get there by 5:15 P.M. This month it will be at the "Chuck-A-Rama," 744 E. 400 South, in Salt Lake City.



Ohm’s Law (Part III)

This the third part of a four part series covering Ohm’s Law. Thanks to OCARC for permission to reprint this article.

By Bob Eckweiler, AF6C

In February we looked at Thévenin’s theorem and how it made solving more complex circuit problems easier. This month we’ll look at Ohm’s power law. This law fits so closely with the Ohm’s law that they are often grouped into the “six forms of Ohm’s law” (actually there are twelve!). Let’s list the three forms of Ohm’s law we know so far. They are:

$$E = I \times R \quad (1)$$

$$I = \frac{E}{R} \quad (2)$$

$$R = \frac{E}{I} \quad (3)$$

Ohm’s power law introduces a new term – power, often symbolized by a P or W (for watts). We will use W. Ohm’s DC power law states: *that the power in watts dissipated in a resistance (or load) is equal to the voltage across the resistance times the current flowing through the resistance.* In equation form it is simply:

$$W = E \times I \quad (4)$$

Like equation one, this equation can be written in two additional forms by re-arranging the terms. Equation five states: *that the voltage across a resistance (or load) is equal to the wattage being dissipated in the resistance divided by the current flowing through the resistance.*

$$E = \frac{W}{I} \quad (5)$$

The other form of equation four, which, we’ll note as equation six, states that: *the current flowing through a resistance (or load) is equal to the wattage being dissipated in the resistance divided by the voltage across the resistance.*

$$I = \frac{W}{E} \quad (6)$$

You now have seen the classic “six forms of Ohm’s Law”. Many ways have been developed to remember them – wheels, mnemonics, etc. I’ve never bothered with any of them nor have I made an effort to memorize the six equations; instead I’ve only memorized equations (1) and (4). From those two it is simple manipulation to get the four others as well as six additional forms that are often very handy.

Getting Ohms Law Into the Form You Want:

Let’s do a simple problem. What is the power dissipated by a one-ohm resistor when one volt is across it? The problem gives us the voltage but we need to know the current through the resistor. Using Ohm’s law equation two it may be calculated as one amp. Then, using equation four, the power dissipated by the resistor may be calculated as:

$$W = (E \times I) = (1 \times 1) = 1 \text{ watt}$$

Now, let’s raise the voltage across the one-ohm resistor to two volts; you might expect the power to double, but be careful. Calculating the current again, we find the current is now two amps, so the power is now:

$$W = (E \times I) = (2 \times 2) = 4 \text{ watts}$$

Similarly, if we change the current through the resistor to 2 amps, the voltage across the resistor will increase to 2 volts and the power will be 4 watts. When you change the voltage or current through a fixed resistor the power dissipated by the resistor changes by the square of the voltage or current change. In the above examples we had to solve two equations to find the wattage. Wouldn’t it be nice if that could be done using only one equation?

When I started this series, I promised to not get into math too heavily. I’m going to renege on that promise a little in this section. Feel free to skip it, but it is really very simple, and once you master

it you will find that you don’t need to memorize as much for that test you’re taking, or for that problem you’re solving. The trouble with memorizing is: if you don’t use it occasionally you’ll forget it. Here’s how to find all twelve equations when you only know the two basic equations (1 and 4).

Notice that between equations one and four, all four items: voltage (E), current (I), power (W) and resistance (R) appear (voltage and current appear in both!) You must know the value of two of the items to find either of the other two. Since each of the Ohm’s law equations only has three items in it, there is one item you don’t care about. What you want to do is end up with a formula that has the two known items on one side of the equal sign (usually the right side). If the three items of interest are all found in either of the two equations (1 or 4) then you only need that equation. If the equation isn’t already in the form mentioned above, divide both sides of the equation by the item you know that is on the longer side of the equation (the side with two items).

For example, let’s say we know the values for E and I and want an equation to calculate R. All three of these items appear in equation one, but it is not in the form we want:

$$E = I \times R \quad (1)$$

We want to get this equation into the form where R is alone on one side of the equation. Since ‘I’ is the item that we know that is on the longer side of the equation, we’ll divide both sides of the equation by ‘I’ like so:

$$\frac{E}{I} = \frac{I \times R}{I} = \frac{I}{I} \times R$$

Since I / I equals one, the ‘I’s on the right side cancel out and we get:

$$\frac{E}{I} = R$$

After swapping the left and right sides we get equation (3), which is the one we want.

If the three items we want in our equation appear only when we look at both equations, the process is similar but has additional steps. First, determine the item that you don't need and arrange either of the equations it appears in so that it appears by itself on one side of the equal sign; this is just what we did above. Then we just substitute that equation for the unwanted value in the other equation.

As an example let's look back at the example where we wanted to know the power dissipated in a one watt resistor when the voltage across it is known. We know 'E' and 'R' and want 'W', but we don't care about 'I'! Thus we can rearrange equation one by dividing both sides by 'E', and get equation 2. Now we just replace 'I' in the second equation (4):

$$W = E \times I$$

$$W = E \times \left(\frac{E}{R}\right)$$

Here's another example; we want the equation to solve for the power 'W', and we know the resistance 'R' and current 'I'. The voltage (E) is the item that we don't need. I'll start with equation (4) and arrange it to solve for 'E'. Equation one could just as easily be chosen):

$$W = E \times I \quad (4)$$

Divide both sides by 'I'

$$\frac{W}{I} = \frac{E \times I}{I} \quad \text{or} \quad E = \frac{W}{I}$$

Now, substitute the equation we just solved for 'E' in the other equation (equation one):

$$E = I \times R \quad (1)$$

$$\frac{W}{I} = I \times R$$

And arrange it so 'W', the unknown item you want to solve for, is alone on one side of the equation. This is done similarly except, since there is a dividing term ('I' in this case) you multiply both sides by the dividing term.

Let's simplify it now; first multiply both sides by 'I':

$$I \times \frac{W}{I} = I \times (I \times R)$$

or

$$\left(\frac{I}{I}\right) \times W = (I \times I) \times R$$

Remember – any value divided by itself is one so:

$$W = I^2 \times R$$

When solving a couple of the equations you will end up with a "squared" term in the answer. One such case is when you want to know the voltage and have the power and resistance. Solve this as was done in the previous exercise up to the point where you get:

$$E^2 = W \times R$$

Now just take the square root of either side:

$$E = \sqrt{W \times R}$$

Table 1 (below) presents all twelve forms of Ohm's law. See how many you can derive from the two main equations one and four? Notice that the less popular "other six" forms of Ohm's law all have either a square or square-root term. Perhaps that is why they are less popular! Spend a little time playing around getting from one equation to the other and you'll soon be able to get Ohm's law in the form you want easily.

In next month's article on Ohm's Law, we're going to use Ohm's law in some practical ways and get a better feeling how it can be used in day-to-day problems. As part of the discussion we'll talk about short circuits, charging NiCad batteries and common car problems.

Answer to the Trivia Question

Number 3..Best Regards. Now notice, I did not say Best Regardses because there is no such word, and that means that if you say 73's, you are using bad grammar. (No, not your grandmother!) Just "73" will suffice.



$E = I \times R \quad (1)$	$I = \frac{E}{R} \quad (2)$	$R = \frac{E}{I} \quad (3)$	$W = E \times I \quad (4)$
$E = \frac{W}{I} \quad (5)$	$I = \frac{W}{E} \quad (6)$	$R = \frac{E^2}{W} \quad (7)$	$W = I^2 \times R \quad (8)$
$E = \sqrt{W \times R} \quad (9)$	$I = \sqrt{\frac{W}{R}} \quad (10)$	$R = \frac{W}{I^2} \quad (11)$	$W = \frac{E^2}{R} \quad (12)$

Lock SSB Signals Using CTCSS

While fumbling around the dial on my 2-meter SSB rig I realized how difficult it is to tune someone in that you are not familiar with their voice pitch unless you have heard them on FM. What I needed is a system to assure perfect pitch.

Then I remembered the subaudible tone-coded squelch on my FM rig and how it selectively limits what I receive using a precisely known tone frequency. Wow maybe I could transmit a sub-audible tone along with my voice on SSB. Most CTCSS (continuous tone coded squelch systems), also known as PL or Quiet Channel) use precision audio oscillator circuits; older FM radios used reeds that actually vibrated at the exact frequency. I found that I could purchase the modules that will do the encoding and decoding and feed their output right into the microphone input and receive from the detector in the radio a signal to decode with.

I tried it, putting the subaudible tone into one SSB transceiver (into a dummy load for test purposes) and tuning a second transceiver until a green LED that I hooked up to the decoder module came on. Wow, I was now perfectly tuned. I spoke into the microphone on the transmitting end and sure enough the sound coming from the speaker on the other transceiver was me (I even asked my dog who told me it was me and he won't lie). The decoder even has a built-in high pass circuit to run the receive audio through assuring all the tone is removed and remains "sub-audible." The tone board manufacturers recommend running the deviation of the tone on an FM system at 500 Hz, I reasoned that this was 10% of the peak deviation of 5 KHz and so I set the level on my SSB rig for 10% of my peak voice. I have also standardized the tone for all SSB at 100 Hz, a nice number.

I am now releasing this brilliant idea into the public domain as of April 1, 2005. Have fun with it like I am!

73, Doby Hertzmonger AP1FOL

Exam Schedule

- 4/02/05¹ (Sat.) Salt Lake City
Contact: Gordon Smith, K7HFV
Phone: (801) 582-2438
- 4/26/05¹ (Tues.) Salt Lake City
Contact: Eugene McWherter, N7OVT
Phone: (801) 541-1871
- 5/18/05 (Wed.) Provo
Contact: Steve Whitehead, NV7V
Phone: (801) 465-3983
- 5/18/05 (Wed.) St. George
Contact: Ronald C. Sappington, W17Z
Phone: (435) 673-4552
- 5/26/05 (Thu.) Roosevelt
Contact: R. Chandler Fisher, W7BYU
Phone: (435) 722-5440
- 5/31/05¹ (Tues.) Salt Lake City
Contact: Eugene McWherter, N7OVT
Phone: (801) 541-1871
- 6/01/05 (Wed.) Ogden
Contact: Mary Hazard, W7UE
Phone: (801) 430-0306
- 6/04/05¹ (Sat.) Salt Lake City
Contact: Gordon Smith, K7HFV
Phone: (801) 582-2438

¹ Pre-registration required. Contact the contact person prior to the examination date.

For more detail either call the contact or checkout the information on our webpage:

<http://www.xmission.com/~uarc/>

Steak Fry

UARC's annual steak-fry will be held on the afternoon of Saturday, July 16th. Tickets will be available at the May and June meetings.

Ogden Hamfest

The Ogden Amateur Radio Club is sponsoring the Northern Utah Hamfest to be held Saturday, April 23, 2005, at

8:00 AM. The location is the Browning Armory, 625 E. 5300 S., South Ogden. They will be holding a raffle with an Icom IC-703 HF radio as the grand prize along with hourly door prizes. See page 11 of this month's *Microvolt* for details or on the web at www.ogdenarc.org.

Utah Hamfest

The Utah Hamfest will be held July 29 – 31 at Ruby's Inn in Bryce Canyon. See pages 9 and 10 in this month's *Microvolt* for additional information or go to www.hamfest.org.

Wyoming State Convention

The Sweetwater ARC is holding an ARRL convention in Casper, Wyoming at the Parkway Plaza on May 27-29. The grand prize drawing will be a Yaesu FT-897D Transceiver. For additional information go to <http://www.qsl.net/wy7u>



**Communication Products
Amateur Radio Sales**

**7946 S. State St., Midvale, UT
801-567-9944**

**Open Weekdays 10-6
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Featuring Their
Amateur/Receiver
Lines Now On Display**

<http://www.comproducts.net>
**Bob Wood, W7OAD
UARC Member**



Utah Hamfest 2005



ARRL ROCKY MOUNTAIN DIVISION CONVENTION

Ruby's Inn - Bryce, Utah

July 29,30,31 2005 (Friday, Saturday & Sunday)

Ruby's Inn - Bryce, Utah (1 mile north of Bryce Canyon)

Visit the following Web site for more details: www.utahhamfest.org

Special Guest and Breakfast Keynote Speaker

Activities Include:

BBQ Cookout / Eyeball QSO Party
Dutch Oven Dinner
Breakfast Banquet
Dealers
Outside Swap Meet Area **Free**
(Bring your own table)
Seminars and Forums
Women's and Children's Events
AF7Q, QSL Card Checker
Prize Drawings

Contests:
CW & QLF
Mobile Installation,
Transformer Toss
Transmitter Hunts (a new challenge)
Wouff Hong
VE Amateur License Exams
(Pre-Registration is not Required)
Contact Bob Anderson aa7tr@nebonet.com
You must be on time for this session

Grand Prize:

Pre-Registration Prize:

Registration Information: Eugene or Carol McWherter – n7ovt@arrl.net or kc7llw@arrl.net

Before July 1st: Adult (18 and over) \$9.00, Youth (17 & Under) \$3.00 (No mail-ins after July 1, 2005)

At the Door: Adult \$12 and Youth \$5.00

Accommodations:

All Hotel registrations need to be made through our Hamfest travel Agents, Steve and Lorna Garlitz

Ruby's Inn (Special Rates prior to July 1)
Ruby's Inn (adjacent to main lodge) \$73 + Tax
Main Lodge \$93 + Tax
Bryce Lodge across street \$53 + Tax
(There is a maximum of 4 people per room)

RV/Campground:
Accommodations For 2
Full Hookups \$29.00 + Tax
(add \$2 for each additional person)

For more information on Accommodations Contact: Steve or Lorna Garlitz 801-955-0671 or by Email at kd7jtz@msn.com



Utah Hamfest 2005

ARRL ROCKY MOUNTAIN DIVISION CONVENTION

Ruby's Inn at Bryce Canyon

July 29, 30, & 31, 2005

www.utahhamfest.org



Please Print

Please provide your e-mail address:

Name: _____ Call sign: _____ Email: _____
Address: _____ Phone: () _____ -
City: _____ State: _____ Zip+4: _____ -

Names of Additional Attendees (Name and age of youth):

_____ Call sign: _____
_____ age: _____ Call sign: _____
_____ age: _____ Call sign: _____
_____ age: _____ Call sign: _____

Must have names and call signs (if applicable) of all registered attendees.

Table with 4 columns: Item, Quantity, Price, Total. Rows include Adults, Youth, Friday BBQ, Saturday Dinner, Sunday Breakfast, and Total.

*Youth registrations eligible for youth prizes only
**Only 200 dinners are available on a first come, first serve basis.

Pay online using PayPal. Send payment to utahhamfest@yahoo.com
Check or Money orders payable to:

Utah Hamfest
PO Box 382
Bountiful, Utah 84011-0382

ALL HOTEL RESERVATIONS MUST BE MADE THROUGH THE HAMFEST TRAVEL AGENT, STEVE AND LORNA GARLITZ (kd7jfb@msn.com)

Please make the following reservations:

Table with 5 columns: Number of Rooms, Type of Room, Smoking/Non, Cost/room, TOTAL COST. Rows include Ruby's Inn, Main Lodge, Lodge, Campground, and Extra people for Campground.

Date of arrival: _____ Date of departure: _____

DEPOSIT (First Night)

Cash _____, Check _____ or
Credit card number* _____ exp date: _____

*Ruby's Inn Requires a credit card or a separate personal check 30 days before arrival. Credit card will be used for accommodations only.

For Official Use Only

Table with 11 columns: DATE, \$ RECEIVED, CHECK #, BY, REGISTRATION #, #AP, #YP, DR, #CO, #DO, #BF

NORTHERN UTAH HAMFEST

Sponsored By
The Ogden Amateur Radio Club (OARC)

Location: Browning Armory, 625 E. 5300 S., South Ogden



Date: Saturday April 23, 2005

Start Time: 8:00 AM

Raffle

Grand Prize : Icom IC-703 HF Radio

(Must be present to win)

Pre Registration Form

Call Sign: _____

Name: _____

Email: _____

Phone: _____

Entrance Donation.....\$ _____

(\$5 or \$10 family, (\$6/\$12 at door) includes a ticket for door prizes)

Raffle Tickets for IC-703.....\$ _____

(\$3.00 per ticket, 2 for \$5.00)

Vendor Table.....\$ _____

(\$3.00 per table)

Lunch - # & Type of Sub.....\$ _____ # _____ (_____)

(\$5 - 6 inch (T)urkey, (H)am or (B)eef Subway with chips)

Total.....\$ _____

Ogden Amateur Radio Club

P.O. Box 3353

<http://www.ogdenarc.org>

Ogden, UT 84409

NET SCHEDULE

Day	Time	Freq.	Name/Purpose
Sun.	2100	146.62 MHz	Utah Amateur Radio Club Information Net
Mon.	2100	147.18 MHz	Intermountain Intertie Net (Ragchew)
Mon.	2100	144.25 MHz	Weekly 2-meter SSB net
Tues.	1900	146.98 MHz & 145.37 MHz	West Desert Amateur Radio Club
Tues.	1930	146.90 MHz	Ogden Amateur Radio Club
Tues.	2000	147.18 MHz & 147.12 MHz	Utah VHF Society (business and swap)
Tues.	2100	147.34 MHz	Utah Valley Amateur Radio Emergency Service
Tues.	2100	146.72 MHz	Bridgerland Amateur Radio Club Net
Wed.	2000	146.88 MHz	Salt Lake County Amateur Radio Emergency Service
Wed.	2000	145.43 MHz & 145.20 MHz	Utah Box Elder – Thiokol Net
Wed.	2100	146.74 MHz	Mercury Amateur Radio Association, SL area
Wed.	2100	145.49 MHz	Mercury Amateur Radio Association, Ogden area
Wed.	2100	145.37 MHz	Mercury Amateur Radio Association, Provo area
Wed.	2100	50.125 MHz	Weekly six-meter net
Thu.	1900	147.42 MHz & 449.925 MHz	Davis County Amateur Radio Club
HF Nets			
Daily	1230	7.272 kHz	Beehive Utah Net (formal traffic handling)
Daily	0200Z	3.937 kHz	Farm Net (Same UTC summer and winter)
Daily	1930	3.708 kHz	Utah Code Net (formal traffic handling)
Sat.	1100	7.272 kHz	Quarter Century Wireless Association (QCWA)



**Are You A Radio Buff?
Are You A History Buff?**

If you are a radio history buff you will enjoy this link. It is a recording made in the 30's of a spark gap transmission.

<http://www.lakeerieba.com/HobartSparkXmtr/HobartSparkXmtr.htm>

**Is Ham Radio Dying
Out?**

Not according to the IARU page at URL <http://www.iaru.org/statsum00.html>

In 1965 there were 399,000 Amateur stations worldwide. In 2000 there were 2,789,720 Amateur stations worldwide.