



# THE OHM TOWN NEWS

*Voice of the Bridgerland Amateur Radio Club*

September 1999

<http://www.w7ivm.org>

## WELCOME BACK SOCIAL TO BE HELD SEPT. 9

### The President's Message

by Tyler Griffiths N7UWX



#### Welcome Back!

Hope your summer was good to you! Just to reflect back on the summer, we had some pretty impressive disasters here in the State of Utah and even in the northern end of the state where we live.

We had a very large flood in Riverdale that took out about one hundred homes and a tornado in Salt Lake City that did a lot of damage and destroyed a lot of homes and places of business too. That brings me to the thought again to stress the point of how important it is to keep up to date on our radios and other equipment. We need to practice using our radios so we know all the IN's and out's of programming it.

At the Riverdale Flood you were required to have an offset on a simplex frequency (with most radio's they do not put an offset on frequency's normally used for simplex) and a PL tone.

There is a good chance that when you show up to the scenes of an accident or disaster you will need to use your radio differently than you normally do.

Also it is important to keep your batteries cycled. If they sit around for long periods of time half charged and you plug in the charger it has the potential of eventually ruining your batteries.

Keep in mind that public service events

*(Continued on Page 2)*

### Fall Welcome Back Social

Thursday, September 9

#### Merlin Olsen Park

300 East between  
Center and 100 South, Logan



#### Pot Luck



**Bring your favorite  
dish to share and your  
own eating utensils**

**Eat at 6:30**

**Please feel free to  
come earlier and visit.**

Listen to the net, 9 pm on Tuesday  
the 7th for final details

### HAM PROFILE

By Boyd Humperys, W7MOY



Gary Richardson KC7WN and  
Fran, his XYL.

We ought to begin this falls series with a musical note, a pleasant one at that. Perhaps not many of us have confessed to any outstanding musical ability other than singing for our suppers. How about fessin' up fellow enthusiasts? We do have a fellow Amateur in our midst who does a very respectable job at the organ amongst his other accomplishments.

Please get acquainted with Gary Richardson, KC7WN, who first got his ticket as WB7OBL (dubbed Old Bony Legs by the household) back in 78 and now holds an advanced ticket as KC7WN. I would say that's family involvement.

Gary's birth place is Grace Idaho, although we ultimately get the live ones down this way. He tells of an early exposure to all sorts of real vintage electrical

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## 1999 Club Leaders

### President

Tyler Griffiths, N7UWX  
Home-752-7269 Pager 750-9222  
n7uwx@email.com  
southpaw@sisna.com

### Vice President

Mark Hebert, AA1HR  
Home 563-1135  
mhebert@spillman.com  
mhebert@netutah.net

### Secretary

Beanie Lofthouse, KJ7LQ  
Home 245-6632  
lofthouse@mtwest.net

### Treasurer

Jeff Tingey, KF7ZX  
Home 753-6627  
jtingey@sisna.com

### Board Members

Farrell Garr, KC7CWX  
(Immediate Past President)  
Home 753-4332  
garr@cache.net

Cheryl Thurgood, N7YUE  
Home 563-5201

Joe Corbett, N7NJR  
Home 752-3263  
ids@mtwest.net

### Newsletter Editor

Don Rawlinson, WA7VNQ  
Home 752-1269  
don@campbellsci.com  
donr@deseretonline.com

### Repeater Committee Chairman & 147.260, 145.310 Repeater Trustee

Bill Neville, WA7KMF  
Home 753-4352  
BillN@qstr.com  
bneville@sisna.com

### 146.720 Repeater Trustee

Bob Wood, WA7MXZ  
Home 753-2119  
bobw@cc.usu.edu

### 146.640 Repeater Trustee

Terry Zollinger, N7PEG  
Home 753-0373  
tlzollinger@mae.usu.edu

### VE Testing

Paul Hansen, WO7N  
Home 753-4843

### Training Coordinator

Travis Roberts, AB7ZK  
Home 787-8374  
travis@campbellsci.com  
gtrobe@xmission.com

### Emergency Coordinator

Brian Potts, KB7FUB  
Home 563-6467

(Ham Profile, Continued from page 1)

stuff, including batteries, microphones, sizable coils, and even some varieties of Ford coils. Some ancient experiments in communications were revived, especially with the latter in the promise of being heard clear down the block. It presumably resulted in an electrifying experience for several if nothing else. Remember Marconi got his start in that direction. He had a great Elmer in one by the name of Lem Allen at radio station KGEM. This substantiates the theory that if one gets infected early in life, he has recurrences throughout his or her life.

He attended USU where he met and married Fran Shoup, a native Loganite, graduating in '53 with majors in Nutrition and Food Science, although music, both choral and instrumental were close seconds. He spent a couple of years, '55-'56 in the military with an assignment in Germany. Perhaps that's where a little knowledge of the German tongue began to be absorbed. Both can probably stay out of trouble with the Francais as well.

They subsequently shifted to the University of Wisconsin, completing a masters program in Food Science in '60. He then accepted a position with The Swift Co. in Chicago. If my memory serves me correctly The Swift Co. is quite renowned for their Ham products. I wonder just how he managed that one. The next tour of duty was with Dairyland Food Labs in Wisconsin, until the lure of the fresh Cache Valley air brought them back with a position in the Nutrition and Food Science Dept. at USU. Undoubtedly some of you may have taken courses under Gary, where it is rumored he ran a tight ship. Most in the teaching and research professions take one or maybe two Sabbatical leaves during their careers. How would three strike you? First the family headed for New Zealand in '75-'76 for work in Dairy research. Incidentally he began to get serious with code practice while there, listening to some old vintage practice tapes about WW 2 tales. The next adventure was in Cork, Ireland for several months for work in Dairy research in '81. Blimy, the next stint was in York, England in '86, where it's rumored his experiments left a few mad cows.

To make a long story short, along came retirement and time to do all those things

one couldn't do beforehand. Next came a Mission call to American Samoa, (rough duty), where he taught Science and tried to make Hams out of half the island youth. He was given the responsibility to operate the Mercury Amateur Radio Club Station 5W1JL. The only radio facility to survive Hurricane Val two years prior in '91. He even received a reciprocal call of 5W1GR. How about that, not many get their initials in a vanity call.

The Richardsons have five daughters and one son, 24 grand children to date. Gary is active on 2 meters, and does some admirable things with the PC. Another talent, and a great family. Get to know them. He probably can teach us a note or two in English, German, or French.

(President's Message - From Page 1)

are great practice for emergency communications and they also keep you up to date on your radio!

We have made some trips to repeaters this summer and have gotten every thing in pretty good shape for the winter. With the exception of Red Spur, they are all up and running. Red Spur will be up shortly and Mt. Logan has new firmware. We are still working on the link to Snowbird, It should be done this fall.

Up coming club events are: Balloon flights. Stay tuned for more information (contact Joe Corbett if you want to get involved). LOTOJA - September 18. Contact Tyler Griffiths or Cheryl Thurgood if you want to get involved. The Top of Utah Marathon - September 25. Contact Bret Butler if you want to get involved.

Well the first club meeting of the fall is almost upon us. It is on September 9th at 6:30 p.m. at the Merlin Olsen park in Logan in the pavilion. It is a pot luck social. So bring along something good to eat, with enough to share, and get to know every one!

See you there!

73 de Tyler N7UWX

## LEARN THE CODE!

Here is some stuff that I received on the QRP-L mailing sig. I have received permission from the author to print it in the Ohm Town News as long as we send him a copy (the address and permission are at the end of the posting). Here is the posting. Travis Roberts

Barry L. Geipel - AD6HR wrote:

>  
> Ed,  
>  
> Could you share with us just how folks in the military are/were trained to do code? What techniques were used in training? What do you mean by "reflexively"?  
>  
> 73  
> Barry - AD6HR

Hi Barry, I'm happy to hear of your interest in this. Of course I'll not get into any classified information or they may confiscate my Vibroplex bug.

Basically one first learns to type. Page after page of training manuals are typed by us until we obviously have better than 30 or 45 WPM skills at a particular accuracy level. Concurrent with typing skill training, time is spent learning the code via sound. Eventually one learns the following characters:

All Alpha letters, 4 special characters with a Bar over them -- O,H,A, and U dada-dadit; dadadadah; didadida, and dididadah respectively, and the cut numbers: 1 thru zero:

- |              |              |
|--------------|--------------|
| 1) didah     | 6) dadididit |
| 2) dididah   | 7) dadadit   |
| 3) didadah   | 8) dadidit   |
| 4) didididah | 9) dadit     |
| 5) dididit   | 10) dah      |

The core training is pure fun for some of us. You enter a room with rows of chairs, each facing a keyboard sunk into the table. Sitting in the chair, you can see all the other operators at their stations at your right and left. In front of you are three divider 3 walls, about 24 inches high, left, front and right. These keep distractions down. As you face the wood grain vertical separator directly in front of you, you notice that the entire keyboard has been duplicated in that wall. It is clear plastic and every letter, number, etc, as well as space bar is outlined. This "Display" is at eye level or just below.

Now, you place the headphones on and you hear noise at a low level, such as a cassette tape before or after music. Later, a 5 second tone alerts you to impending code.

Realize that we haven't learned the code at all at this time. No one knows the letters unless they practiced when they were younger.

You hear Morse code and DON'T know what to do! After a few seconds (About 3 seconds), the "Display" light comes on. You can easily see you should have pressed that letter as it is clearly lit up. You hear the letter 3 more times and try as you might, hitting the key does not stop the light until you have heard the character 3 times and the sound stops. You type the correct character, the light goes out and a new character is heard. What to do, what to do..... 3 second wait, light comes on under the letter on the display, hear that code letter again 3 times, then tap the keyboard letter. If you tap the WRONG character, the light goes on and you get to hear it all over....

After a while you get some right. You Also realize that you are learning ONLY 6 NEW CODE LETTERS AT A TIME. You are also taught to hit the space bar after every 5 random letters, twice space-bar after 5 groups, and carriage return key after 10 groups of five.

Above the keyboard display is a block of rectangle boxes. They light up after every 5 characters are completed, you march along watching the red blocks light up and progress to 50 groups of 5 letters. That is 250 characters and the computer lets you rest and grades your success rate. After a success rate of 90% or something, you get 6 new letters. This progresses until you learn the final characters. Your now expected to work with 12 characters. This phase of training is the "Bravo" phase. You begin at "B6", progress to "B12" etc. until you learn "B26" which is all alpha characters. Then "B40" and "B50" (I'm digging deep here, I can't quite recall....) Eventually you learn all the letters and you no longer get 3 repeats of code for missed letters. OH, the response time for the learning phase is about 3 seconds to locate and tap the correct letter on the keyboard.

Soon you are ready for "Charlie" phase. The response time drops to 2.5 seconds or so and the repeat is only once for missed letters. All missed letters are lit up and

you must clear them to proceed. Then you graduate up to "Charlie 1.4" (1.4 second response time.)

Upon passing this phase you arrive at the "Delta 5's" This is 5 wpm, No repeats of missed characters -- no more lights. You are on your own! Every missed character will offset that row and you'll miss all of the characters. So you soon learn that if you don't know a character -- there's know time to guess. HIT A PERIOD for a placeholder. To this day, when static crashes or QSB result in bad copy, I place a period on my hardcopy. Good habit to have.

You progress from Delta 5's to 6's to 7's etc up to Delta 20's to graduate. I was at Delta 30s after 30 school days and was awarded their "Samuel F. B. Morse" award. I have it framed at home. Perhaps I'll bring it with me to a Norcal meeting in the future.

By the time you are into the "Delta" training phase, any opportunity to "THINK" about what you heard disappears. There is NO TIME to think of Beethoven's 5th symphony when the Letter "V" is heard. No more di di di Dahhhhhhh. Time to REACT. This is how you get to high speed copy. Reflexive response. Autonomic, etc. Terms that describe a direct path from hearing the code and typing in a spot on the keyboard with a particular finger. You don't hear the letter, such as a "T" and think "Type a T", you simply find your left index finger is already moved and typed it!

This is why having a QSO is different than just learning the code on computer. One must think of conversation and process thoughts while sending code. WaaaaY different than being an expert at copy.

Anyway, somewhere between "B50's" and "Charlie 2.5's" you have to scribe all of the letters in a timed test. You have been taught the code by sound, and I found that I had to learn to write a "." for a di, and a "-" for da. We learned that only the final character of the Morse code will have the pronounced ending for dit and dah. so "H" is sounded didididit and Bar-H is sounded dadadadah. Letter "I" is sounded didit, not ditdit.

All of the elements of these 50 characters (a-z, 1-0, cut numbers, and special) must be scratched on paper from memory

(See "Code" on Page 4)

## Letters to the Editor



YOUR contributions to this column are welcomed. You may contact me by the following modes:

Mail: Don Rawlinson WA7VNQ  
182 West 700 North Apt C  
Logan UT 84321

Phone: (435) 752-1269 (Home)  
(435) 750-9613 (Work)

E-mail: donr@deseretonline.com or  
don@campbellsci.com

Don,  
Could you put this in the next news letter?  
Tyler

Tyler Griffiths tyler@sfcicorp.com  
Inventory Specialist  
Utah Distribution Center 435-752-8175  
x377

----- (Forwarded letter 1 follows) -----  
Date: Mon, 26 Jul 1999 08:18:15 -0600  
To: Tyler.Griffiths  
From: Mark.Hebert[mhebert]@spillman.com  
Subject: FW: Question

Tyler,

I could not find the original message I sent to ARRL for a ruling so I resent this past week. Here is the message and reply I received.

Perhaps we should get this included in club documentation someplace so we do not have to always ask for a ruling every time someone questions the legality of the clubs participation.

Mark

-----Original Message-----  
From: Mark Hebert [mailto:mhebert@spillman.com]  
Sent: Thursday, July 22, 1999 3:11 PM  
To: 'reginfo@arrl.org'  
Subject: Question

The radio club I belong to has been asked to handle communications for a bicycle race. This race is a one day 203 mile race through the Rocky Mountains going from Northern Utah through Idaho ending in

Wyoming. The promoters have offered to pay for lodging for those amateurs that assist with communications. The race begins at 0630 MST and will end when the last rider crosses the finish line. Typically I am told to expect a 12 - 14 hour day.

The question that has been raised is does this violate Section 97.113 subparagraph 2 or any other section of part 97 of the FCC rules?

I would like to thank you for your time in responding to this question.

Mark A Hebert  
AA1HR

-----Original Message-----

From: Hennessee, John, N1KB [mailto:jhennessee@arrl.org]  
Sent: Sunday, July 25, 1999 10:49 AM  
To: Mark Hebert  
Subject: RE: Question

Mark,

That would be incidental, such as receiving a tee shirt or free food for assisting with a walk-athon. Free lodging isn't the reason amateurs provide the communications since it simply reimburses amateurs for out of pocket expenses, something I presume that they do for all volunteers who help for long periods. The problem would come in if the organizers would make an offer for payment for services rendered and that's prohibited by Section 97.113. In the case you mentioned, it is incidental and not a rule violation. 73.

John, N1KB

John C. Hennessee, N1KB  
Regulatory Information Specialist  
American Radio Relay League HQ  
225 Main St.  
Newington, CT 06111  
Tel: 860-594-0236  
Fax: 860-594-0259 (specify JCH)  
E-mail: n1kb@arrl.org  
jhennessee@arrl.org  
World Wide Web: <http://www.arrl.org/field/regulations/>

(Code Continued from page 3)

within 1 minute in a timed test. Example: A) . \_ B) \_ \_ etc...

Other timed tests are seemingly more practice than conditions of passing the schooling. Instead of code elements, you practice writhing the letters as heard. Example: didah) a dadididit) b.

One learns quickly that there are better ways to write an "A" than as a capital with three strokes! Also, at first you write REAL BIG, and your copy slants off the page at an angle, with the letters getting smaller and smaller as you realize you are getting behind :) (Boy, I sure remember a lot eh??? So much for debriefing)  
<vbg>

These practice sessions appear to add a dimension to your training by subverting your typing reflex and forcing you to form characters by hand. It is a different ball game altogether. It took me a week to get to 18 or 20 WPM by "Stick", (Using a pencil), but this was in a secondary school that required proficiency with "Stick". Only two of us were awarded the "C" school.

That's about all. Oh, back in 1985 or so, I wrote a basic program that mimicked the training methods at the school. It was really cool and even graded my copy. I also tracked the code characters on screen with a marching 'box', and could visualize my position within the 250 character "Block". This program is lost somewhere...

Well, this is probably more than anyone needs or wants to know about military code training. I do have a photograph from the base newspaper which featured the areas I described and a brief blurb on the school.

I hope you have found this entertaining. I have. Good memories of NTTC Cory Station, Pensacola Florida. Some of this is mentioned in my Biography on <http://www.qrz.com>

Best to all and have a great weekend.  
Viva QRP!  
-Ed "73" we6w/cueball <g>

Don.

This might be a good short article to put in the Ohm Town News.

Harl, W7LTH

## PROPAGATION FORECASTING

Here is a very basic explanation of the numbers used in the National Bureau of Standards radio propagation forecasts that are helpful in determining conditions for working DX on the Amateur Bands.

(Thanks to Tad Cook, K7VVV of Seattle Wa.)

Amateur Radio operators who use HF generally like increased sunspots because it correlates with better worldwide radio propagation. When there are more sunspots, the sun puts out radiation which charges particles in the ionosphere. Radio waves bounce off of these charged particles, and the more dense these clouds of ions the better the HF propagation. When the ionosphere is more dense, higher frequencies will reflect off of the ionosphere rather than passing through to space. This is why every 11 years or so when this activity is higher 10 meters gets exciting. It is at a high enough frequency, right near the top of the HF spectrum, that radio waves propagate very efficiently when the sunspot count is high. Because of the wavelength, smaller antennas are very efficient on this band, so mobile stations running low power on 10 meters can communicate world wide on a daily basis when the sunspot cycle is at its peak. The sunspot numbers used in this bulletin are calculated by counting the sunspots on the visible solar surface and also measuring their area. The solar flux is measured at an observatory in British Columbia using an antenna pointed toward the sun tuned to 2.8 GHz, which is a wavelength of 10.7 cm. Energy detected seems to correlate with sunspots and with the density of the ionosphere.

Other solar activity of concern to HF operators are solar flares and coronal holes, which emit protons. Since the charged ions in the ionosphere are negative, a blast of protons from the sun can neutralize the charge and make the ionosphere less reflective. These waves of protons can be so intense that they

may trigger an event called a geomagnetic storm.

The Planetary A index relates to geomagnetic stability. Magnetometers around the world are used to generate a number called the Planetary K index. You can hear the Boulder K index updated every three hours on WWV, or by calling 303-497-3235. A one point change in the K index is quite significant. A K index below three generally means good stable conditions, and above three can mean high absorption and poor reflection of radio waves. Each point higher than three is a big change in conditions.

Every 24 hours the K index is summarized in something called the A index. A one point change in A value is not very significant. A full day with the K index at 3 will produce an A index of 15, K of 4 means A of 27, K of 5 means A of 48, and K of 6 means A of 80. You can find an explanation of these numbers on the web at [http://www.ngdc.noaa.gov/stp/GEOMAG/kp\\_ap.html](http://www.ngdc.noaa.gov/stp/GEOMAG/kp_ap.html).

The number reported here is the Planetary A index, which is sort of a worldwide average based on the K readings from a number of magnetometers. The numbers reported on WWV are the Boulder K and A index, measured in Colorado. Generally the higher the latitude of the measuring station, the higher the K and A indices reported. This is because the effects of geomagnetic instability tend to concentrate toward the polar regions of the globe.

You can get a lot more information by reading the chapter on propagation in any recent edition of the ARRL Handbook. Another good source is a book titled The New Shortwave Propagation Handbook, by George Jacobs, Ted Cohen and Robert Rose, published by CQ Magazine.

### VE EXAM SESSION

Saturday, September 11, 1999  
8:00 A.M. SHARP

The test session will be held at  
CAMPBELL SCIENTIFIC, INC.  
815 WEST 1800 NORTH  
LOGAN (Front Door)

SEE YOU THERE

## AC70 Repeater System News



146.720, 449.625 145.310,  
147.260, 146.640

While there was not a formal repeater committee report made this month, there is some information in the President's message about what is happening. See that location for some latest news.

## FIELD DAY

We want to thank Travis Roberts and Kevin Reeve and all who worked with them to put the field day activity together this year. While your editor was unable to attend I understand that it was a great time...as usual.

Cheryl and Russ Thurgood would like to thank all of you who took over at field day in their stead. They were detained by the arrival of McKenzie Shae Thurgood who was born on Field Day at 12:33 PM. I guess she started field day off right!



(I suppose we will have to concede that this was a pretty good reason for their absence.)

Have your "cake" and eat it too!

**REMEMBER THE SOCIAL**

**ON THURSDAY**

*September 9*

Merlin Olsen Park

**6:30 PM**

*Details Inside*

THE OHM TOWN NEWS  
 PO BOX 111  
 PROVIDENCE UT 84332

**September, 1999**



Ham Profile...Page 1

Gary Richardson, KC7WN,  
 And his XYL, Fran

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