

Big Rapids Area Amateur Radio Club

August 2014

PO Box 343 Paris MI 49338 Pres. Jim Woolen Web Page: www.braarc.net Editor: Phil – phildolly@power-net.net



Presidents Message

My arthroscopic surgery is scheduled for September 9th to hopefully “fix” the lateral meniscus tear in my knee.

Gregory and I returned from Hartford, Connecticut on Sunday (July 20th) after attending the ARRL National Centennial Convention. There were over 4,000 hams attending this event and they were from all over the world. It was an awesome cultural experience for us as we met a man who came all the way from Australia to attend the convention. There was also a large delegation from Japan representing their country’s amateurs.

While the tour of ARRL headquarters was not what was expected by us, the W1AW station visit was awesome! We were standing in the midst of our history as a hobby and got to experience it first-hand.

The lunch on Wednesday was great in terms of food and the speaker. We heard an inspiring and uplifting talk by ARRL First Vice President, Rick Roderick (K5UR). Rick used stories and humor to remind all 900 of us attending the luncheon that: amateur radio is the world’s greatest hobby and that “hams” are the most dedicated and friendly people you will ever meet. He also said that even though we are growing in numbers, the average age of ham radio operators is 55. Rick challenged us to bring in new and perhaps younger hams by showing just how vital we are to emergency communications, experimenting, etc. He reminded us that the cell phone was developed as a direct result from amateur radio.

On Saturday, Gregory and I attended a presentation by Joe Taylor (K1JT) on weak signal communications. Dr. Taylor is a 1993 Nobel Prize recipient for physics and teaches at Princeton. While I only understood about half of what he presented, it nonetheless was an enriching experience for me. Joe makes moon bounce contacts with amateurs around the world using voice, CW and digital communications.

I did end up buying a couple of things from the exhibitors. My first purchase was dual-band HT from Baofeng. I could not resist the \$40 price tag. I also purchased the “Ham Radio Deluxe” software – it remains to be seen if this was a good decision or not.

Later that day as the convention activities were winding down, Gregory and I visited the “Vintage Radio and Communications Museum of Connecticut.” For me it was like taking a stroll down memory lane as they had many of the radios I used and saw during my Novice years in the late 1950s. They also had communications gear from the 1800s along with an assortment of related consumer radios and TVs. We listened to recordings from wax cylinders that were over 110 years old. It was an awesome experience as our tour was led by a ham.

As the late Paul Harvey would say in his famous radio broadcasts – “now for the rest of the story...”

During the ARRL Centennial Convention I picked up some literature on on-line license testing. At first

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glance, the HamTestOnline offering to ham radio clubs might be a good alternative to conducting our own classes. They have dropped their price to \$15 per student. They have the top rating on eHam.net as the most effective study method for exams. More to come after further research on them.

Please volunteer to conduct a net as it is not hard and it is a lot of fun. The two meter net is every Tuesday at 9 PM and the 440 net is every Sunday at 7:30 PM. The script (preamble) for conducting the net is on the BRAARC Web site. Also, one can be provided in print, if needed.

Please join us for breakfast with your fellow hams on August 2nd at Sharon's Restaurant in Rogers Heights. I hope to see all of you at our next monthly meeting on August 7th. I am arranging a speaker.

May God bless and watch over each of you.

73s,

Jim
K4UIH

Meeting minutes – Due to holiday there was no July meeting

Announcements:

Saturday, August 2, Club Breakfast at Sharon's in Rogers Heights, 9A.M.

Thursday, August 7, BRAARC meeting at Big Rapids Public Safety, 7P.M.

Check WWW.BRAARC.NET for all the scheduled nets during the month

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**New hams are different**

By Dan Romanchik, KB6NU

This is going to be a bit of a ramble, but I need to get some thoughts down about new hams, and maybe get some feedback on these ideas from both new hams and guys that have been around for a while.

Recently, I visited the All Hands Active (AHA) makerspace here in Ann Arbor. Several of the "makers" that use this space have recently gotten their ham licenses—most of them in one of my one-day Tech classes. I was down there trying to get them interested in attending Field Day, and in particular, in operating the GOTA station.

There were four of us sitting around, talking about amateur radio, the projects they were working on, Field Day, and other stuff. In the past, they had also expressed an interest in doing something with WA2HOM, our station at the Ann Arbor Hands-On Museum. While it was a great discussion, it was apparent to me that it was going to be difficult to get them out for Field.

It dawned on me that these new radio amateurs were just not interested in the "old" amateur radio. Sitting in front of shortwave radios and exchanging fake signal reports with other guys sitting in front of shortwave radios is just not their idea of a good time. I think that if you take a step back and try to look at it through their eyes, you'll see where they're coming from.

What are they interested in? Well, one guy is having a blast playing around with RTL SDR dongles. He's also trying to figure out a way to rig up wireless link to light a light at bus stops around his house

when a bus is approaching. Another is working on a Hinternet-type project. I helped him out a little bit last summer setting up a wireless node at his house.

This is perhaps one reason why there are so many more licensed radio amateurs these days, but yet there seems to be less activity on the HF bands these days. HF is just not where it's at for these new guys.

One consequence of this is that the old amateur radio clubs don't have much to offer the new guys. In fact, one of them told me that the one time that he attended the local club meeting, he got such a hostile response that he decided not to return.

I'm finding this all quite interesting. I do intend to pursue some kind of joint activities between the All Hands Active maker group and WA2HOM and see where that goes. They may not be interested in working DX on 20m, but they do seem to be interested in the IRLP node that we're in the process of installing there.

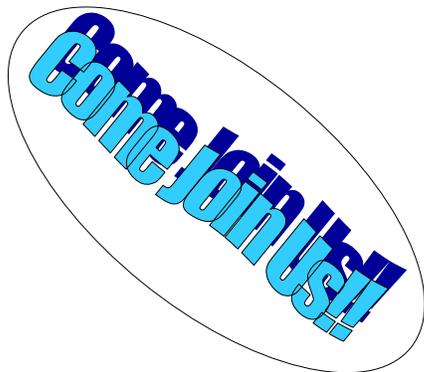
I'm not sure where this is all headed, but what I do know is that these folks have a lot of energy and creativity. If we can couple that with our knowledge and experience, then I think that we'll be a good fit for one another. It's going to take open minds all around, though.

I'm really interested in hearing from all of you about this. Have your clubs made contact with the "makers" in your area? Do any of them have ham radio licenses? Are there any interesting ham radio/maker projects going on in your area?

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When he's not thinking about the future of amateur radio, Dan, KB6NU enjoys working CW on the HF bands, teaching amateur radio classes, and building kits. For more information about his operating activities and his "No-Nonsense" series of amateur radio license study guides, go to KB6NU.Com or e-mail [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com).

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# BREAKFAST

Sharon's Restaurant

9:00AM

Saturday, August 2

Come order from the menu or  
enjoy the breakfast buffet!!!



## Smart Electric Meters

Don, WA4FRJ

Most of us have “smart” electric meters installed on our houses. These meters allow the power company to measure electricity usage remotely instead of sending a meter reader to each house. The power company sends a signal over the power lines and each meter responds with usage data. The system greatly reduces the cost of collecting individual use data. But reducing cost of collection is only a part of what the smart meter can do, as these meters are complex instruments.

Probably the most important data collected by the meter is the time of day of power use. This allows the power company to charge different rates for different times of day if such charging is allowed by the public utility rules in each state. Commercial users can have peak and off peak rates but at present local residential customers are not charged varying rates. In Michigan Homeworks is presently charging \$0.12285/kWh at all times of the day. California is a different story!

In California, depending on where a customer lives the power use charge versus time of day in the summer looks like this:

Peak Hours: 1:00 pm to 7:00 pm, Monday-Friday, \$0.293/kWh

Partial-Peak Hours: 10:00 am to 1:00 pm AND 7:00 pm to 9:00 pm, Monday-Friday, Plus 5:00 pm to 8:00 pm Saturday and Sunday, \$0.14432/kWh

Off-Peak Hours: All other times including holidays, \$.08447/kWh

There is a meter charge of \$0.25298 per meter per day and a minimum energy charge of \$0.14784 per meter per day.

Wow, those are high rates, but there is another factor that can kick the rates even higher. The power company sets a “baseline” rate that depends on where you live. You get the rates shown above if you don’t exceed a total energy use that is higher than the baseline. For example, in San Jose the baseline is 330 kWh per thirty days. That’s not a lot of power. Let’s say that a customer uses 1000 kWh in thirty days. Their peak rate will jump to \$0.40974/kWh for energy used in excess of 990 kWh with similar increases as they exceed a multiple of the baseline.

I looked at our power bill and made an estimate of when we use power. Based on that estimate and using California rates my power bill would increase by a factor of five!

The time-of-day use measured by smart meters is just the camel’s nose in the tent. Power factor (a measure of how efficient a load is) and the make and model of the actual device using the power can also be collected and sent back by smart meters. Will that happen soon? Within in the next five years we are probably going to see some of this information collected and reported. This is very useful marketing information, which is why Google and others want to be in the smart grid/smart meter business.

Will the power companies also be able to control when we can use certain appliances? They already can control electric water heaters and air conditioning, so further steps in controlling our lives are very likely.

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## **Brain Teaser**

At the recent Ham Club downhill mountain bike race, four entrants entered the challenging slalom event.

At the finish, all were treated, released and expected to recover.

How did they finish, what were their numbers and what colors did they wear?

- Mike came first.
- The entrant wearing number 2 wore red, whereas Jeff didn't wear yellow.
- The loser wore blue and Bruce wore number 1.
- Patricia beat Bruce and the person who came second wore number 3.
- The entrant in yellow beat the entrant in green.
- Only one of the entrants wore the same number as their final position.

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### **Last Month's Technical Question:**

In single-sideband suppressed carrier transmissions:

- a. Carrier frequency only is balanced out
- b. Lower sidebands only are filtered out
- c. Upper sideband only are filtered out
- d. One set of sidebands and carrier are modulated together
- e. One set of sidebands are filtered out and carrier is balanced out

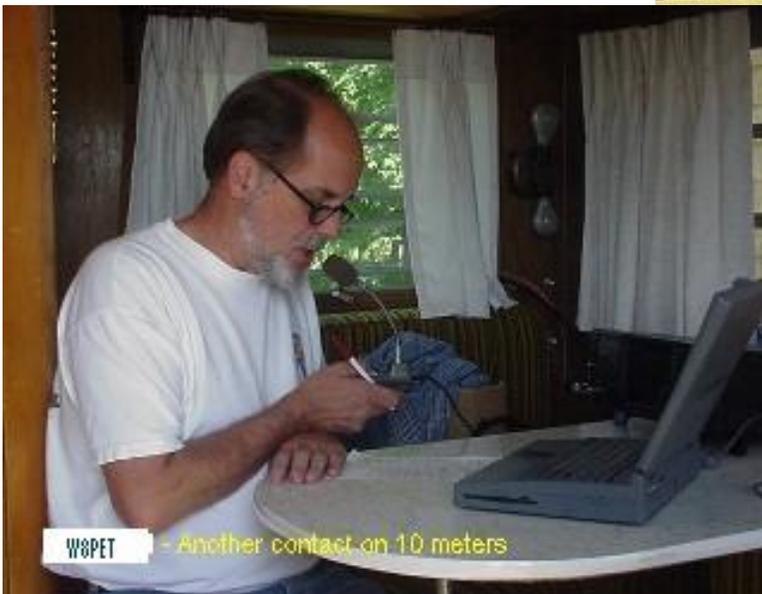
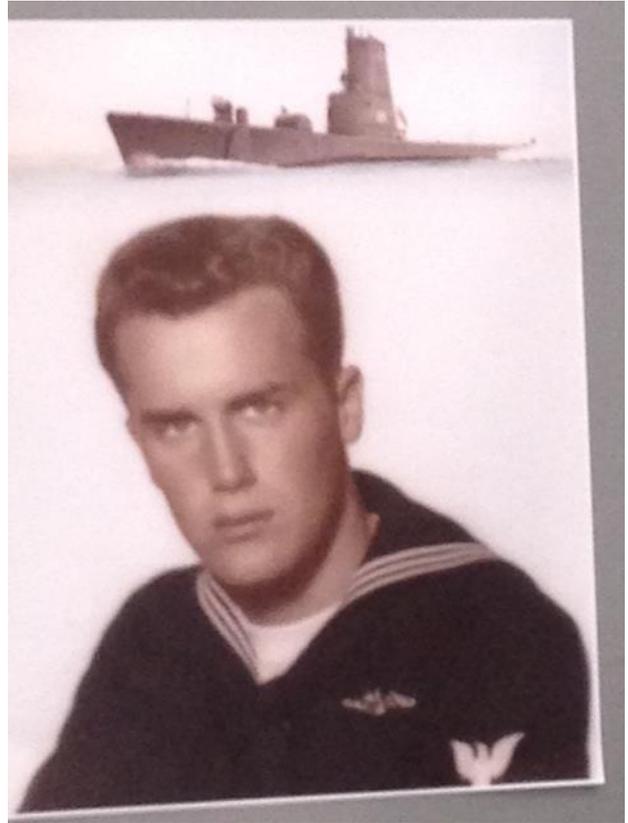
Ans: e. One set of sidebands is filtered out and carrier is balanced out.

### **This Month's Technical Question:**

As a general rule, increasing the coupling between two tuned circuits up to the critical point:

- a. Increases the bandwidth response
- b. Decreases the bandwidth response
- c. Decreases the power transfer
- d. Decreases the coefficient of coupling
- e. Increases the gain on the following stage

Remembering Pete, W8PET





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| 9 | 2 | 4 | 6 | 3 | 1 | 7 | 5 | 8 |
| 1 | 5 | 6 | 7 | 8 | 9 | 2 | 3 | 4 |
| 3 | 7 | 8 | 5 | 2 | 4 | 1 | 6 | 9 |
| 2 | 8 | 3 | 1 | 6 | 5 | 4 | 9 | 7 |
| 5 | 4 | 9 | 3 | 7 | 2 | 6 | 8 | 1 |
| 6 | 1 | 7 | 9 | 4 | 8 | 3 | 2 | 5 |

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|   |   | 3 | 9 | 1 |   |   | 8 |   |
| 5 | 1 |   |   | 2 |   |   |   | 7 |
|   | 7 | 4 |   |   | 6 | 9 |   |   |

Solution to last month's puzzle

**PO Box 343 Paris MI 49338**  
**August 2014**

