



THE CHERRY JUICE

cherryland amateur radio club traverse city, mi

March 2011

Club Officers
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Don N8QX

Vice President
Hope AA8SN

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Corresponding Secy
Dave K8WPE

Treasurer
Ward N8WK

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Ann KA8YJ

Chuck W8SGR

Mike W8VPC

Cherry Juice Editor
Dave N8CN

CLUB NETS

MESH NET
8 pm Monday
146.86 MHZ

SMASH NET
9 am Sunday
3.935 MHZ



ARRL Affiliated Club
#1082

Coming Club Events

March 22nd Club Meeting

This month, Hope **AA8SN** will be discussing April's Michigan QSO party and her plans for an all out club effort. This will be a fun night and as always Don N8QX will bring us up to date on club activities. Where: The lower level cafeteria in the Governmental Center on Boardman near the intersection of Boardman and Eighth. 7 p.m. Cookies and coffee available.

Tuesday Project Nights

Where: At the club station in the lower level of the Salvation Army Building located at the NE corner of Barlow and Boone. 7 p.m. Every Tuesday except the 4th Tuesday of the month which is reserved for the regular club meeting.

Forward Waves

VE EXAMS:

Big Rapids, MI. Saturday, March 26, 2011.
Ferris State University. West Commons Building, Room 109. Walk-In OK. 4 p.m.
Contact: Patricia McKay 231 527-1688

Cadillac, MI. Saturday, May 7, 2011.
Wexauke ARC Hamfest. Cadillac Jr. High. 500 Chestnut St. 10:30 am. Limited Spaces. No Walk-In Contact: Alan 231 829-3433

HAMFESTS:

Saturday, April 2, 2011. Lowell, MI.
Amateur Radio Group of Youth in Lowell Hamfest. Lowell HS. 11700 Vergennes St. 8 am til ? VE Exams at 10 am. Walk-In OK. TI: 146.62 (PL 94.8) or 145.270 (PL 94.8) Contact: AL at 616 450-4332

Saturday, May 7, 2011. Cadillac, MI.
Wexauke ARC Hamfest. Cadillac Jr. High School. 8 am til noon. TI: 146.980. Contact: Alton NU8L. 231 876-1485 or nu8l@yahoo.com.

Reflected Waves

March 1991

The March program was presented by **KF8KK**. John covered the make-up and workings of the IBM PC "clones". Club members Rob **N8LDQ**, Holly **KB8ALS**, Ron **N8NEV** and Jim **N8JKQ** put on a demonstration of ham radio for the physics and math classes at TC Senior High. The group demonstrated packet, 2 meters, 10 meters and 80 meters.

March 2001

The March meeting was well attended and on hand were 2 service monitors so members could check their 2 meter mobile and HT's. Several club members attended the Cross Roads Hamfest in Marshall, MI and gathered for lunch after the swap. Some members moved on to Maumee, Ohio for a swap on Sunday. The board voted to sponsor a plaque for this years Michigan QSO party.

HAMS ACTIVE IN JAPAN DISASTER

After the 8.9 earthquake that struck near Sendai, Japan on March 11, the island nation is trying to recover. Soon after the earthquake -- which the US Geological Survey is calling the largest to hit the island nation in 140 years -- Japan was rocked by tsunamis and power outages caused by critical damage to a nuclear power station. Reports from Japan tell of phone and Internet service still up in most parts of the country. Even so, the Japan Amateur Radio League (JARL) -- that country's IARU Member-Society -- has asked that 7.030 MHz be kept clear for emergency use. Other reports are asking that these additional frequencies be kept clear: 3.525, 7.030, 7.077, 7.087, 7.097, 14.100, 21.200 and 28.200 MHz.

JA1RL, the JARL HQ station -- along with other amateurs throughout the island nation -- is maintaining the effort to support the disaster relief operation, according to IARU Region 3 Secretary Ken Yamamoto, JA1CJP. "In less damaged areas, the electric power supply is being restored gradually and local amateurs have started to establish stations at shelters," he said. Yamamoto said that JA1RL continues to operate as an emergency traffic center on 7.030 MHz, as well as 2 meters and 70 cm. It is receiving and reporting news from Japanese amateurs who are in the affected area. Using battery power or small generators, Japanese stations are active and are using various frequencies to exchange rescue and disaster relief operation information with JA1RL and others.

"While 3.525, 7.030, 7.043 and 7.075 MHz have been mentioned as in use, it's wise to keep those -- and all of the Center of Emergency frequencies -- clear of normal and non-urgent traffic," said IARU Region 3 Disaster Communications Committee Chairman Jim Linton, **VK3PC**, who added that there is no call for additional foreign radio amateurs in Japan.

YAESU FACTORY DAMAGED IN QUAKE

In a letter to the Amateur Radio community, Vertex Standard Chief Executive Officer and President Jun Hasegawa expressed his "sincere appreciation to all of you for your kind words and thoughts about us" after the devastating 8.9 earthquake that struck Japan last week. Vertex Standard is the parent company of Yaesu.

All Vertex Standard employees and their families are safe and unhurt, Hasegawa said, but the company has not been able to reach many of their dealers and subcontractors who are located on the coast area: "We just hope that they are alive."

Hasegawa said that a Vertex Standard factory in Fukushima was damaged in the earthquake. Even though the factory is not located near the coast and the damage was minimal, he said that Vertex Standard has decided to "disable the operation at this moment." Saying that they are working very hard to get the factory back to its normal operation, Hasegawa said that "it may take one to two weeks to restart operation in the Fukushima factory. I would like to ask for your understanding and cooperation at this time."

DIPOLE or G5RV?

A monopole is one pole. So it should go without saying that a dipole is two poles. As we all know, the center conductor goes to one side and the braid (if you're using coax) goes to the other conductor. That's rather straight forward to most of us. It's also common knowledge that dipoles are probably the most common antenna we ham radio operators have around the house and property. My first antenna was a 40 meter dipole that I tuned to 15 meters while operating my tube rig (Heathkit HW-16), back in the mid 70s.

During the mid to late 80s, I dropped out of ham radio, relatively speaking. I never lost my license, and sometimes placed my call on 2 meters, but I was off of HF for a few years while my kids grew up. When I returned to HF, I learned some new terms that I had missed earlier. It seemed that the G5RV antenna became incredibly popular while I was gone. Although this is an OLD antenna concept, we didn't discuss it too much in the 70s. It became more popular later on. Other dipoles also seemed to gain some attention, too. Let's see, we have Buddipoles, Windom dipoles, trapped dipoles, slinky dipoles, rotatable dipoles, off-center fed, and then there's the famous ladder line fed dipole. I even heard some guys talk about a dipole that could outperform any dipole ever known to humankind. It was the dipole of all dipoles. Can't remember the name, and really never believed it anyway. You see, a dipole is two poles, where as, a monopole is one pole. A dipole is a dipole and a monopole is a monopole.

Since a dipole is a dipole, the question about performance mostly comes down to resonance and matching the antenna. The other key thing to consider is the height. Figure out the best way to feed the dipole and then determine your best (optimal for your needs) height, and you've handled most of your performance questions surrounding your dipole. If you don't match it properly, when coax fed, then you stand to lose quite a bit of your signal before it reaches the antenna. And even if you have a tuner in the shack, and the radio sees a 50 ohm match, you still stand to lose a large part of your signal in the feed line, before the antenna, when using coax. This isn't the case when feeding your antenna with ladder line. Ladder line has a lower loss scenario, especially when the dipole isn't tuned well. Read the charts. It's all in the charts.

When I was new to ham radio, I received a Murch UT-2000 tuner for Christmas one year. That was an exciting Christmas. At 15 years old, in no way was I able to afford a \$130 tuner out of my own pocket. On the back of this tuner it allowed for coax from the radio and then coax to the antenna. It was such an awesome tuner, I could tune almost anything. But it wasn't until years later that I learned that simply tuning the antenna system (feed line and antenna) to match the radio didn't necessarily mean that the antenna was performing well. Having the tuner in the shack, next to the radio, and feeding through coax, meant that yes, I was able to get to 50 ohms. The radio was happy with the 50 ohms, certainly. But in reality, I later learned that the further I moved away from 40 meters (it was a 40 meter dipole) the less signal was actually getting to that antenna. My signal was being lost in the coaxial feed line. Had I fed with ladder line, then yes, the performance would have increased perhaps as much as 10 to 20 fold.

You see, feeding a dipole with coax, with a tuner, can "work", as far as the radio is concerned with respect to a "match". But this does not mean that you've optimized its performance. Perhaps far from it!

In comes the G5RV. At this point, you may think that I'm a G5RV proponent, but you'd be wrong. The G5RV is a compromise and well past its hey day. We hams, with our antenna preference, argue that "my antenna is better than yours" all the time. In this case, it's a matter of physics. My ladder line fed dipole IS better than your G5RV, and here's why. It's all in the coaxial losses. I'd argue till Kingdom come that a true ladder line fed equivalent antenna will outperform a G5RV, everyday. Yes, a G5RV uses some ladder line. I've also seen several variants of the G5RV. But at the end of the day, the G5RV has two things in common when it comes to resonance and loss. First, again, the G5RV uses coax, even if it's a little bit. It's typically 102 feet wide, fed roughly half and half with coax and ladder line. The ladder line and coax make up a design that is supposed to provide a match. But here's the problem. It's very rare that you do not need a tuner with a G5RV. Yes, it is broad in its response and SWR, but certainly not acceptable to our transistor output rigs of today, that are very touchy when it comes to SWR. I don't know about your particular rig, but my 746PRO power drops off at anything above VSWR 1.5. In order to use a G5RV, a tuner in the shack is SOP (standard operating procedure) and needed.

Therefore, practically speaking, you need a tuner, in the shack; about 100% of the time, when using a G5RV (check it out on your own). Since you're using a tuner, and coax, then you have losses in that coax. There's no getting around it. This is not my opinion, but simple fact. Ladder line and coax are so different when it comes to losses, there's almost no comparison. A ladder line fed dipole, when operating away from the initial intended operating frequency (for example a 40 meter dipole), will perform better than a coaxial fed dipole or G5RV, when operating away from "resonance". I guarantee that a 102 foot dipole, fed with ladder line, will perform better than a G5RV. Ladder line losses are so much less! If you're using a tuner, in the shack, then step away from coax, if at all possible.

So, why was the G5RV created in the first place? Well, that's simple. It was designed with idea that you would NOT use a tuner. "But Sean", you say! "What about matching the antenna to the rig?" Well, that's simple too. Rigs back in the day didn't need to have a perfect match. Tube output rigs were a great deal more forgiving than solid state rigs of today. You could have a match of 5:1, or even worse, and get away with it.

"But Sean", you say, "Why coax then?" Well, coax was developed by the military when there was a need to run feed line along big metal objects, like submarines and cruisers. But make no mistake; coax has loss, even WHEN the antenna is tuned well. It has a great deal more loss when it is away from resonance. Coax is convenient and really neat. However, coax has more loss than ladder line.

My dipole is fed with ladder line and you will NOT talk me out of it. I know the benefits of coax, like sometimes less noise introduced into the feed line. I also know that if I owned a home with aluminum siding, I'd probably stick with coax. But this stick built camper is sticking with ladder line. My antenna will be as long as I practically can make it, and as high up as possible for a lower angle of attack, and I will feed it with ladder line. I will not fall for the hype and I will not make or buy a G5RV.

A dipole is a dipole. A G5RV is a dipole, and fed with a combination of coax and ladder line. Coaxial fed dipoles have more loss than a dipole fed with ladder line.

Disagree? Then drop me an e-mail at: w8okn@arrl.net

MI QSO PARTY

The Michigan QSO party will take place on April 16th, 2011 from 1200 EDST to 2400 EDST (1600Z Sat to 0400Z Sun). This is a fun contest and you will find that most of our Northern Michigan counties are in demand. Michigan stations work anyone, anywhere on SSB or CW. Stations can be worked once per mode and band. CW contacts count for 2 points and SSB contacts 1 point. The contest exchange for Michigan stations is a serial number for the contact beginning with 001 and the Michigan county. Stations in other states and Canada send a serial number starting with 001 and their state or province for VE stations. Countries outside US/Canada send serial number and DX. Multipliers for Michigan stations are the 83 Michigan counties, 49 states (Michigan excluded) and the 13 VE provinces. DX stations worked for points but no multiplier.

One of the neater things about the MI QSO party is that your score can be attributed both to yourself and a club. If you indicate the CARC as your club, your score will be added to the CARC total and still count in your individual category. The complete rules are located at: <http://www.miqp.org/Rules.htm>.

The MI QSO website is located at: <http://www.miqp.org/index.html>. There are a lot of very helpful materials located on the website including operating tips, logging software, county abbreviations and even information on submitting an electronic log if you are unfamiliar with this procedure. Hope **AA8SN** will be presenting additional material at this month's club meeting. Hope to see you there.

THREE HAM SATELLITES LOST

The launch of three Amateur Radio satellites on a Taurus XL rocket has ended in failure. The satellites were launched from Vandenberg Air Force Base at 10:09:45 UT Friday, March 4 on an Orbital Sciences Taurus XL rocket. The rocket's fairing, the part of the rocket which covers the satellite on top of the launcher, did not separate properly so the Taurus XL did not have enough velocity to enter orbit. The rocket is believed to have crashed near the Antarctic; the Amateur Radio satellites Explorer-1, KySat-1 and Hermes were all lost. A video of the launch can be seen at: http://www.southgatearc.org/news/mar...lites_lost.htm