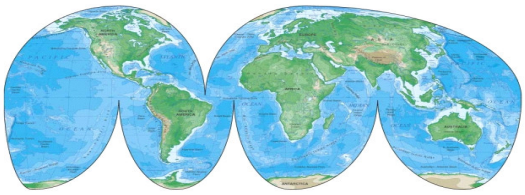
MOUNT VERNON AMATEUR RADIO CLUB

C  Q

September 2006 Newsletter

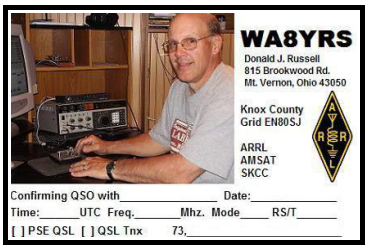
MEETINGS SECOND MONDAY OF THE MONTH AT THE RED CROSS ANNEX BUILDING,
300 N MULBERRY ST, MT. VERNON, OHIO
REPEATER FREQUENCIES: 146.790 (-) K8EEN /R 444.750 (+) KC8YED /R 53.790 (-) WA8YRS/R
SUNDAY NIGHT ARES NET AT 8:00 P.M ON THE K8EEN REPEATER OPEN TO ALL

Amateur Radio Course Scheduled

An amateur Radio Technician Class course is being organized by Mike McCardel, KC8YLD, and Don Russell, WA8YRS. The course will consist of six weeks of classes starting Thursday, October 19, 2006 at 7:00 P.M. and continuing weekly through November 30, 2006. There will be an exam scheduled for the weekend following the end of classes. Morse Code may be taught as an option, if there is enough interest. Site of the course is yet to be determined. Please let family, friends, and organizations interested in Ham Radio know about this class.

QSL'ing BY E-MAIL

BY DON RUSSELL, WA8YRS



If you are active at all on our Short Wave bands, then you no doubt have to deal with sending out QSL cards. Especially if you work a lot of DX or get into any contests. QSL cards can be fun, but they are no where near the way they used to be. I can remember when I was a Novice Ham (Okay, yes, the good old days. I have been an official "Old Timer" for some time now.) one of the great things was checking the mail for new QSL cards. Back then, you could count on a hand filled out card with a remark or two about the QSO, or an update on a subject discussed during the QSO. This is rarely the case these days. Most times it is a computer printed out label and if you are lucky, a hand written "Thanks for QSO". Some contesters (the rich ones I presume) actually send QSL cards to all stations they contacted during a contest. Still, it is computerized and certainly not personal. So, with the price of postage these days, why do we even bother? Can't we do this via e-mail?

The reason we still do this the old fashioned snail mail way is because there are Awards out there that require you to submit "Proof of QSO" to obtain. This means a "hard copy" of the QSL sent by the station needing confirmed. That is one of the enjoyments of our hobby: Collecting and hanging paper awards. Yes, we can do this via e-mail, but the process has taken a long time to evolve. Many were against using e-mail or web pages for QSL collecting because at the time, many computers sites were insecure, and how do you make sure that the QSL was legit without an operator signing off on it? Of course, it is pretty easy to fake a QSL card if one wishes to do so.

That fact always failed to get mentioned. Actually, many hams that were ahead of their times did QSL via e-mail. What was needed though was a way to have all QSL's on line, all the time.

Things have changed a bit since e-mail QSLing was suggested and there are two popular systems that actually allow you to confirm QSO's via email or the internet. One is call e-QSL, an independent QSL service. This service can be found at http://www.eqsl.cc/qslcard/index.cfm You can actually send and receive QSL's electronically through e-QSL. You print out the QSL's on your printer if you want a hard copy to hang on the wall. If you prefer receiving QSL's in the mail, they will actually print and mail you hard copies of the QSL's (for a fee). E-QSL has their own awards system and it is separate from the ARRL. The ARRL does not recognize QSL's from e-QSL for QSO confirmations in the ARRL awards program.

The other QSL service is the ARRL's own "Logbook of

the World". In the ARRL's version, you do not actually receive a QSL card. What happens is you upload your computerized log information to the Logbook of the World (LOTW), and the site compares your log with others submitted. If the contact is a match in both operators submitted logs, then the QSO is confirmed and can be counted on towards certain ARRL awards. No need to submit QSL cards.

Both these systems have taken measures to certify that only legitimate log files are uploaded to there web page. In my opinion, both systems have a high degree of integrity. I use them both. I would trust a confirmation from one of these services more than I would someone sending me hard copies, if I were an awards checker.

E-QSL is easy to join and free if all you want to do is send and receive QSL cards electronically. If you wish to apply for some of the awards, then there is a minimum fee of $15 per year. Being a paid member gives you better control of the way your e-QSL card looks and allows you to apply for the e-QSL awards. After registering, you should apply for Authenticity. This step allows your QSL cards to be counted towards awards. If you do not receive authenticity, then other stations will not be able to use your e-QSL card towards the many e-QSL awards. Doing so is easy. You simply email a scanned copy of your license to the e-QSL support group. They will send you back acceptance of authenticity via e-mail. The awards include e-QSL's version of WAS, DX Century, WAC, etc. There are many other contest and award sponsors that have approved the use of e-QSL for confirmation of QSO's when applying for their awards. I went ahead and paid the $15 donation just to help out. Didn't really change my card layout, nor have I applied for any awards. You may donate more than $15 if you wish. The more you pay, the more benefits you receive.

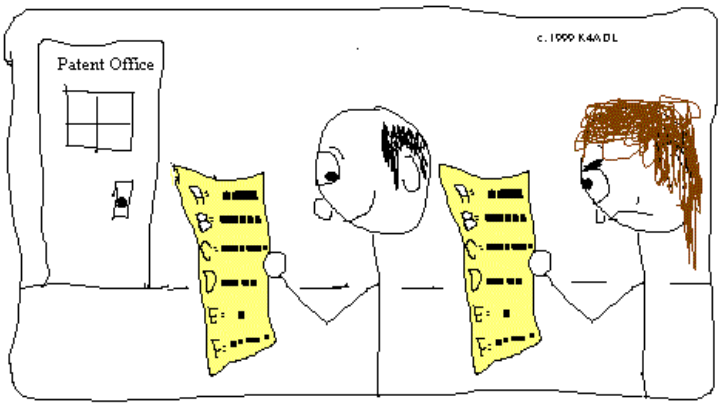
To upload a log to e-QSL, one needs a logging program capable of converting its logging format to an ADIF format. This is called exporting. I cannot think of one general logging program that does not support this. I am sure all the major contest software supports this file format also. Doesn't hurt to check before you buy or download though. By the way, my general logging program is called Xmlog. It is freeware and works perfectly. I see no reason to change. Get it at: http://www.xmlog.com/ . The other option is to enter your logging information manually (yuck!). This may work if you only make a few contacts a week. You can visit the site and manually enter the data in. I would much rather upload a log file myself. In fact, I have been going over all my paper logs and entering them in into the logging software. It is going to take a while, but in the end, everything will be there at my finger tips. By the way, if you ever loose your log data file, you can retrieve it from e-QSL as a download. It will be stripped of any comments or notations you may have had, but at least you will know whom you have talked to in the last 30 years!

The ARRL LOTW is free to members and non members alike. There is a fee for applying for each award, and only ARRL members may apply for awards. This is with the exception of DX stations. They may apply for awards even if they are not members of the ARRL. I believe this is to encourage the DX stations to upload their logs for the benefit of everyone. I see that as very acceptable. The awards that accept LOTW are: DXCC, WAS, VUCC, and WAC. There may be more, as the ARRL keeps adding to this list.

Signing up for LOTW is a bit more complicated than signing up for e-QSL. There is a ten step process you must go through. Don't be put off though. Each step is simple. Just take them one at a time. All in all, it takes one or two weeks before you can actually upload a log to LOTW. Briefly, first you have to sign up. Then the ARRL sends you a post card with a password to access LOTW. You also have to download a certification program that you first run you log file through to certify it. Then you upload the resulting file to the LOTW site. Afterwards, you can check and see if you qualify for any awards and apply for them on line. A bit more complicated. More secure is debatable. E-QSL does a good job keeping things secure too, in my opinion.

I find I have to play around with LOTW more than I do with e-QSL to upload a file. Not because it is that more complicated. I just do not do it often enough. E-QSL on the other hand can bug you to death with emails from other e-QSL members saying they rejected your QSL card for various reasons. E-QSL give the members more control over this. All the ARRL LOTW does is look for a match in the logs. If the match is not there, then no credit is given. You need not worry about whether you log is totally correct. Unless you really, really need that rare country confirmed! If that DX station got your call incorrect, you will never get credit for it. This is how is should be.

So, which service is better? In my opinion, they pretty much equal out. If you are going for ARRL awards, then of course you should register for LOTW. If you like



LUCKILY FOR US, SAMUEL MORSE ARRIVES AT THE PATENT OFFICE JUST SECONDS BEFORE IGOR CZNXOVIZKYNOVIA

receiving hard copy QSL, even if you print them yourself, then e-QSL is the one. If you are a contester or DX'er, you should join both services. In fact, I think the active ham should belong to both services. I prepare my ADIF file for uploading to e-QSL. After this is done, I immediately run it through the certification program obtained from LOTW (free) and upload the resulting file to LOTW. The last contest I was in, it took me about two weeks to get around to uploading my log. It took less then 10 minutes to organize and upload my log file once I got started. Now that I see how easy it is, I think I will be uploading the files within 24 hours after the contest. That would be the considerate operator thing to do.

Please read the related article on e-QSL in this Newsletter.

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The Satellite Beacon

A monthly article presented by the Project OSCAR Amateur Radio Club

This Month's Topic – Improving Satellite Reception, Part 1

By Emily Clarke, W0EEC – VP of Project OSCAR

When investigating people who are unintentionally "jamming" a satellite (transmitting but unable to hear someone respond) the first thing we hear is "everything works fine – I used a repeater just before the pass." Following up we usually discover that the ham is using antennas designed for terrestrial use, or using receivers such as scanners that do not have good specifications. When we tell the ham that the repeater 40 miles away is transmitting 100w or more, and the satellite 1200 miles away is transmitting 0.5w, the ham is usually surprised. So what makes a good satellite receiving subsystem?

Receivers

Receiver specifications are important and the primary number to look at is **receiver sensitivity** as this is the number that will tell you how strong a signal must be before the receiver can detect it. Sensitivity is measured in microvolts (µvolts), and is usually rated for 10 db signal to noise for SSB/CW, or 12db SINAD (signal + noise + distortion) for FM. An excellent satellite receiver will have a sensitivity rating of 0.11 µvolts on SSB/CW but under 0.14 µvolts is adequate. FM sensitivity should be 0.22 µvolts or better (lower is better, higher is worse.) For example, the Yaesu 847, Kenwood TS-2000 and Icom 910H all meet or exceed these figures.

If you are only interested in using FM satellites there is an important caveat that you should consider, and one I was surprised to learn while researching this article. If you check the specifications for some full duplex dual band rigs (including handhelds) you will see that one band (Icom calls these left and right, others may refer to them as main and sub) may not be as sensitive as the other band. For example, my Icom 2720H mobile rig has a sensitivity of 0.2 µvolts on the left band, but 0.45 µvolts on the right band.

The important point to note here is that you should know your receiver specifications and make choices wisely when choosing a radio, and a radio's band.

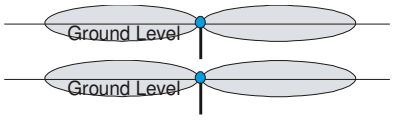
Coaxial Cable and Connectors

At UHF and above frequencies, standard coax for HF and even VHF doesn't always work very well. If we were to use an example of 50 feet between your receiver and antenna, at 436 MHz (AO-51's downlink) RG-58 will have a loss of about 6db. This means that the signal will be only 25% as strong at the receiver as it is at the antenna. Replacing RG-58 with RG-8X may help, but you will still lose 4db or more than half the signal.

Replacing RG-58 or RG-8X with LMR-400 or 9913 will get the losses below 2db, which make a huge difference. For example, LMR-400 at 436MHz will only lose about 1.3db. So the rule of thumb is "Use the best coax you can afford."

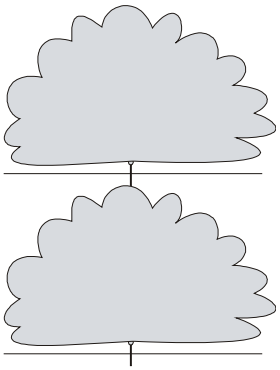
If there were ever to be a Murphy's law about amateur radio it's that the connectors on the cable and the connectors on the thing you are attaching it to will not be the same. My rig has type-N connectors but the antenna has a UHF connector on it. The first reaction is to use an adapter, and while this will make the connection, it will introduce additional loss. So it's a good idea to build cables that match up with connections.

Antennas



There are a number of factors here to consider about antennas and it isn't just gain. Gain is good but radiation pattern (and it's inverse, the receiving envelope) is equally important. One mistake we see is that the type of antenna being used by our jammer is a 5/8 wave

collinear, which has very good gain (typically 8db or better) and a narrow envelope. The problem is that the antenna is mounted vertical and the radiation pattern is horizontal, so 50% of the envelope is under ground. This is good for ground based repeaters, but really defeats the purpose for satellites as it will only receive the satellite when it is very low on the horizon.



One solution is to use an antenna that raises the envelope above ground and is rounder. Eggbeaters, quadrafillar helix and discone antennas work, but the tradeoff is gain. The rounder the pattern, the lower the gain and pattern is omni-directional. So in addition to receiving the satellite an omni will receive noise from other sources. In a suburban neighborhood this can be a problem. While an omni-directional antenna may eliminate the need for rotators, one should really consider the best solution.

A yagi antenna with an az-el rotator is always the best solution because the antenna is pointed directly at the satellite, but may not always work depending on where you live. If you absolutely have to be omni-directional make sure you have one that has a pattern that is higher than ground level, not below it.

Next Month – Part 2, Pre-Amplifiers.

HAM HISTORY

By Barry Butz, N8PPF

Credit for this article goes to: International Electrotechnical Commission (IEC)
http://www.iec.ch/100years/techline/

The third member of the famous trio mentioned in Ohm's Law was, wouldn't you know it, Georg Simon Ohm (1787-1854)

Born in the Bavarian town of Erlangen as the son of a self-educated locksmith, it took the restless Georg Ohm some time to finish his university education and settle down to the intensive study of electricity. His career only took off when, aged 30, he became a teacher of mathematics and physics at the Jesuit Gymnasium of Cologne and had for the first time access to a well-equipped physics laboratory. Having spent much of this life in private study reading mathematics, he began his first laboratory work when he learned of Oersted's discovery of electromagnetism in 1820. Experimenting at first only for his own interest, he soon realized that to attain the university post he desired he would have to publish the results of his research. The first two of the three papers he published in 1825-6 reported on his experiments on the electromagnetic effects of varying the length of wires carrying a current and offered general models of circuit conduction based on Fourier's theory of heat.

The second paper he published, in 1826, laid down the comprehensive theory which Ohm was able to give in his famous book published in the following year as The Galvanic Current Investigated Mathematically. This contained the statement of the 'law' later named after Ohm, namely that the current through (most) conductors is always directly proportional to the potential difference applied across it: in other words, that the proportionality for any given conductor can be defined by a specific quantity known as its 'resistance'. Ohm's book and theories were not greeted with much enthusiasm at first, perhaps because of his particular style and unconventional assumptions, although he did get the university post he sought in 1833. By the 1840s Ohm's research was at last internationally recognized as original and important and, two years before his death, he was appointed to the prestigious chair of physics at the University of Munich that he had long sought.

Ohm's work is now enshrined in the widespread adoption since 1881 of the ohm as the standard unit of electrical resistance.

A Bamboo Vertical

By Don Russell, WA8YRS

Looking for a cheap portable antenna that needs no guy wires, no antenna supports, and when broken down is only 4 feet in length? I have just the thing for you! I have been searching for the ideal antenna to take to New York for an annual fishing trip that my brother and a few nephews accompany me on. Everything I have found so far requires a tree or some other means to hang a wire. Well, my camp grounds in New York does not like this.

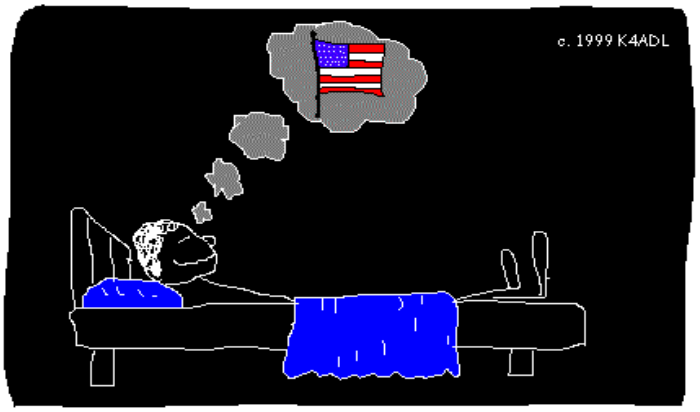
The idea for this antenna came to me when I was shopping at K-Mart. I ran across some bamboo poles in the garden section. There was a package of 4 bamboo poles, each about 4 foot long for the price of $5.99. This got me thinking. Bamboo is really light. All I need is a way to secure the 4 bamboo poles together to make the longer pole of 16 feet. This longer pole should be light weight, but sturdy enough to hold its own weight in a

moderate wind.. Then, using small, lightweight insulated wire taped or bound with cable ties, one would have a long enough vertical antenna to cover 20 meters, a popular band for campers. Take this one step further and use banana plugs at points which would resonate the antenna on multiple ham bands and you have a truly light portable antenna. Of course banana plugs would also have to be placed at the breakdown points of the pole so you could quickly break down the antenna for transport. Later, I found some cane fishing poles that break down into five foot lengths. I think the cane poles would serve the purpose nicely. For a bit extra money, the sporting goods store also had fiberglass poles that were 12 foot long. A little short, but may be usable.

I can see this being a real covert antenna. Quickly put up just before dark. Work the bands all night. Break it down before morning. Heck, this even sounds good for apartment dwellers and deed restricted lots!

The basic construction of this antenna is pretty simple as described above. The real problem may be coming up with a system to mount it in the ground and still be covert. One way would be to bring along a 5 gallon bucket. Fill this bucket with dirt when you get to the camp site and insert a small PCV pipe in the center of the dirt. You will have to pack it down so that the pipe does not have any play in it. The pipe should be just big enough in diameter to let the bottom side of the bamboo slide in. A two foot piece of pipe should be plenty. The dirt should be heavy enough to hold the antenna upright. The center of the coax cable will run to the antenna wire tapped to the bamboo poles. The braid of the coax need to be connected to a minimum of 8 radials, each about 15 feet long. The more radials the better and they can simply be laid on the ground. If this is for a covert home station antenna, however, burying the radials would allow quicker set up of the antenna. Once the radials are buried, they would be invisible except at the base of the antenna. If for home use, one can also eliminate the bucket. Just drive your PCV (or aluminum) pipe in flush with the ground. Use a level to keep this pipe straight.

To adjust the antenna, First set up the antenna in its operating position. Then use the formula in the ARRL antenna handbook for quarter wave verticals. The shortest wire needs cut first. Say you want to start on 6 meters. Use the formula and cut the wire maybe 6 inches longer than the formula indicates. Make sure the radials are attached and the antenna is in the vertical position (and of course, the center wire of the coax attached to the lower part of the antenna wire). Now trim the top of the wire for minimum SWR on 6 meters. Solder a female banana plug to the end of this wire. Prepare the wire for the next band by soldering a male banana plug on its end. The 10 meter band would be next. Do the formula again. measure the completed wire from your first band (6 meters) and subtract this amount from the formula results. You want the total length of the antenna to equal the calculation for the 10



ANDREW, A CANADIAN AMATEUR WITH LOW ASPIRATIONS, DREAMS OF CONTACTING FELLOW HAMS IN AMERICA.

meter band. Again, make sure you leave an extra 6 inches. Be sure the banana plug is plugged into the lower wire. Now trim the second wire for minimum SWR on the 10 meter band. Repeat this process for all the bands to be used. You can skip bands that you have no interest in. Or just do them all in case you get the urge to try a new band. Don't forget to add banana plugs at each point that the antenna comes apart. In the end, you should have an antenna that will work 6 meters through 20 meters using no antenna tuner. It should be able to break apart into three or four feet sections.

Don't want to use all those banana plugs or don't like trimming antennas? Then simple use banana plugs at the breakdown points of the antenna. Then use 300 ohm TV feedline to an antenna tuner. You should be able to work any band you can tune. If this is done, it may be better to raise the antenna. A ten foot pole would be ideal. The guys could be made of wire and become the radials. It would not take much to hold this antenna up because it will be extremely light weight. You should be able to get buy with three guys/radials in this

case. This feed should also work at ground level, but I am not sure how the 300 ohm feedline will react to being a ground level.

This antenna should easily handle the normal 100 watt radio. Remember the RF Safety rules. I would advise using 50 watts on 6 and 10 meters just to keep things safe. Don't let people be close to the antenna while operating anything but QRP. Don't let anyone touch the antenna while you are transmitting!

No, I have not tried this antenna. Actually, I used the idea but built a bamboo 20 meter dipole instead. It is still in the testing stages.

REPORTED "FIREDRAGON" JAMMER/INTRUDER SHIFTS FREQUENCY

From the ARRL Letter August 18, 2006

A Chinese-language "intruder" signal first spotted earlier this summer on 14.260 MHz this week shifted frequencies. International Amateur Radio Union Region 1 Monitoring System (IARUMS) Vice coordinator Uli Bihlmayer, DJ9KR, says the powerful jammer -- dubbed "Firedragon" -- had been transmitting solely Chinese music on 14.260 MHz since August 5.

"This offender is active day and night -- all day, every day -- and causing very harmful interference to the Amateur Radio Service," Bihlmayer informed ARRL Monitoring System/Intruder Watch Liaison Chuck Skolaut, K0BOG, and IARU Region 2 Monitoring System Coordinator Bill Zellers, WA4FKI, on August 15. In an August 17 update, however, Bihlmayer said the music jammer had moved to 14.050 MHz. That part of the 20-meter band is allocated to the Amateur Radio Service on an exclusive basis throughout the world.

Prior to August 5, Skolaut said, reports indicated that the transmission contained both talk and music and was more intermittent, but "now it's pretty continuous and entirely music."

According to Bihlmayer, German telecom authorities pinpointed the transmitter's location as Hainan Island in Hainan Sheng Province, Peoples' Republic of China (PRC), located south of the mainland in the Gulf of Tonkin. Hainan Island also was the apparent source of an over-the-horizon radar signal heard on 75 meters in Region 3. Bihlmayer said.

Citing complaints from members, Skolaut has reported the intruder to the FCC, although as he and Zellers point out, the Commission has no authority to make intruder stations outside the US stop transmitting on Amateur Radio frequencies. Such situations typically are dealt with through diplomatic channels.

Skolaut says he was able to hear the jammer for himself this week -- on its new frequency -- from W1AW. Until earlier this week, the same jammer also was appearing on 18.160 MHz. In July, Bihlmayer alerted telecom authorities in Germany and Hong Kong, as well as IARU Region 3 and the PRC embassy in Berlin to the situation. The 17-meter band also is a worldwide exclusive Amateur Radio allocation.

According to reports filed this month with DX Listening Digest <http://www.worldofradio.com/index.html>, the 14.260 MHz Firedragon signal was an effort by the PRC to jam the clandestine "Sound of Hope" transmission beamed to the Chinese mainland from Taiwan, with Amateur Radio operators being caught in the crossfire. The "parallel" signal on 18.160 MHz apparently disappeared earlier this week, and the jammer now has been appearing on 17.330 MHz. The signal also has been heard on 7.130 MHz, which is allocated to broadcasters in much of the world outside of Region 2 (the Americas).

Short wave listeners said the AM carrier, heard earlier this summer on various 20-meter phone band frequencies, would occasionally drop out at the top of the hour, apparently for a monitoring check, then reappear five minutes later.

Skolaut says he's received reports about the music jammer from all over the US. "I have one ham reporting it regularly from New Zealand," he said

eQSL - The Final Courtesy

by Dave Morris, N5UP, Founder and Webmaster,
eQSL.cc February 5, 2001

The world's first and only eQSL exchange centre, www.eQSL.cc, started the year 2001 with a bang. Only a few weeks earlier, on the first of December, it had blown through the 1 million card mark, and now 2 million cards were in the central database. But instead of slowing down, the rate increased as thousands of eQSL cards were uploaded every hour.

The eQSL.cc site was launched in April of 2000, and included about 1500 hams who had been part of an earlier experiment in an electronic QSL card exchange. The "big" idea was that eQSLs should not be sent around from person to person via e-mail, but should be available at any time through a web-based exchange system and a central database.

Other concepts using e-mail or by posting one stock QSL card on a web page and calling it an eQSL were not satisfactory, because security could not be guaranteed, e-mail addresses had to be looked up, and the sender had to laboriously design his QSL card using graphic design software.

So, we used our 25 years of software development and database design experience to develop a site where

each user could guarantee his identity with a scanned image of his ham license, could lay out an eQSL card design using simple point-and-click forms, and could upload logbooks either one-at-a-time, or by uploading an entire ADIF format log file at once. The concept is such a breakthrough, we have patents pending on its technology.

To retrieve one of these eQSL cards, the recipient only need enter the callsign, date, and band of the QSO he wants to retrieve, and if the other ham has entered that QSO into the system, up pops the complete eQSL card, ready for printing on a local printer. Furthermore, if the recipient registers his callsign with us, he can get a listing of all incoming eQSLs, and can just point and click to print each card received. Sending a reciprocal card back is a matter of clicking a button!

Apparently, most everyone else thinks this is the right way to do it, too. Another six weeks after hitting the 2 million card mark, it appears the number of cards will double again to 4 million.

Many of the members of the eQSL.cc site are using stock images for their eQSL card designs. But since it is possible to upload a graphic image to use on one's card, there are many custom cards online as well. Users are signing up from over 180 countries all over the world. In many places, a stack of 500 traditional QSL cards might well cost the average ham operator and entire year's salary. On eQSL.cc, 500 beautiful full-color cards can be sent for free!

In an era when "dot coms" are failing left and right, it is noteworthy that the eQSL.cc site, which is supported almost entirely through voluntary donations, has been operating in the black since Day One. Since the site runs virtually without any human intervention, the only ongoing expenses are for development of new features, and for continually increasing disk space, processor power, and bandwidth. A small amount goes to answering the questions and suggestions that come into the webmaster's office by e-mail. In most cases, replies are returned within the same day.

Not everyone agrees that eQSLing is the way to go. Some people like to get their hands on that stiff cardboard with the exotic stamps that spent months in transit from the jungles of some island that is only above water for 3 weeks out of the year. Others are bothered that some amateur organizations still have "no electronic transmission" clauses in the rule books for their awards. Others still are spooked by the privacy issues that this interconnected new world brings up.

But it's very difficult to argue - as the saying goes - with success. And 4 million cards is success by anyone's measure. At the present growth rate (with the number of eQSLs doubling every month), eQSL.cc could be home to virtually all of the world's amateur radio operators within a couple of years. Contest "big guns" will be able to "QSL 100%" within a matter of minutes, saving hundreds of hours of time and thousands of dollars in the process. DXpeditions will be able to "QSL 100%" on the spot, whether it be from that desert island with a dial-up Internet connection, or when the crew gets back to "civilization". It's just a quick log file upload, and they are done!

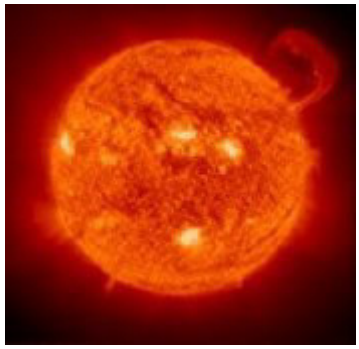
And eQSLs, unlike their traditional cardboard counterparts, can be verified through automated computer interfaces by amateur organizations wanting to validate award and contest submissions. The presence of a scanned license image on file for each user goes way beyond the simplistic checking that is possible using the older traditional QSL cards.

And now eQSL.cc is also a favorite site for SWLs, because users can identify themselves as either licensed amateur operator, or SWL. The eQSL cards between SWLs and hams are automatically configured to contain proper SWL phrasing, making their lives easier and saving them tons of money.
Complex systems shouldn't be designed in a vacuum, so we have assembled a capable group of hams and SWLs into an Advisory Board. Among these advisors are users with satellite and DX experience, contesting backgrounds, and international origins, as well as technology gurus and people with long-term operating histories. This group discusses current issues and future development plans for the site on a daily basis. Just another feature of the interconnected world we have entered as the 21st Century dawns.

There were nay-sayers when SSB first began to push CW aside. There were those who thought packet radio was just a short-lived fad. Others thought we shouldn't be wasting money on amateur satellites. And some people think eQSLs are "not natural". But for tens of thousands of hams and SWLs who upload their entire logbooks nightly in an effort to live up to the "100% QSL" promise of amateur radio, the final courtesy of a QSO is an eQSL.

BACKWARD SUNSPOTS" MAY HERALD START OF SOLAR CYCLE 24

From the ARRL Letter Sept. 9, 2006



The recent appearance on the sun of two so-called "backward sunspots" may mean solar Cycle 23 is drawing to a close and Cycle 24 now is under way or soon will be. At least that's the thinking of some scientists.

"We've been waiting for this," said Solar Physicist David Hathaway of the Marshall Space Flight Center in Huntsville, Alabama, after the first backward spot showed up. "A backward sunspot is a sign that the next solar cycle is beginning."

The term "backward" refers to the sunspots' magnetic polarity. One such sunspot appeared briefly July 31, then disappeared, but its significance was that its magnetic polarity was just the opposite of current Cycle 23 spots.

Another more robust backward spot, Sunspot 905, appeared in late August -- although it subsequently began to dissipate -- and some sungazers are saying Cycle 24 already has begun. ARRL propagation guru Tad Cook, K7RA, this week called it "the second sunspot of the new Solar Cycle 24."

"Eventually there will be more of the new reversed sunspots than old ones from Cycle 23, and that occurrence is one way to mark the beginning of the next sunspot cycle," he said. Radio conditions will not improve any time soon but over a period of several years of the course of the 11-year cycle, perhaps peaking around 2010

Editors note: For our non-ham readers, the number of sunspots directly relate to how far radio signals propagate on the short wave frequencies. The more sunspots the better, as far as long range communications go. The number of sunspots vary during an 11 year cycle. At the present time were are at a low spot in the cycle, meaning very few, if any sunspots. Conditions will improve as more and more sunspots are generated by the sun. This is why Cycle 24 is so important to ham radio operators.

REPEATERS AND STUFF

By Don Russell, WA8YRS

It is all your fault, I hope you know that! Really, if it was not for you guys, I would not be doing this! I had so much fun Field Day that I could not wait for another contest to come along. There were several contests in July, but I have tried these before and really did not enjoy them so I decided to wait for the North American QSO Party (NAQP) that runs in August. It was a long month!

I really enjoy the format of the NAQP. There are two separate contests during the month. One for CW and one for SSB. I, of course, favor the one with Morse Code. The contest is shorter than the typical contest. Usually a contest runs 24 or 48 hours. The NAQP runs 12 hours. Out of the 12 hours, a single operator station may work 10 hours. Off times must be taken in a minimum of half hour increments. So, two hours worth of break time are built into the contest. A multi-op station may work all 12 hours. There is a power limit of 100 watts for this contest, which means you won't be going head to head with 1,000 watt stations. The exchange is simple. Your name and state / providence / country. If you work a station that is not in North America (say in Europe), then you log it simply as the operators name and "DX" as the country. What could be simpler?

So, I was looking forward to the CW running of this contest. Other than Field Day, I did no contesting what so ever in 2005. My intentions were to give this NAQP the full 10 hours operating time. In reality, I was only able to operate about 8 hours of the contest. Other matters prevailed. My score was not great, but I was satisfied. 399 contacts in eight hours is pretty decent.

With anticipation, I waited for the running of the SSB portion of this contest. Since I do not enjoy operating phone contests as much as CW, I was not thinking of putting in a full effort. I didn't. I worked 4 or 5 hours of the contest, making just over 200 contacts. You don't have to work the whole contest to have a little bit of fun.

What I learned from entering these two contests was pretty simple. I needed to get my HF antennas back up to where they were when I was heavily into contesting. The 160 meter windom did pretty good as an all band antenna on CW. But then, you can be pretty weak and still get through on CW. My effort on 20 meter sideband was not good. Just about all I could do was search and pounce. I was not loud enough on the bands to have much luck calling CQ. If I do any contesting at all this fall, a lot of it will be on the higher HF bands, 20,15 and 10 meters. I need to get my Tri-Band beam back up! I also need to get my Butternut Vertical back up to par. It used to be one of my best antennas on 40 meters. It does not perform like it used to. I believe I need to redo the radial wires. Not a big chore. Mostly grinding off dirt and corrosion and making new solid connections.

So, I spent some time taking my VHF antennas off the tower. I had previously taken down the Tri-Bander so that I could play VHF and UHF for a while. That did not really come about. Other than FM, I have not done much work on those bands. I felt safe removing them.

The next step will be to get the Tri-Bander up in the air. This may be done by the time this Newsletter is delivered, although I do have until November to actually get the job done. Boy, My tower sure does look bare!

The next contest I am planning to get into is the November Sweepstakes, CW. This is a fun contest, but once again, a domestic contest. This time involving the U.S. and Canada. I prefer these contests much more than doing a DX contest. So, I was thinking, what would make my signal loud out to about 500 miles or so? There are a lot of hams in Ohio and the surrounding

states. Why do I not make more contacts in these states than I do? On to the internet to do a little research.

The answer may be in a Near-Vertical Incident Sky wave (NVIS) antenna. This antenna is more popular in the emergency communications work where one wants reliable HF communications from in very close in, to out to 200, 300, or 400 miles. It does not do well for DX, but signals are very strong out to around 400 miles. Sounds like just the ticket. I won't get QRM'd by DX while working the short stuff.

This antenna is unique in that it is not installed as high as possible, as with other antennas. In fact, a 40 meter antenna can be installed as low as seven foot off the ground! I presume then that an 80 meter antenna would do well at the 14 foot level. The antenna I may try is a dipole installed seven feet off the ground. It then has three radials laid on the ground. One directly under the dipole, one on one side of the dipole, eight feet away from the first radial. Then one on the other side, again eight feet from the original radial. This antenna is for 40 meters. The antenna is a standard dipole. The radials need to be 65 to 80 feet long. Do an internet web search on NVIS antennas. There is a ton of information on them. By the way, 40 meters is the highest band that NVIS is effective on.

Till next month, 73. See you at the meeting.

AMATEUR RADIO AWARENESS DAY IS SEPTEMBER 16

From the ARRL Letter, Sept. 9,2006

September is US Department of Homeland Security (DHS) National Preparedness Month, and Saturday, September 16, is Amateur Radio Awareness Day. For the third straight year, the ARRL and Amateur Radio Emergency Service (ARES) groups across the US will join a coalition of more than 200 national, regional, state and local organizations taking part in Preparedness Month activities. ARES is a partner with DHS through the Citizen Corps program. ARRL Media and Public Relations Manager Allen Pitts, W1AGP, says local ARES groups and clubs will be making presentations to civic organizations, at schools and at regional fairs to showcase Amateur Radio.

"More than 4000 ARRL 'Hello' campaign <http://www.hello-radio.org/> brochures have gone out in the past few weeks alone to prepare for the month-long initiative," he said.

To highlight Amateur Radio Awareness Day, ARRL public information officers (PIOs) will promote the DHS's "30 Tips for Emergency Preparedness" <http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0711.xml> to attract news media coverage. Some tips on promoting National Preparedness Month are on the ARRL public relations Web pages <http://www.arrl.org/pio/contact/2006/08/SEPTEMBER>.

ARRL Public Service Team Manager Steve Ewald, WV1X, notes that the underlying theme of National Preparedness Month is to encourage everyone to be aware of and prepare for emergencies all year long.

"Amateur Radio operators, led by ARRL Field Organization leaders across the country, are encouraged to consider this year's ARRL Simulated Emergency Test (SET) -- as well as all preparations and post-SET evaluations -- as a demonstration of your participation in National Preparedness Month," Ewald said. The target weekend for the 2006 SET is October 7-8 <http://www.arrl.org/FandES/field/setguide.html>.

A major ham radio presentation during September will take place on the West Coast. ARRL Southwestern Division Director Dick Norton, N6AA, says Amateur Radio Expo 2006 <http://lafair.b2v.org/> will be held in conjunction with the Los Angeles County Fair. "They will staff the exhibit over four weekends," Norton said, noting that the fair annually attracts hundreds of thousands of visitors.

Amateur Radio Expo 2006 will get under way the weekend of September 9-10 and will feature a special event station plus interactive presentations to demonstrate the many facets of ham radio.

In a related vein, Pitts says he'd like to see a tighter relationship between ARES organizations and the League's corps of volunteer PIOs.

"Too often something happens, and everyone grabs a radio. No one grabs a camera or laptop and gets the word of ARES actions out to the media until long after the story becomes stale," he observed. "We have wonderful stories to tell, but we are too busy to tell them when they are fresh."

Pitts said he and the ARRL Public Relations Committee are working on ways to better integrate public relations and emergency response actions at the local level.

Pitts says that according to the Federal Emergency Management Agency (FEMA), families should plan on being totally on their own for up to four days. "That's like being back in ancient times: no cell phone, no Internet, no 911," he said.

Membership Form

Club dues run from Jan. 1 until Dec. 31 and are collected during the last quarter of the year. You can mail in the dues to the address below or bring them to a meeting.

Dues Schedule:
$12 regular

$10 for second member in the same family,
for those over 65 yrs. of age, and
for those living outside Knox County

Mt. Vernon Amateur Radio Club
P.O. Box 372
Mt. Vernon, OH 43050

Name_____Call-Sign_____

Street_____

City_____State_____Zip Code_____

Phone Number_____License Class_____

ARRL Member (Y/N)_____E-Mail_____

Extra Donation (Optional)_____

Members are entitled to a free MVARC E-Mail address. Would you like one? No_____Yes_____

If yes please enter password_____

Other Comments:

The Mt. Vernon Amateur Radio Newsletter, CQ, is published monthly by the Mt. Vernon Amateur Radio Club.

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