

The Radio Hill Gazette

Volume XXXIX Issue X

October 2014

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From the Editor

Welcome to another edition of the Radio Hill Gazette.

By now the weather has moved away from the heat we expect from summer to the more mild, if not rainy fall. Time is getting short if you have outside projects to complete before winter sets in. If you have a project that needs help, just ask. There is no reason not to be on the air because you didn't get help with a new antenna or other project. Winter can be long and air-time can be a great diversion from the fact we don't venture outside.

Fall is when we start to ponder indoor projects. Some are actual "build it" type projects, possibly a piece of HAM gear; some are personal enrichment, like learning how to operate a new mode, such as digital or possibly CW.

Fall is also the time of year when some great operating events occur. Beyond chasing W1AW portable operations, there are some major domestic and international contests providing many opportunities to fill out your lists as you chase any awards.

This issue has several great submissions about what others are doing. Hopefully, these articles will help to inspire you to get involved and then write an article for others to read about your experiences. When you see these contributors, be sure to tell them how much you appreciate their contributions.

Anthony
Editor, RHG



The Hunters OR the Hunted?

Steve Karson, AC9EM, Fox Hunt Chairman and SARC Director

The hunters became the “hunted” during the on-foot fox hunt in Busse Woods on Saturday morning, September 6th. Steve Karson, the Hunt’s course setter, placed the Club’s three (15mW, 2 meter) Micro Fox transmitters in the trees and brush near the lake. The transmitters cover the whole hunt area – not bad for a single 9-volt battery.



Hunters, Chris Brewer AC9GN, Mike Clodfelter AC9CG, Rob Glowacki N9MVO, Cliff Sowka K9QD, and Anthony Willard AB9YC, swiftly honed in on the first transmitter site. Then, Rob and Chris led the way to the second transmitter further down the lakeshore while Anthony “always prepared” returned to his car for a crucial item: mosquito repellent! Within 60 minutes, all of the beacons were found and recovered... A testament to the intrepid hunters’ skill...

This 76 °F sunny day should have been perfect; however, the recent rains brought additional hunters to our course. Dozens of mosquitoes dogged our steps and hurried the hunters through the brush. Their buzzing wasn’t the arbitrary modulation of a directionless insect. It was the hum of a predator carefully circling its prey, smelling body odors and sensing our body heat - planning its strike. These pesky, uninvited guests will hopefully miss the next scheduled Hunt in October. Hope that more of you plan to join us!

Be Advised: Weather permitting the next “fox hunt” will be after Breakfast at Maxfield’s on Saturday, October 4, in Busse Woods. Bring your radio, antennas, attenuator, drinks, and other gear... and don’t forget the insect repellent just in case...

Note: if you don’t have an HT or the right antenna, come anyway and join a team.



Illustration 1: Mike AC9CG, Chris AC9GN, and Rob N9MVO battle the bugs and close in Chris on transmitter #2



Illustration 2: That antenna isn’t just for show! Mike AC9CG and Rob N9MVO



Illustration 3: AC9GN and Rob N9MVO found one



Illustration 4: Anthony AB9YC circles the transmitter



Illustration 5: Mike AC9CG fearless despite the pests



Illustration 6: Anthony AB9YC bags one



Illustration 7: Chris AC9GN, Rob N9MVO, and Cliff K9QD hunt the transmitter near the lake

Rubber Wheel Mobile—Contesting from the Car

Paula K9IR

I wanted to participate in the August North American QSO Party (NAQP) SSB, but realized I'd be in transit during the window of time I had to operate. What to do? As the OM would handle some of the driving, I realized I could go "contest mobile" for the first time.

My mobile antenna is modest—a trunk-lip mounted Little Tarheel screwdriver. While this antenna gets good reviews, the mount is not ideal and probably accounts for much of the ignition noise I hear (even with grounding straps to bond the trunk lid to the car body). Nevertheless, my mobile signal "gets out" and I've logged DX from this setup, so let's give it a go!



Illustration 8

The rest of my mobile station: an IC-706MkIIIG with matching mic; a laptop to run logging software and control the rig; a RigBlaster RigTalk USB stick to enable the IC-706 and laptop to talk with each other; and a cheap lightweight PC headphone/mic combo I bought primarily to use with my KX3

(see photos). You also can see this gear (plus other ham "toys") on my KP3/K9IR QRZ page: <http://www.qrz.com/db/KP3/K9IR>.



Illustration 9

For CW when traveling or mobile, I use the Begali Magnetic Traveler Light iambic key (see http://www.i2rtf.com/html/traveler_light.html). This key isn't cheap but is great for travel—only 1.5 lbs., with "wings" that fold in to protect the paddles and fold out when in use to expose the paddles and provide a stable base. It connects to the rig via a 3.5mm stereo plug, so no wires to alarm TSA ;-). The Traveler also comes with a strap to firmly affix it atop your leg—which is ideal when operating mobile, where convenient flat surfaces are limited. And the key

just looks cool (mine is red) ;-).

Around 2:30 pm on contest day, my OM and I did the "fire drill" to swap places. I have 2 whips of different lengths to use with the Tarheel; the shorter one covers 6M, but I had installed the longer whip for improved HF performance. I figured 20M would be my "best" band all things considered, so I started there in "search & pounce" mode, calling all stations I heard as I tuned the band. A couple of times I went to 15M and 40M and grabbed a few Qs on each, but



had the most success on 20M.

So what was it like contesting mobile? I heard more stations than heard me—but I was heard much more often than not! I worked both coasts and into VE. Sometimes I had to wait while other calls went through before I could make the Q. Other times I just noted the frequency on the kneeboard and came back later to see if the pile had dissipated or conditions had improved. When operating with limits, one has to rely more on technique—don't call with the pack but wait a few seconds and then call, with the hope that your signal will be heard in that lull after the pack finishes calling. Try to time calls for when any QSB peaks signals.

Beyond ignition noise, a compromised TX signal, and limited RX capabilities, other challenges were road and passenger compartment noise. The Honda Accord isn't the quietest car, and coupled with the FM radio and conversations (my fellow passengers weren't hams ;-)), I had to mentally filter quite a bit of ambient noise.

I couldn't use the mic portion of the headset (it may be possible to wire it to work with the 706, I just haven't done so). That meant a little juggling of the hand mic while also tuning the radio and typing log entries. The cheapo headset doesn't do much to keep out unwanted noise. In the future, I would either use my portable noise-cancelling headset, or my Yamaha CM-500 headphone/mic combo that does work with the IC-706 and would bar at least some of the noise.

The contest also was a good test of the laptop, which I'd just purchased used on eBay for dedicated DXpedition/portable/mobile radio use, and my emergency capabilities. As I closed on 2 hours of operating, the battery was quite depleted, so I first tried paper logging on my pilot kneeboard. However, after just a few minutes, I realized I needed the logging software to avoid dupes. What to do? Plug the laptop into the power inverter. It doesn't get much use—but when you need it, you need it!

My modest results after 2.5 hours—60 QSOs X 30m mults = 1,800 score. 40M—7 QSOs; 20M—46 QSOs; 15M—7 QSOs

The biggest lesson—don't let station limitations stop you from operating HF. GOTA with whatever ya got! Throw up a dipole, string up a vertical, run some coax from your car's mobile HF antenna into the house—just go for it. You will be pleasantly surprised with how much you can work, maybe a little frustrated at what you hear clearly but can't work, but most important of all—you'll have FUN!

AC9EM earns Worked All States (WAS) Award from ARRL

By Chris Karson, KC9ZID

Though having made a couple thousand contacts since attaining the Extra License in 2012, Steve Karson, AC9EM, had never really contested. In May he finally registered with the Logbook to the Word (LOTW). Picking up QSOs on 20m from California to Maine easily, Steve thought he would earn this award in record time. However, obtaining confirmations from the few contacts he was able to make in West Virginia and North Dakota proved difficult; many hams do not participate in contesting. Also – although the contacts were happy to talk, many did not confirm through ARRL’s Logbook of the World. The QSL cards that arrived in the mail were fun for our kids to see.

[Confirmation rates in LotW range from 30% to almost 60%, with digital modes being the highest category of contacts to confirm in this way. Domestic versus DX is a bit hit or miss, with Dxpeditions being very responsive, if not a bit slow to upload their several hundred thousand contacts. Some stations only upload logs a few times a year producing confirmations well after a contact. Keep operating, keep logging contacts and you'll get the confirmations you need. Ed.]

If this was still 1936 – the inception year of this particular ARRL award - Steve would have completed his roster of states with 48; but all 50 states are now required. Because of a few unconfirmed states, our family soon learned that Steve would spend more time than we expected earning the WAS award. We could hear him on his radio at 5am, noon, and 2am, trying to pick up elusive contacts on 20m, usually from nearby states like Wisconsin and Iowa. Finally giving up on the single band, Steve set up a 40m dipole in the yard. This is his 4th wire antenna!!! How much can the poor trees take...? Fortunately, using this 20m/40m band combination, Steve finally received all 50 confirmations.



Steve told us that the much anticipated “major award” would arrive by mail. When the large white envelope arrived from the ARRL, I breathed a sigh of relief that the award was not the leg lamp “major award” which arrived in the movie **A Christmas Story**. The certificate looks great! It has been framed and is on display in Steve’s ham shack.

He also has confirmations from virtually every part of the world – including Antarctica, the Cook Islands and Greenland. His next goal is to receive confirmations from 100 countries; then the DX Century Club Award will join the WAS framed copy on the wall.



Tuning an HF antenna

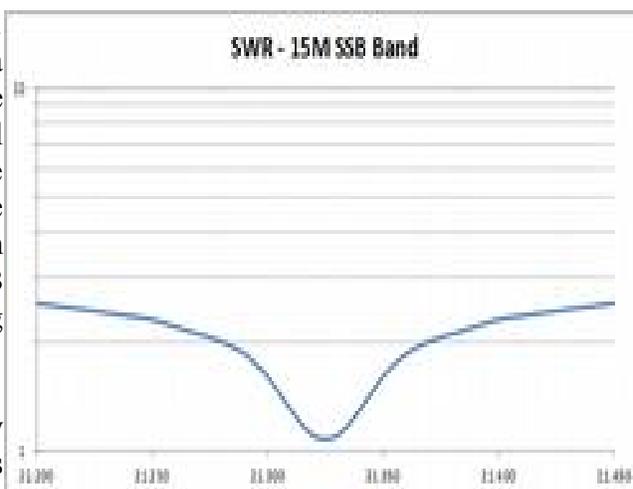
Matt AC9IG

Last month I discussed getting on the air and making my first few contacts. The entire process was very exciting. This month I'll discuss the process of tuning the antenna.

I was relatively pleased with my setup, and very happy to be on the air. But I wanted to resolve the issues with the 40M and 10M bands having a high SWR. Through SARC-All I asked for help tuning my new antenna. Anthony, AB9YC responded and dropped by with an antenna analyzer and plenty of know-how. Since I don't yet know CW or have any type of data-mode setup, we analyzed the antenna at the center of SSB portion of each band.

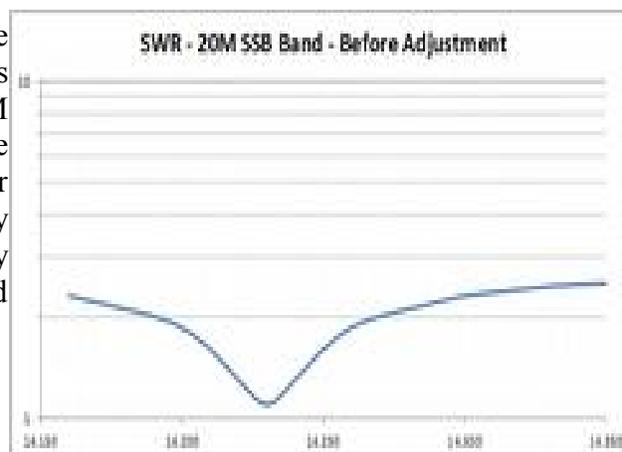
The 10M band showed its resonance at the higher end of the band. After I realized just how much spectrum is available on 10M I quickly realized why I didn't have any success tuning it previously. When I tried tuning the antenna on the higher end of 10M it tuned right up. The 15M band was working for me, and the antenna analyzer confirmed this.

This was definitely a case of having the right tool. Anthony had brought with him a RigExpert antenna analyzer. The analyzer connects directly to the feedline in the shack and provides a graphical display of the SWR of the antenna across a wide swath of frequencies. The frequencies to sweep are selectable, and were set to center at 21.345MHz with a width of 250kHz. This covered the entire SSB portion of the 15M band. I've recreated the resulting graph.



The graph shows that across the entire frequency range scanned, the SWR of the dipole antenna was under 3:1 which is often considered a target to shoot for when tuning an antenna. The near 1:1 SWR at the center of band shows that the dipole is cut to the correct length to be resonant on this band.

The 20M band is where things get interesting. The dipole I installed has a 20M element that also has traps and an additional length of wire for the 40M band. This means that any adjustment made to the 20M elements will also affect the 40M band. After looking at both the 40M and 20M frequency responses generated by the analyzer Anthony suggested that we start by adjusting the 20M band first. I've recreated the 20M graph.



While the graph shows that the SWR across the entire measured area is still below 3:1, it is no longer centered at the middle of the band. This means that we're giving up a little more power to the mismatch at the higher end of the band than we are at the lower end. We decided that it would be best to center the resonant frequency on this antenna on the portion of the band that I was interested in. To do this we need to use some math.

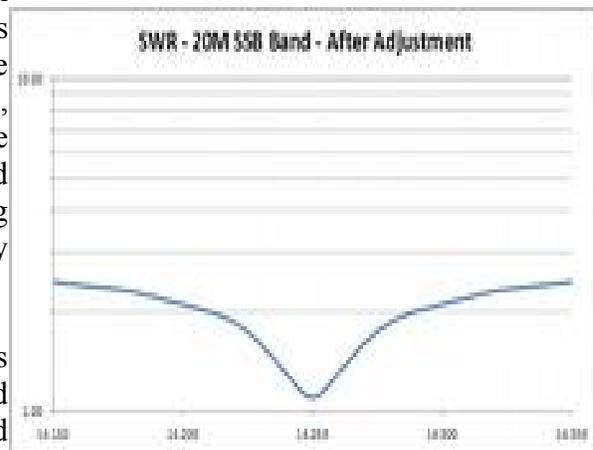
From the graph and some additional measurement features available on the antenna analyzer we determined that the lowest SWR occurred about 10% below the desired frequency. When you recall the relationship between frequency (f) and wavelength (?) the way that we need to adjust the antenna's length becomes apparent.

$$\lambda = \frac{300 \text{ meters}}{f \text{ (in Hz)}}$$

By solving the equation for frequency, we quickly see that to increase the resonant frequency, we need to decrease the length of the antenna.

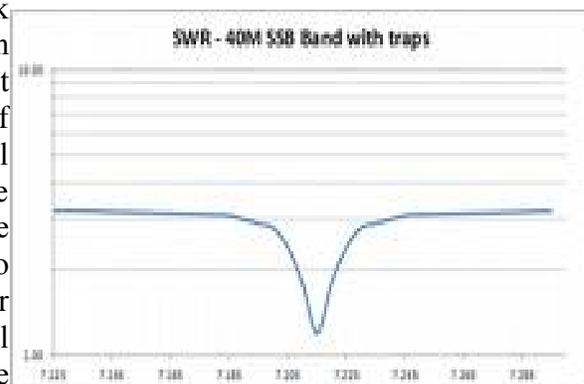
$$f \text{ (in Hz)} = \frac{300 \text{ meters}}{\lambda}$$

The 10% that was measured earlier is exactly how much the length of the antenna needs to be shortened. It's advisable at this point to not take too much off the antenna at once, we made the adjustment in two steps, taking off the bulk of the length of the antenna in the first pass. We then checked the measurements again, and made one final adjustment to the length. After making the adjustments the center frequency ended up exactly where we wanted it.



At the start of this process the 40M band also had its resonant frequency (lowest SWR) lower than we would have liked. The process of adjusting the 20M band brought the resonant frequency of the 40M band to nearly the center of the frequencies of interest that I would be working with. Because of this we decided not to make any additional length adjustment to the 40M part of the antenna.

The 40M portion of the antenna has an interesting quirk that they analyzer made very apparent. The design incorporates a trap that is used on the antenna to make it resonant on 40M, without adding a significant amount of length to the 20M element of the antenna. A trap is a coil that is adjusted in number of turns and diameter to make it resonant at certain frequencies. On this antenna the traps are designed such that it acts as an electrical open to the 20M band by creating a very high impedance near 14MHz. However, at 40M the trap becomes an electrical short to the 7MHz frequency at this band, allowing the RF energy to pass into the coil. Finally, the coil itself loads the antenna, making the 40M portion of the antenna significantly shorter than it would need to be if it were a full-wavelength dipole. Like an antenna, the coil in the trap is resonant at a specific frequency. This causes the SWR of the entire antenna assembly to change very quickly as you approach this resonant frequency. The graph below shows this characteristic.



The trap design causes a much steeper curve. In fact, a portion of this band is above the desired 3:1 SWR discussed earlier. With the antenna tuner built into the radio, however, this portion of the band is still workable. Additionally, the 40M band just happened to be something I wasn't expecting to have access to given the space constrains that I had when selecting an antenna. So even though it is not an ideal situation, I still have the opportunity to work some contacts on this band.

Overall the process was fairly straight forward. I'm very glad to know that I have gone through it and now have a much better understanding of dipole antennas and their characteristics. I'm also grateful for the helpfulness of the ham community in general, and specifically Anthony for making the correct equipment and his time available to help me with the process. Had I used the SWR meter built into the radio the entire process would have taken significantly longer as data points for SWR would have had to been taken manually across the several hundred MHz, on several band.

Next month I'll discuss some of the features of the HF radio that I've found useful in cleaning up HF contacts and that make locating them on the band easier.

Matt, AC9IG

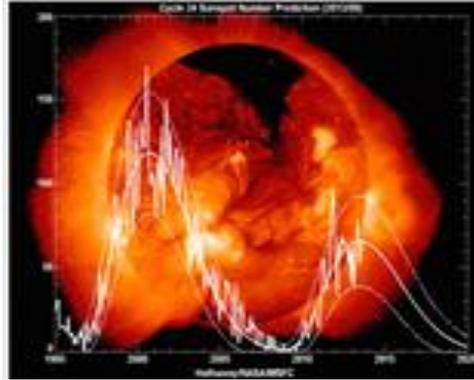
Solar Cycle 24

Cliff Sowka K9QD

A recent mainstream press headline read:

Solar activity drops to 100-year low, puzzling scientists
[Reuters Sep 18, 2013]

Also, ARRL QST recently published an article about the current behavior of Solar Cycle 24 and it prompted me to undertake some basic knowledge review as well as prompted new research into what Amateur's should expect the impact will be on the radio spectrum during this current cycle. Here is a compilation of plagiarized information from various sources.



Significant solar information from various government resources is collected, summarized, and graphically presented by VE3EN at WWW.solarham.net

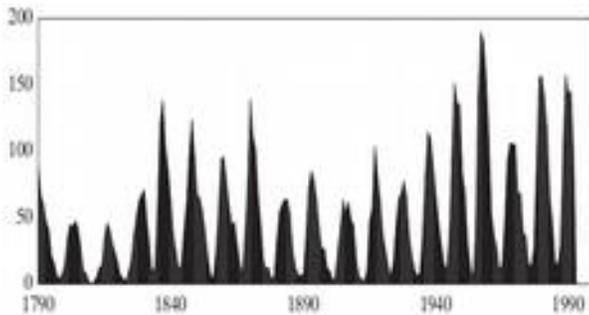
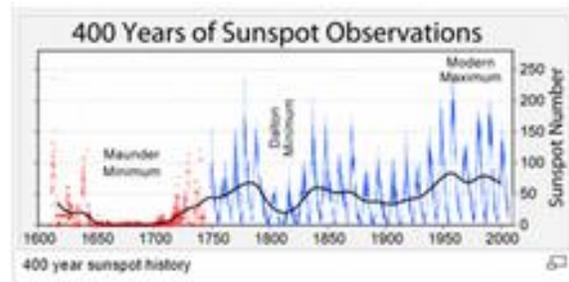


Illustration 12: Here is a summary of Sunspot Cycles from 1790 to the present.

One periodic increase and decrease of sunspots defines a complete cycle.



Until 1960, Earth's magnetic field, called the geomagnetic field, was thought to be a simple dipole field like that of a bar magnet. We do not yet know the details of what produces the geomagnetic field, except that there must be currents circulating inside Earth, probably associated with the molten core. With the discovery of the solar wind, physicists realized that the magnetic field of Earth is pushed away from the Sun.

The solar wind exerts a pressure on Earth's magnetic field which compresses it on the Sun-facing side and stretches it into a very long tail on the side away from the Sun. This complex magnetic envelope is called the magnetosphere (Figure 4-1). On the Sun-facing side, the solar wind compresses the magnetosphere to a distance of about 10 Earth radii; on the downwind side, the magnetotail stretches for more than 1000 Earth radii. The magnetosphere is filled with tenuous plasmas of different

densities and temperatures, which originate from the solar wind and the ionosphere. The ionosphere is the highly charged layer of Earth's atmosphere which is formed by the ionizing effect of solar radiation on atmospheric molecules.

In the early 1960s, solar physicists began to realize that the solar wind carries the Sun's magnetic field out to the far reaches of the solar system. This extension of the Sun's magnetic field is called the interplanetary magnetic field and it can join with geomagnetic field lines originating in the polar regions of Earth. This joining of the Sun's and Earth's magnetic fields is called magnetic reconnection, and happens most efficiently when the two fields are anti-parallel. Through reconnection the magnetic fields of Sun and Earth become coupled together. Solar wind particles approaching Earth can enter the magnetosphere because of reconnection and then travel along the geomagnetic field lines in a corkscrew path (Figure 4-2). Positive ions and electrons follow magnetic field lines (in opposite directions) to produce what are called field-aligned currents. The solar wind and the magnetosphere form a vast electrical generator which converts the kinetic energy of solar wind particles into electrical energy. The power produced by this magnetohydrodynamic generator can exceed 10^{12} watts, roughly equal to the average rate of consumption of energy in the United States daily. The very complex plasmas and currents in the magnetosphere are not fully understood. Some of the solar wind particles travel back along the magnetotail in currents which make the tail.

Fluctuations in the solar wind cause large voltages to be induced in the magnetosphere. Part of this EMF causes currents to flow along magnetic field lines between the magnetosphere and ionosphere. As solar wind intensity changes, so does the strength of this current. This varying current has its own magnetic field which combines with Earth's field to produce a changing magnetic field of the surface of the Earth.

Such a changing field induces currents in any conductors, such as power lines or pipe lines. Magnetic reconnection is the joining of the Sun's and the Earth's magnetic fields, and occurs most readily when the two fields are antiparallel. When the fields are joined, solar wind material can more readily enter the magnetosphere, enhancing the energy input to the magnetosphere.

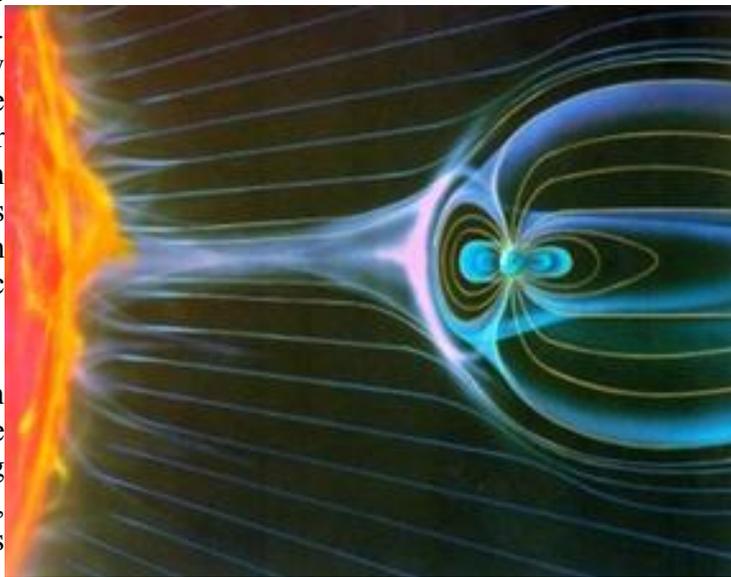


Illustration 14: Solar Wind Encountering Earth's Magnetic Field

Low-orbiting satellites can be engulfed in the Earth's atmosphere as it expands due heating from increased radiation levels from the Sun. This encounter with the atmosphere causes a frictional drag on satellites, which causes them to drop in their orbits, and possibly fall to Earth prematurely. High-orbiting satellites are often exposed to energetic particles during intervals of high solar activity. These particles can cause damaging charge buildups, degrading solar panel output and can destroy or damage microelectronic devices* NOAA.GOV [terrestrial effects of solar activity].

Several centuries ago, the disruptive effects of the Sun were totally unnoticed by humans. But as technology developed that utilized currents, conductors, and eventually electromagnetic waves, the disruptive effects of the Sun became evident. Early telegraph systems in the 1800s were subject to mysterious currents that seemed to be generated spontaneously. It was not until World War II, when radio communications were heavily relied upon, that solar disturbances were recognized as a serious problem. From that time on, our reliance on electronic technology has grown exponentially and so has the disruptive potential of the Sun.

The massive collapse of the Hydro-Quebec power system in 1989, which resulted in the temporary loss of 9450 megawatts of electrical power, probably marked the moment when others than just the scientific community took solar disturbances seriously.

The NOAA Space Environment Services Center (SESC) in Boulder is one of the world centers that makes forecasts of solar impact but there is no comprehensive model of the Solar-Terrestrial environment. In most cases, the ability to predict the behavior of nature comes from a mathematical model. For example, the motion of an object falling in a gravitational field can be modeled using the mathematical expression $v = g \cdot t$. Earth weather forecasters have been trying for the last 30 years to construct a mathematical model of the global weather using the very complex equations of fluid dynamics to describe the circulation of the oceans and atmosphere. Even with the best supercomputers to run these models, it has proven impossible to precisely model Earth weather. Modeling the solar-terrestrial environment is vastly more complex. The physics necessary to do this includes not only fluid dynamics but also Maxwell's equations. This combination is known as magnetohydrodynamics (MHD), and at the present time the equations of MHD cannot be completely solved analytically.

Numerical solutions exist which involve the use of software in a "trial and error" fashion. Numerical solutions, however, can give incorrect results (Hockey Stick anyone?) and at best are an approximation.

Research to improve solar forecasting is occurring in two major areas. The first area is the correlation of observable phenomena with effects on Earth. For example, we have observed a strong correlation between sunspot cycles and disturbances on Earth. However, this correlation is very coarse; we know that during a certain period of years there will be high levels of solar activity and the accompanying disturbances on Earth. But we cannot accurately predict these disturbances as happening over specific days or hours, as we would like to be able to. Many researchers are trying to refine the correlations between observable symptoms, like increased radio emission, and subsequent eruptions of mass. Some of the best correlations yet are those that have been found between the evolution of sunspot groups and eruptions.

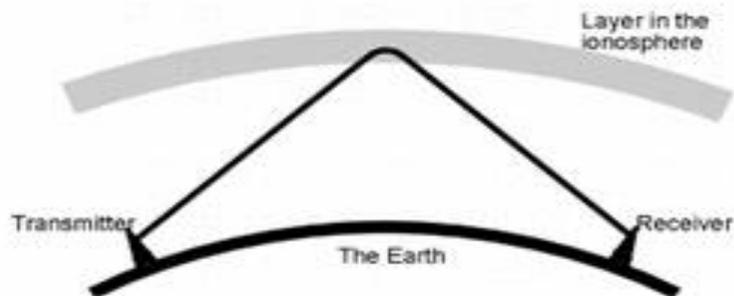
The second area of work is that of constructing a model for the Solar-Terrestrial environment. In addition to the complexities of MHD, the problem is difficult because there are three different domains involved, which all couple together. The first domain is that of the Sun; to simply construct a mathematical model of the Sun is far beyond us at the present time.

Geomagnetically Induced Currents

When an intense surge of solar wind reaches Earth, there are many changes which occur in the magnetosphere. The day side of the magnetosphere is compressed closer to the surface of Earth and the geomagnetic field fluctuates wildly. This type of event is generally called a geomagnetic storm. During a geomagnetic storm the high-latitude currents which occur in the ionosphere change rapidly, in response to changes in the solar wind. These currents produce their own magnetic fields which combine with Earth's magnetic field. At ground level, the result is a changing magnetic field which induces currents in any conductors that are present. These are called geomagnetically induced currents, which often flow through the ground unnoticed by humans. But when good conductors are present, like pipelines and electrical power transmission lines, the currents travel through these as well. These currents are the result of voltages that are induced during geomagnetic storms. Voltages as high as 10 volts per mile have been measured. Although this may seem small, it leads to a potential difference of 10,000 volts in a 1000 mile long pipeline or power line. In 1957, voltage differences of 3,000 V were recorded along a trans-Atlantic cable between Newfoundland and Ireland.

Induced currents are much more serious at higher latitudes, near the auroral oval, and in areas which lie above large deposits of igneous rock. Because igneous rock has a low conductivity, the induced currents tend to take a path through man-made conductors. In pipelines, these currents cause increased corrosion and the malfunction of flow meters. The Alaska pipeline has carried as much as 1000 A during geomagnetic storms.

In large power systems, like Hydro-Quebec, surges of induced current overload transformers and capacitor banks, causing damage and shutdown. The problem is worsened by the fact that geomagnetically induced currents are largely direct current, while all of our power systems are alternating current. Hydro-Quebec was especially vulnerable because it is located fairly far north and sits above huge igneous rock formations.



Ham Radio has long understood the Ionosphere's influence on propagation. Ionized layers of the atmosphere reflect radio signals and Solar Activity modulates these Ionized layers.

CYCLE 24 is Really Weak

The yellow highlight here shows that predicted activity is remarkably deviant from actual flux intensity. Observations so far indicate the lowest level of activity in the past 100 years. The impact on earth's weather is yet to be determined. The Maunder Minimum in 1650's is believed to be the causation non-existent summers suffered for several years of Europe's deficient crop production.

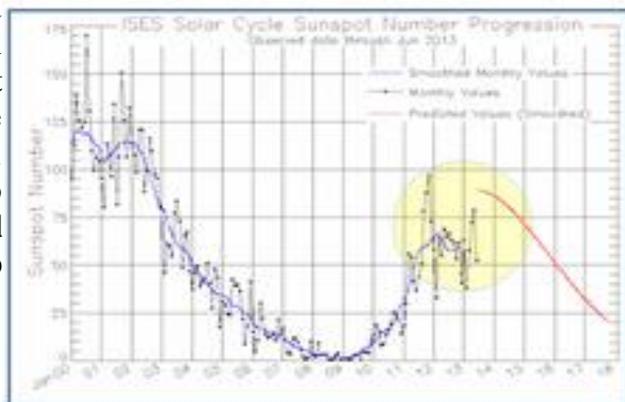
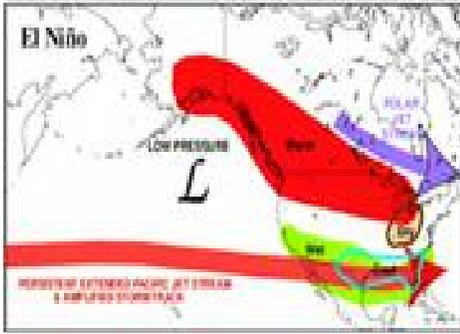
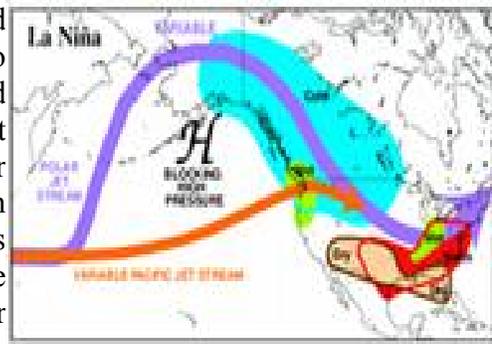


Illustration 15: Maximum Usable Frequency

El Nino and La Nina have Major impact



Terrestrial Weather and Ham Radio Tropo Propagation are involved here too. Solar impact on these two weather phenomena isn't known but surely the sun adds thermal energy to the oceans. Ocean water temperatures directly

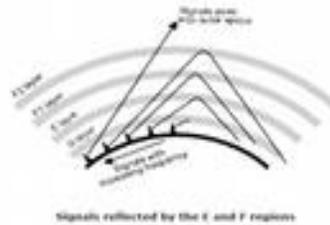


cause the lighter fluids of air to move in cycles that exert motive energy on the weather patterns of earth.

Terrestrial Weather on earth as well as Ham Band Propagation is directly affected by these cycles. Weather's induced Tropo Propagation is one of the most-observable affects Ham Radio operators experience.

VE3EN's Current Solar 24 Forecast:

Quiet to unsettled levels are expected, with a chance for isolated active conditions, for days one and two (04-05 Sep). By day three (06Sep) unsettled to active conditions are expected, with a slight chance for minor storm levels (particularly at high latitudes) in response to the arrival of the glancing blow from the 02 Sep CME combined with the potential influence of a negative polarity coronal hole high speed stream.



Solar-Terrestrial Data - <http://www.v3en.ca>

16 Oct 2013 0014 GMT	VHF Conditions	HF Conditions
SFI 125 SN 136	Item Status	Band Day Night
A 14 K 1/Plntry	Aurora Band Closed	80n-40n Fair Good
X-Ray 65.5	6n EsEU Band Closed	30n-20n Good Good
304A 157.6 @ SEM	4n EsEU Band Closed	17n-15n Good Good
Ptn Flx 0.10	2n EsEU Band Closed	12n-10n Fair Poor
Elc Flx 102.00	2n EsNR Band Closed	Geomag Field VR QUIET
Aurora 7 /n=0.90	EME Deg Good	Sig Noise Lvl 50-51
Aur Lat 58.6°	MUF ES - SEASON BREAK	MUF US Boulder 33.46
Bz -1.9 Sw 542.5	MS 0 5 10 15 VPC	Solar Flare Prb 12%

Source: <http://www.solarcyde24.org/>

Illustration 16: A Screen shot of VE3EN's Solar Terrestrial Data helps in predicting Ham Radio propagation in the various bands.

CONCLUSION

.....we need significantly higher taxes on energy in order to correct the sun's failure to comply with our computer models.....

Club roster information request

Ladies and gentlemen,

We are still trying to get information for the club roster. The information will be published only in paper form to prevent creation of spam emails etc, but will be useful to you and other members of the club, when you and they could use help in learning something. The spreadsheet requests the following information. If you don't want to provide all, you don't have to. (Actually, I was just looking at the list below, and I see it does not include offspring. It is possible that they could also benefit from knowing others from within SARC, as well.)

The info you send will not be on Google groups if you send it only to him, and thus it won't be available to anyone else (except the NSA, and they already know all about you.)

Name, Call Sign, License Class, First year licensed, SARC Committee Positions (current), SARC Committee Positions (former), Ham Radio Interests, Spouse Name, Home Address: City, State, Zip Code, Email Address, Home Phone, Cell Phone, Work Phone, Employer, Occupation, Former occupation, Other Interests or Hobbies, Special Abilities

Please send your information to Jim at mccannj706@gmail.com. Let's make a Roster that can be really helpful.

73 de N9MVO,

Rob

Calendar and things to do

October

ARRL Centennial QSO Party	1/1 – 365 days, all 50 states, all bands, many modes
Board of directors meeting	1
Breakfast at Maxfields	4
Club meeting	16
EmComm Roundtable	18
IL QSO Party	19

There are plenty of contests this month operating in many modes on various bands, so find one and listen in. Check out <http://www.hornucopia.com/contestcal/weeklycont.php> to see what's coming up.

Looking ahead

Christmas Party	January 15, 2015
Cruise	2016

VE Testing Results

Results for September 6, 2014
 Next Test October 4, 2014
 Park District CRC; Sr. Center;
 Sunshine Room.



CLASS	NUMBER TESTED	NEW LICENSE or UPGRADE
Technician	0	0
General	0	0
Extra	4	3
Total	4	3

NO REPORT.

New/Upgraded Licenses:

****Technician****

****Amateur Extra****

Stephen Gilbert KE4AM
 Gerald janka K9JHY
 Joseph Overhuls KD9BTS

****General****

The SARC-sponsored VE exam sessions are held at 9:00 a.m. on the first Saturday of each month (unless it is a holiday or advised to the contrary by Schaumburg Park District) at

Schaumburg Community Rec Center (CRC)
505 N. Springinsguth Road
Schaumburg, IL 60168-0251

The CRC is located at the S.E. corner of Springinsguth and Bode Road, park in the North lot and enter through the North doors. Testing will be in the Sr. Sunshine Room, signs will be posted to guide the way to the room.

The fee for taking a VE exam is \$14.00.

According to the FCC, the test fee allows an examinee one attempt to pass or fail each of the three examination elements. In addition, the order in which the examination elements are taken is not restricted; they may be taken out of sequence.

As in the past, an identical fee will be assessed to any applicant who fails an exam and wants to retest at the same session. The only condition is that the same exam (identical set of questions) cannot be given to the Applicant, since all our exams are unique, this is not a problem at our sessions.

Tom Doyle K9MF
 W5YI-VEC CVE & Test Session Manager
 847-895-0174
 Email: K9MF@ARRL.NET

SARC Email Reflector

Want to know what's happening in the club? Join the club's email reflector on Google groups.

Point your web browser to: <http://groups.google.com/group/sarc-all>

Click on the Join this group link. You can use your current email account to sign up or create a free Gmail account.

You can elect to receive individual messages, a daily digest, or just read the messages on the Google Groups webpage.

Club Nets

Technical information net - Every Tuesday night at 7:30 pm. on the SARC Repeater 145.23 MHz.-600 kHz WITH 107.2 Hz PL. Bring your Q&A's

Thursday nights are the 2 meter general information net on the SARC Repeater 145.23 MHz.-600 kHz with 107.2 Hz PL. at 8:00 PM (except meeting nights.)

Club Meetings

Club meetings are held at the Schaumburg Recreation Center (CRC) on the southeast corner of Springinsguth and Bode roads. Our nets are held every Thursday (except Meeting nights) at 8pm on the K9IHK repeater; 145.23 MHz -600 kHz with 107.2 Hz PL.

Club Officers – 2014

President: Rob Glowacki N9MVO

[n9mvo <at> sbcglobal.net](mailto:n9mvo@sbglobal.net)

847-981-1481

Vice Pres. Leo Ribordy N9NBH

[leoribordy <at> sbcglobal.net](mailto:leoribordy@sbglobal.net)

847-697-7616

Secretary: Ray Parsons W9RAP

Treasurer: Albert Valdes K6K0K

Director: Steve Karson AC9EM (2016)

Director: Anthony Willard AB9YC (2016)

Director: Cliff Sowka K9QD (2014)

Director: Ray Parsons W9RAP (2014)

Director: Gary Bernstein N9VU (2015)

Club Committees

Programs	Open
Social Activities	Roger Ryan, W9RDR
Membership	Leo Ribordy, N9NBH
Education	Open
Public Service	Rob Glowacki, N9MVO
Emergency Communications	Bob Langsfeld, WB9TZC
Special Events / Field Day	Dennis White, KC9NZP

RHG Anthony Willard, AB9YC	
Publicity	Open
Net	Jim Brink, W9JFB
Technical Assistance	Ted Lester AB9SZ
Fund Raising	- Open -
Fox Hunt Coordinator	Steve Karson, AC9EM
Repeater	Rob Glowacki, N9MVO



Schaumburg Amateur Radio Club

Thursday Night 8:00 Net
S.A.R.C. Repeater
145.230 MHz- 600 kHz PL=107.2
442.275 MHz +5 MHz PL=114.8
Hz

Don't forget to check into the net! It will only take a minute and will let other club members know how you sound on the club repeater. The net features current club news, weekly NEWSLINE, news from other clubs and (of course) the swap-and-shop. Encourage your friends who are not yet members to check in with as well. Keep in mind that this is an open net and we encourage everyone to check in. See you Thursday at 8p.m.

The Schaumburg Amateur Radio Club, Inc. is organized as a general not-for-profit corporation in the State of Illinois to render public service whenever applicable to the needs of the

community and further various pursuits of amateur radio as a hobby. Meetings are generally held on the third Thursday of each month. Visitors are always welcome.

Please send all submissions for the Radio Hill Gazette to the following address:

Schaumburg Amateur Radio Club,
Inc.
790 Washington Blvd.
Hoffman Estates, IL 60169-3077

Or you can send by email to rhg@n9rjv.org.

We solicit letters, articles, news items, quizzes, advertisements, suggestions, and criticism – plus anything else you can think of, including ideas to improve the RHG! Please make submissions by the 20th of the month for inclusion in the next issue.

The editor reserves the right to edit submissions due to size or formatting limitations. S.A.R.C. shares newsletters with a number of other clubs. We scrutinize their publications very closely to make

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Visit the SARC Home Page at <http://n9rjv.org>

