

# The Dipole

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*Radiating the News of the Marple Newtown Amateur Radio Club*

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March 2010

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Next Club Meeting: Thurs. March 4<sup>th</sup>, 7 p.m. at The Gauntlett Center

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## THE PROGRAM

Presenting at the Thursday March 4<sup>th</sup> monthly club meeting will be Joe Vilardo K3JV. His topic will be Olivia and WSPR. Olivia is called the Magical Mode because of its nature and design to work in difficult conditions.

More information about the March 2010 program was not available at the time of the Dipole production; however, members may always contact the club President Walt Faust at 610-622-2200 for information regarding the club and the meetings.

MARPLE NEWTOWN AMATEUR RADIO CLUB  
c/o The Gauntlett Center  
20 South Media Line Road at West Chester Pike  
Newtown Square, Delaware County, PA 19073

For information about our club,  
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The Dipole

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Meetings, Nets, and Packet BBS

Monthly Club Meetings: First non-holiday Thursday,  
7:00 p.m. at the Gauntlett Center in Newtown Square,  
Delaware County. Talk-in: 147.195 repeater  
Daily Weather and Information Net: Every morning at 8:30  
a.m. on 147.195 repeater  
Club Web Page (including online version of The Dipole):  
<http://mnarc.org>  
Delaware County ARES Net: Every Wednesday at 19:30 local

Super Computer from Odd Beginning



U.S. Air Force Building Supercomputer from PS3s

Image courtesy of the USAF.

When bean-counters first within the purchasing department of United State Air Force (USAF) read a unique request, this project may have caused the largest number of "raised eyebrows." There is little doubt that a mixture of reactions were produced by this very unusual request were varied.

Just as this request surely generated this collection of initial, unusual responses, there must have been a super-sized grin on the face of the USAF officer initiating this request to procure approximately 1,700 Playstation 3 units for a USAF facility in Rome, NY.

Before any readers of the *eDipole* join the initial collection of complainers stressing the foolish, unwise expenditure of tax dollars, this request is not one for a large number of "toys." No, these machines aren't for gaming. Instead, the facility -- an Air Force research lab -- will included these requested items into a special parallel-computing cluster. When complete, this special application will combine more than 2,000 **PS3s**.

The resulting supercomputer -- snappily monikered "500 TeraFLOPS Heterogeneous Cluster" -- will be used to be 'play' 2,000 simultaneous games of God of War III. At first glance this application seems to have no practical application. It will! Among the planned applications, this project will be attempting to simulate the way the human brain processes information as well as accomplishing the remarkably difficult task of recognizing the content of images.

This USAF's facility computing director Mark Barnell told the military's news source, Stars and Stripe "Humans can routinely do these things, but a computer struggles to do it. In a general sense, we are interested in making it autonomous."

It is recognized that this cluster of individual PSC units will not be as powerful as a regular supercomputing rig. What is being demonstrated that this combination collection will be cheaper and more environmentally friendly. This cluster will consume as much as 95% less electrical power and shut down unused machines when the cluster isn't running at full capacity.

Another Shared User of Ham Radio Frequencies

A recent FCC granting of a waiver of the rules found in the FCC's Part 90 has generated one more user of popular Amateur Radio frequencies; frequencies that are already used by the Ham Radio world on a shared basis. This recent grant authorizes the operation of a device that provides a data transfer from hazardous environments.

This device, the Recon Scout will be licensed in segments of the 430-448 MHz band. As a reminder, this segment of the radio spectrum is allocated to the Federal Government Radiolocation service as the primary user. Amateur Radio and a collection of non-federal radiolocation systems also use this spectrum area on a secondary basis.

The sharing concept, while a known concept, became even more apparent with the recent restrictions being activated by the FCC on a group of UHF repeaters located within the use areas of USAF RADAR installations.

The manufacturer, ReconRobotics, has provided a background of the device that will become an additional shared user of these UHF frequencies:

The Recon Scout device can be thrown, dropped or launched into hazardous areas and can provide an operator located a safe distance away with video and audio, along with infrared, biological, chemical, heat, radiation or other data. It would be marketed for use by state and local law enforcement and firefighting agencies, as well as by security personnel in critical infrastructure industries.

In their initial waiver request, ReconRobotics asserted that even though the device operates in an area allocated to other services, including Amateur Radio, the Recon Scout operates with only 1 W peak power and it is "unlikely to cause interference to these services."

The ARRL has had an ongoing and firm stance in their position. They have called upon the FCC to "deny ReconRobotics waiver request, "either permanently or even temporarily." The League called on the Commission to require ReconRobotics to "initiate a rulemaking proceeding if it feels that the Part 90 or Part 15 rules governing analog devices are not sufficiently accommodating and should be changed, and could be changed consistent with interference avoidance. Repeatedly granting waivers for analog devices which do not meet the fundamental interference avoidance requirements of the existing rules is bad spectrum management and ill-serves the Amateur Service."

It should be noted that one of the channels being requested by ReconRobotics -- 442-448 MHz -- is used by Amateur Radio repeaters, as well as (with band plans varying by locality), as well as Amateur Radio television repeater inputs.

The FCC verbiage stated, "These repeater inputs, both for voice and video, are at high locations where line-of-sight to [ReconRobotics] devices should be expected anywhere in the United States. Repeater inputs in this band are routinely used for emergency communications via Amateur Radio for numerous served agencies including FEMA, and so at times when the petitioner's device may be expected to be used, the repeaters may be expected to be in operation in the same areas."

Because of this well-documented reality, the ARRL has maintained that interference -- both from and to -- the Recon Scout device may be expected on a regular basis from Amateur Radio operations.

In yet another technical threat, the ARRL added, "Because [the Recon Scout] operates on a channelized basis, each of the three channels being six megahertz wide, the necessary bandwidth of the device is apparently close to 6 MHz."

In a detailed review by the ARRL, the *eDipole* is adding a detailed review of the League's comments:

The ARRL position added, "[ReconRobotics] asks that it be granted an unspecified series of permanent waivers to allow the marketing and sale to, and use of this device by law enforcement and fire department personnel for public safety applications. The Amateur Service, which has a heavily occupied, secondary allocation in the 420-450 MHz band...would be potentially substantially impacted by grant of these waivers."

The ARRL noted that ReconRobotics asked for "unspecified permanent waivers of Part 90 rules" in order to market and sell its product, but, as the ARRL pointed out, more than the Part 90 rules would have to be waived: "Because the three channels (430-436 MHz, 436-442 MHz and 442-448 MHz) on which the device is proposed to operate...are all within that segment [430-450 MHz], what is being requested is not only a waiver of Part 90 service rules, but also a waiver of Section 2.106 of the Commission's Rules, the Table of Allocations. The only allocations in the 430-450 MHz band are for Government Radiolocation (limited to military radars) and on a secondary basis, the Amateur Service. Per Section 90.273 of the Commission's rules, frequencies above 429.99375 MHz and below 450 MHz are unavailable to stations in the land mobile service anywhere in the United States."

The ARRL's comments also stated that ReconRobotics "fails to establish that the 420-450 MHz band is the only viable choice and that no other band would be suitable; an obligation of the Petitioner in order to entitle it to a waiver. In requesting the waiver, ARRL asserts that ReconRobotics only claimed, but did not show, prove or demonstrate, that other bands were not suitable for its purposes. In other cases before the FCC as recent as 2006, the Commission denied such waivers, saying, "We do not believe that the public interest requires grant of a waiver merely to accommodate a manufacturer's choice of a specific frequency when others are available." The ARRL contended, "Nothing in the four corners of [ReconRobotics'] request indicates anything that would verify the factual conclusions offered. The waiver request boils down to 'trust us, we have checked into this.'"

The ARRL claimed that a permanent waiver of the Commission's Rules permitting nationwide marketing and use on a licensed basis of land mobile short-range transmitters, benefiting as it does only one manufacturer to the exclusion of all others, "is an inferior method of conducting spectrum allocations and spectrum management" and that ReconRobotics "should be required to refile its proposal as a petition to modify the Table of Allocations for this purpose. Its petition should be vetted in the normal course, and would be properly evaluated based on a complete technical compatibility showing, which is not included in the present Waiver Request."

In a realistic posture the ARRL's Chief Executive Officer, David Sumner, K1ZZ, added League comments when it was learned the FCC had granted this waiver. Sumner stated, "While we are completely sympathetic to the desires of law enforcement and firefighting agencies and certain security personnel to have a tool like the Recon Scout at their disposal, the fact remains that 430-448 MHz is a poor choice of frequency range for such a device in the United States. In its *Order*, the Commission does not say otherwise; it simply concludes that by imposing an array of conditions and limitations on the use of the device by eligible Part 90 licensees, the potential for harmful interference to Federal and

licensed non-Federal users of this band can be, in the Commission's view, adequately minimized. The *Order* falls short of requiring that the manufacturer adequately explain these conditions and limitations to its potential customers and does not explain how the Commission will enforce its requirements. We share the concerns expressed by NTIA on behalf of the Federal users of the band with regard to development of mass-marketed consumer devices that the Commission has no ability to control. Everyone's interests would have been better served had the manufacturer spent the last two years on engineering, redesigning its product for a more suitable frequency range, rather than on advocacy to legalize the domestic use of a product that was designed for military use abroad."

In another action, there has been shared another possible, negative fallout from this granting of the waiver. Julius Knapp, Chief of the FCC's Office of Engineering and Technology from Karl Nebbia, Associate Administrator of the National Telecommunications and Information Administration's (NTIA) Office of Spectrum Manager, Nebbia told the FCC that the NTIA also has concerns. In his correspondence he added that the mass-marketed low power consumer devices are permitted to operate in the 420-450 MHz band would adversely impact the performance of critical radar systems.

The NTIA added a list of several conditions that "are necessary to preclude the development of mass-marketed consumer devices that, over time, could impact the use of the 420-450 MHz band by federal systems."

### The Waiver Is Granted

Despite the magnitude of possible or probable interference, the FCC granted this waiver citing that Section 1.925 of the Commission's Rules provides that they may grant a waiver if "it is shown that (a) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and grant of the requested waiver would be in the public interest; or (b) in light of unique or unusual circumstances, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative."

Concluding its stand, the FCC concluded, "ReconRobotics has met the first prong of the waiver standard and that the grant of the request is warranted, subject to certain conditions."

Explaining this waiver, the FCC stated, "One purpose of allocating different spectrum bands to different services is to prevent harmful interference" and that ReconRobotics asserts that operation of the Recon Scout is unlikely to cause interference to the other services using the 430-448 MHz band, "because the device operates with lower power (1 W peak power, 0.25 W average power) than radiolocation systems. With respect to amateur operations, ReconRobotics asserts that amateur satellite downlinks should not experience interference because earth station antennas are angled too high to detect a low-power device near ground level; and that terrestrial amateur operations are unlikely to experience interference due to the Recon Scout's low power and brief, itinerant operation, and amateur transmitters' much higher power. Moreover, ReconRobotics acknowledges that the

Recon Scout would operate on a secondary basis to amateur services in the band, obligating its users to avoid causing interference."

Comments from individual Amateur Radio operators and the League added a reality that may have been ignored by the developer of this device. They commented, that because Amateur Radio satellite orbits are not geosynchronous, amateur earth station antennas often point toward the horizon to receive low-level signals.

Agreeing with ReconRobotics, the FCC responded, "that interference to amateur satellite communications is unlikely. The Recon Scout will be used infrequently and will be limited in number, significantly reducing the possibility of interference. In addition, it is unlikely that Recon Scout would have a significant effect on the ability of even an amateur earth station operating near the horizon to receive a low-level satellite signal, given the variety of natural and man-made interference sources such as terrain, trees, buildings, and other obstacles and ground level interferers having a greater effect on reception. We conclude, therefore, that grant of a waiver to permit equipment authorization and customer licensing of the Recon Scout on 436-442 MHz clearly is appropriate, because the device is unlikely to cause interference to amateur satellite communications in the 435-438 MHz segment."

There was additional Commission dialog about the remainder of the 436-442 MHz spectrum segment that is used by amateurs for wideband amateur television (ATV) operations. The FCC cited the 2002 edition of *The ARRL Handbook for Radio Amateurs* (pages 12.44-12.51), is stating, "that amateur stations transmitting a video signal to a repeater station typically use much higher power than the Recon Scout and may use high gain, directional antennas. We believe, therefore, that the signal of the amateur station can reasonably be expected to be much stronger than the signal of the Recon Scout at the repeater's receiving antenna, and that the stronger signal of the amateur station will capture the repeater, thereby minimizing any interference from a Recon Scout. Accordingly, we find no basis in the record before us to believe that operation of the Recon Scout on 436-442 MHz will create interference to ATV operations."

In additional dialog, the ARRL added the following:

The FCC stated that they are "not as clear" if the Recon Scout can operate in the 430-436 MHz and 442-448 MHz segments "without causing harmful interference." Some Amateur Radio operators, in their comments, stated that 1 W is more than enough to activate a repeater, which could cause interference to an entire system of linked repeaters. In addition, the 432-433 MHz segment is used for long-range weak signal communications utilizing very sensitive receivers. "We note, however, that deployment of the Recon Scout on multiple channels is expected to be rare. Therefore, we believe that interference to these amateur operations can largely be avoided by requiring deployment first in the 436-442 MHz segment, then in the 442-448 MHz segment and in the 430-436 MHz segment only if the other two channels already are in use."

### FCC Imposes Special Conditions

In what current users of this segment of the UHF spectrum view as some hope for any relief from interference, a set of notations by the FCC may become a way to police this waiver. The Commission noted that ReconRobotics would need to follow the following special conditions:

- Eligibility is limited to state and local police and firefighters eligible for licensing under Section 90.20(a)(1) of the Commission's Rules, and security personnel in critical infrastructure industries. Any offer for sale or lease of the Recon Scout will state these eligibility limits.
- The Recon Scout may be used only during actual emergencies involving threats to safety of life and for necessary training related to such operations. Security personnel in critical infrastructure industries may operate the Recon Scout only in areas that are environmentally hazardous for entry by human personnel, and for necessary training related to such operations.
- Training operations are not permitted within 30 kilometers of certain US military installations.
- The first unit sold to a responding organization will operate on 436-442 MHz, with the 442-448 MHz version being sold only to entities that already own the 436-442 MHz version and the 430-436 MHz version being sold only to entities that already own the other two versions.
- The number of units to be sold is limited to 2000 during the first year following equipment approval and 8000 during the second year. Future sales of the Recon Scout will be reconsidered at the end of this period. ReconRobotics may request authorization to sell additional units in subsequent years.
- The Recon Scout will operate on a secondary basis (cannot cause interference and is not protected from interference) to all federal users and licensed non-federal users.
- The operation of the Recon Scout may be impacted in the vicinity of certain radar and ionospheric research sites. Recon Scout transmitters shall be labeled as required in Part 2 of the Commission's Rules, and shall bear the following statement in a conspicuous location on the device: "This device may not interfere with Federal stations operating in the 420-450 MHz band and must accept any interference received." In addition, the following statement shall be placed in the instruction manual: "Although this transmitter has been approved by the Federal Communications Commission, there is no guarantee that it will not receive interference."

In some additional citation associated with this waiver, the FCC noted that operation of the Recon Scout by eligible entities would require a separate Commission authorization. This mandate stated: "Applications must reference this *Order*. Applicants must specify the proposed area of operation, and the requested frequency segment. Part 90-frequency

coordination is not required. No operation is permitted prior to license grant, and no applications will be granted until ReconRobotics obtains equipment authorization. Licensees must maintain a log of all Recon Scout use. The log will include date of operation, start/stop times, location of operation, frequency segment of operation, reason for use and point of contact. Licensees must provide this log to the Federal Communications Commission or to the National Telecommunications and Information Administration upon request of either agency."

In its report on this matter, the ARRL added the following information:

In conclusion, the FCC pointed out that some commentators were concerned that use of the Recon Scout will not be limited to emergencies and that it is meaningless to authorize the device on a secondary basis "because even if amateurs can identify the source of interference, public safety entities will not discontinue use of the device in the middle of an operation. We do not believe that this speculation is grounds to deny the waiver request, but we caution prospective users that operation of the Recon Scout in an unauthorized manner will subject licensees to Commission enforcement action and license revocation. Widespread improper use could lead us to stop granting or renewing Recon Scout authorizations."

The ARRL Executive Committee will consider what additional steps can be taken with regard to the grant of this waiver.

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### Money Facts Worth a Dollar

There are many possible features included in the U.S. dollar that may have escaped your normal inspections. This is a collection of some of the features incorporated in this lowest denomination of our nation's paper currency.

Despite ongoing attempts by the government, the United States have not yet been as successful as other nations in exchanging a coin to replace our nation's dollar bill. Our language cousins in the United Kingdom have a mammoth coin for their single pound money. In Canada, our neighbors to the north no longer have a paper Canadian dollar. It should be noted the Canadians have borrowed the name of the native bird, the loon, calling this coin a "loonie." They also have created a two-dollar coin as well. It called a "toonie," a name fabricated through references to the denomination, "two," and the name of the single dollar coin.



Pull a dollar bill from your wallet now and prepare to be amazed.

Only recently, following several movies and a collection of books, has there been a serious growth in various types of curiosity about multiple, unscientific investigation of our nation's money as well as several not-so-scientific searches to discover more about connections between the Masons and the founding emphasis when our nation began. A part of this investigation consistently looks for ties between this ancient service group and the creation of many of the initial programs that helped create this nation.

While the many authors of such studies are serious, there are no hidden meanings.

As readers of the eDipole, were you aware of many normally unnoticed features on a dollar bill? These items include items viewed as hidden pictures, specks of color, and mysterious symbols. As a beginning, there will be a discussion of what appears to be a collection of seemingly random letters and Latin phrases. What are the meanings of these items?

**The Basics: How much is a dollar worth?**

A question about the value of a dollar may seem simple. The answers, however, is very complex. Since 1973, the US dollar bill has had no value tied to it. A holder of one of these pieces of valued paper cannot trade to the government for gold, silver, or any other commodity. The value of the nation's currency is related to the decree by the government that a dollar is legal tender for all debts.

One example of the meaning of this concept is demonstrated with the concept of someone attempting to pay a debt using dollars. The person being paid must accept the money or the law no longer recognizes the debt. There should be no doubt about this concept; it is important enough that the phrase is printed on every bill the government creates.

Another ingredient in this form of exchange is the need for the nation's citizens to agree that the bills have value. Without this agreement dealing there could exist a lack of belief in the nation's currency. This would result in this paper being worth no more than the "paper it is printed on." As an FYI, each dollar bill's printing cost is 6.4 cents.

**What kind of paper are the bills made from?**

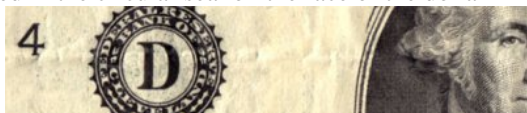
These complex pieces of special paper are a blend of linen and cotton. This helps explain why our non-coin provisions wash so well when left in clothing.

**LOOK:** A careful inspection of the white spaces on the face of the bill will reveal little bits of the colored thread. While they may appear to be lint, they cannot be removed by scratching.

**Special features on a dollar**

**Numbers and Letters**

Not everyone understands the meaning of the letter that is included in the circular seal on the face of the dollar



The black seal with the big letter in the middle signifies the Federal Reserve Bank that placed the order for the bill. A = Boston, B = New York City, C = Philadelphia, D = Cleveland, E = Richmond, Va., F = Atlanta, G = Chicago, H = St. Louis, I = Minneapolis, J = Kansas City, K = Dallas.

It should be noted that the letter also corresponds to the black number that is repeated four times on the face of the bill. For example, if any readers of the eDipole remember one of their first 'secret codes, it was common to have a number assigned to each letter in the alphabet. This is demonstrated in the number and the equivalent letter on the currency. For example, if you have a bill from Dallas with the letter K, then the number on the bill will be 11 because K is the eleventh letter in the alphabet.

**Some people say there are tiny owls or spiders hidden on the front of the bill.**



Many people believe they can see what they describe as a tiny owl (some say it is a spider) next to the large "1" on the upper right of the bill. Looking at the shield shape that surrounds that "1," the tiny owl rests on the top left corner.

More than likely, the markings are nothing, just a point where the webbed design of the border varies. That won't stop some people from associating the peculiar detail with Masonic symbols, or with more practical things, like anti-counterfeit measures.

**The Great Seal of the United States**

The green back of the dollar bill features the two sides of The Great Seal of the United States. The founding fathers approved its design in 1782. Ben Franklin, John Adams, and Thomas Jefferson all had a hand in its design. The seal provides great insight into the values of the newborn nation

and, just as the Constitution, it provides a direct link to its formative days.

**What does Annuit Coeptis mean?**

This is the first of three Latin phrases found on the back of the bill. This phrase translates to "God has favored our undertakings." Many founders, Franklin and George Washington among them, believed that God's will was behind the successful creation of the United States.

**Beneath the pyramid, what does Novus Ordo Seclorum mean?**

This Latin phrase translates to the phrase "New Order of the Ages." Charles Thomson, a statesman involved in the design of The Great Seal of the United States, proposed the inclusion of this phrase to signify the beginning of what he called "the new American Era," which he said began in 1776 with the signing of the Declaration of Independence.



**Why is MDCCLXXVI on the bottom of the pyramid?**

Remembering the study of Roman numerals, this collection of alpha-styled numbers stand for the important American date of 1776. If rusty, they translated in the following: M is 1,000, D is 500, CC is 200, L is 50, XX is 20, and VI is 6. Combining these numbers, these Roman numerals on the pyramid, they translate to the year 1776, when the Declaration of Independence was signed, and when the Novus Ordo Seclorum began.

**Why is there an unfinished pyramid with a glowing eye?**

Thomson explained the sturdy pyramid as a symbol of "strength and duration". He did not explain its unfinished state, but many believe it signified that our nation remained unfinished. The pyramid also stops at 13 steps, the number of the original colonies.

The "Eye of Providence" is a visual representation of the words Annuit Coeptis. This combination reinforces the founders' belief that God favorably looked upon the endeavor of the new nation. Many theorists mistakenly believe the symbolism of the eye is related to the Freemasons (a society whose members believed they were under the careful scrutiny of God), but the symbolism of the glowing eye has roots as far back as the ancient Egyptians.

**Brush up on your Latin. What does E Pluribus Unum mean?**

This phrase translates to, "Out of many, one." Reflecting upon the origin of our nation, this saying is what some might say, "This is a 'natural'." After all, there were originally 13 fundamentally different colonies that came together to form one nation.

**Why a bald eagle?** The founders wanted an animal native to America to be the new nation's symbol. In its talons the eagle holds arrows and olive branches, signifying war and peace. It should be noted that one of the founders, Ben Franklin was a strong supporter of the native turkey as the national symbol.

What would we do at Thanksgiving?

**Fun activities with a dollar bill: track your bills.**

Readers of the eDipole and anyone, adults and children can participate in a tracking the distribution of a sample dollar bill. By visiting the Website, Where's George? (<http://www.wheresgeorge.com>) and then entering the serial number of the bill, this process will initiate the tracking of the entered bill. Trackers will see where that bill has been as it travels from wallets to registers and back. After enter serial numbers for dollar bills, check back later to see where they have gone.

**Activity Upswing Starts Year**

Anyone at home or traveling around the region that does not listen or participate in the daily Newtown Square Weather and Information Net is missing an opportunity to be both informed and entertained. The normal pilot of this weekday flight is Jeff Lynch, W3JEF.

His mastery of the important leadership role is one of the ingredients that draw people to this ongoing feature of a well-informed day.

He as forwarded to the *eDipole* a collection of check-in statistics. This month of January has provided a good beginning to the year. Please not that has been a collection of new participants in this long-standing feature on the Marple Newtown Amateur Radio Club's repeaters.

**Weekday Check-in numbers: 362**

**Weekend Check-in numbers: 120**

**JANUARY TOTAL: 482**

**We had 15 new check-ins in January.**

**AB3KJ Fred**

KB2KAB David  
 K3RNZ James  
 KB3RUN Herman  
 KB3SID Jakob  
 KB3TSN David  
 KB3TVK Sheila (N3LMV's XYL)  
 KC2VUZ Dennis  
 N2SAB Scott  
 W2IW Maike  
 W3ELF Mike  
 W4FOX Jeff  
 W8ETS George  
 WA2IAF Carl  
 WA2MFS Tom

We also had a good opening ducting up and down the East Coast toward the end of the net on January 15th which provided contacts from Raleigh NC to NYC and Long Island and Westchester County NY.

Submitted February 4th 2010  
 by Jeff W3JEF

### An Award from Neighbors

#### The IARU Region 2 Award

In October 2009, the **International Amateur Radio Union (IARU) Region 2** announced a new award -- the IARU Region 2 Award. This award is available to amateurs and shortwave listeners who submit confirmed QSLs with 20 Region 2 countries or entities. To be considered for the award, contacts must have been made after April 16, 1964 -- the date when IARU Region 2 was founded.

US applicants must submit QSL cards -- along with the application and certification form (see below) -- to either the ARRL Awards Branch or ARRL Card Checkers for certification; non-US hams must submit their cards, application and certification form to their IARU Member Society to be approved. Applicants will also need to provide an envelope with sufficient postage affixed so the person checking the cards can forward the application and supporting materials to the IARU Region 2 Awards Manager in Venezuela (from the US, postage is approximately 98 cents).



*IARU Vice President Ole Garpestad, LA2RR -- the first recipient of the IARU Region 2 Award -- shows off his 20 QSL cards and application form. Congratulations Ole!*

Applicants may also submit photocopies of the QSL cards (front and back) that have been authenticated by both the applicant and an appointee of the ham's IARU Member-Society, or the original QSLs (no authentications necessary) to the IARU Region 2 Awards Manager. Both methods require sending the application form.

The IARU Region 2 Award Manager may request the presentation of one, several or all the QSLs together with the application. Please note that electronic QSLs -- such as Logbook of The World (LoTW) or eQSL -- can not be used for this award.

Contacts can be made using the following bands: 160, 80, 40, 30, 20, 17, 15, 12, 10 and 6 meters. You can make all your contacts on one band, or mix it up and use them all -- it's up to you. Contacts can be made using phone, CW, digital or satellite modes. But keep in mind that all contacts must be made from the same location using any official call letters that belong to the applicant (including special licenses for contests or events) and must be bilateral or two-way. Contacts in crossed modes and/or bands will not be accepted, except for satellite mode.

All interested applicant should check your existing QSL cards and see if you have at least 20 from IARU Region 2 countries or entities. If you do not have 20 confirmed contacts, this is a good time to begin hunting.

Included in the list of IARU Region 2 are the following:

- Anguilla, Antigua y Barbuda, Argentina, Aruba, Bahamas, Barbados, Belize, Bermuda, Bolivia, Brazil, Canada, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Granada, Guatemala, Guyana,

Haiti, Honduras, Jamaica, Mexico, Montserrat, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Saint Kitts and Nevis, Saint Lucie, Saint Vincent and the Grenadines, Suriname, Trinidad & Tobago, Turk & Caicos Islands, United States, Uruguay and Venezuela.

If you have any questions regarding the IARU Region 2 Award, submit them via e-mail to the IARU Region 2 Awards Manager . <awardmanager@iaru-r2.org>

### **The Digital Age Simplified**

Joseph A Vilardo, K3JV, better known by many as “Joe,” is the special Monday counter person at the New Castle, Delaware’s Ham Radio Outlet. Even if one were not a customer at this popular store of dreams and reality, Joe is no stranger to Delaware Valley Amateur Radio operators.

His professional background and his Amateur Radio special interests combine to provide a foundation for his upcoming, presentation of an update of a collection of the growing number of digital applications within Amateur Radio operations. The simplicity and the diversity of this increasing application of Ham Radio resources is felt by many to be an attraction of newer operators.

Joe Vilardo’s post retirement activities are a demonstration of his personal diversity. Prior to this redirection of his skills, energies, and enthusiasm, he spent 35 years with Honeywell. His area of special skill was in that firm’s Building Controls activities. Mr. Vilardo’s responsibilities embraced his role of the Area Vice President for the Western United States, as well as serving as the Director of business development for Eastern Europe and Russia in the mid 1990’s.

Born in Buffalo New York, Mr. Vilardo has lived in multiple parts of the United States. His residences have included Michigan, Ohio, California, and Pennsylvania. Current, Joe and his wife Carole live in West Chester, Pennsylvania. They have two children and three grandchildren.

He was first licensed in 1963 with the FCC call of WN2MZA. Amateur Radio interests were fanned following his active duty with the ARMY National Guard. He was a CW operator. His collection of Amateur Radio identities has included the FCC calls of WB3GQJ and WB3DWG. Presently, he is known by K3JV

In commenting upon one of his strong Amateur Radio interests, Joe Vilardo state that he loves to “chase” DX on HF. He holds a DXCC Certificate for mixed modes and this quest has been well served by his confirmation of contacts from 220 countries.

His Amateur Radio activities are far greater than his personal quests. Vilardo has served as the RACES officer for Chester County ARES/RACES. He also is an APRS Tracker and he is active in the APRS Weather station-reporting project for CCAR. Currently, he is leading a project for CCAR that will be developing a corps of operators skilled in the use of the Narrow Band Emergency Message System (NBEMS).

His seemingly endless source of energy sees this busy Amateur Radio operator spending two days a week wiring for Habitat for Humanity of Chester County. When Joe Vilardo is not wiring homes or practicing his sales skills at HRO, he can be found fly fishing in Montana or walleye fishing in Ontario’s Georgian Bay.

During this MNARClub visit, this versatile Amateur Radio operator with provide background information and a demonstration that will focus upon two new digital communication modes, Olivia and WSPR. In describing one of these modes, Mr. Vilardo stated that Olivia is a highly effective digital mode that produces nearly perfect copy on HF even when signals drop into the noise floor.

The second, new digital communication mode, WSPR, is used for prospecting propagation that centers on interval-timed transmissions of narrow band audio signals sent using SSB. These signals operate at very low power, typically 2 to 3 watts. Participating stations are connected to the Internet where signal reports are collected and posted in near real time.

### **Sad News**

With the sometimes, confining influences of the record-establishing snow falls, people who were able to find their buried newspapers may have resorted to reading all section of these welcomed news from the outside world. If any readers of the eDipole missed this sad news, there was a special feature in one day’s Obituary Section.

For eDipole readers who may have missed this notice, this special feature follows:

Today we mourn the passing of a beloved old friend, Common Sense, who has been with us for many years. No one knows for sure how old he was, since his birth records were long ago lost in bureaucratic red tape.

He will be remembered as having cultivated such valuable lessons as:

- Knowing when to come in out of the rain
- Why the early bird gets the worm
- Life isn’t always fair and maybe it was my fault

Common Sense lived by simple, sound financial policies (don’t spend more than you can earn) and reliable strategies (adults, not children, are in charge).

His health began to deteriorate rapidly when well intentioned but overbearing regulations were set in place. Reports of a 6-year-old boy charged with sexual harassment for kissing a classmate; teens suspended from school for using mouthwash after lunch; and a teacher fired for reprimanding an unruly student, only worsened his condition.

Common Sense lost ground when parents attacked teachers for doing the job that they themselves had failed to do in disciplining their unruly children. It declined even further when schools were required to get parental consent to administer sun lotion or an aspirin to a student; but could not inform parents when a student became pregnant and wanted to have an abortion.

Common Sense lost the will to live as the churches became businesses; and criminals received better treatment

than their victims. Common Sense took a beating when you couldn't defend yourself from a burglar in your own home and the burglar could sue you for assault.

Common Sense finally gave up the will to live, after a woman failed to realize that a steaming cup of coffee was hot. She spilled a little in her lap, and was promptly awarded a huge settlement. Common Sense was preceded in death, by his parents, Truth and Trust, by his wife, Discretion, by his daughter, Responsibility, and by his son, Reason.

He is also survived by his four stepbrothers: I Know My Rights, I Want It Now, Someone Else Is To Blame, and I'm Am Not Involved

Not many people attended his funeral; so few realized he was gone.

## Tools Explained

Someone once said, "There are far too many tools." This person then added, "All I need is a hammer, screwdriver and a pair of pliers."

Tool users may also have heard a father or grandfather add, "Know how to use a tool is as important as owning the tool."

The following list of tools and their descriptions may add some light upon the tool problems the handiest people may feel from time-to-time.

### DRILL PRESS

A tall upright machine useful for suddenly snatching flat metal bar stock out of your hands so that it smacks you in the chest and flings your beer across the room, denting the freshly-painted project which you had carefully set in the corner where nothing could get to it.

### WIRE WHEEL

Cleans paint off bolts and then throws them somewhere under the workbench with the speed of light. Also removes fingerprints and hard-earned calluses from fingers in about the time it takes you to say, "Oh, s\*\*t!"

### SKILL SAW

A portable cutting tool used to make studs too short.

### PLIERS

Used to round off bolt heads. Sometimes used in the creation of blood-blisters.

### BELT SANDER

An electric sanding tool commonly used to convert minor touch-up jobs into major refinishing jobs.

### HACKSAW

One of a family of cutting tools built on the Ouija board principle... It transforms human energy into a crooked, unpredictable motion, and the more you attempt to influence its course, the more dismal your future becomes.

### WISE-GRIPS

Generally used after pliers to completely round off bolt heads. If nothing else is available, they can also be used to transfer intense welding heat to the palm of your hand.

### OXYACETYLENE TORCH

Used almost entirely for lighting various flammable objects in your shop on fire. Also handy for igniting the grease inside the wheel hub out of which you want to remove a bearing race.

### TABLE SAW

A large stationary power tool commonly used to launch wood projectiles for testing wall integrity.

### HYDRAULIC FLOOR JACK

Used for lowering an automobile to the ground after you have installed your new brake shoes, trapping the jack handle firmly under the bumper.

### BAND SAW

A large stationary power saw primarily used by most shops to cut good aluminum sheet into smaller pieces that more easily fit into the trash can after you cut on the inside of the line instead of the outside edge.

### TWO-TON ENGINE HOIST

A tool for testing the maximum tensile strength of everything you forgot to disconnect.

### PHILLIPS SCREWDRIVER

Normally used to stab the vacuum seals under lids or for opening old-style paper-and-tin oil cans and splashing oil on your shirt; but can also be used, as the name Implies, to strip out Phillips screw heads.

### STRAIGHT SCREWDRIVER

A tool for opening paint cans. Sometimes used to convert common slotted screws into non-removable screws and butchering your palms.

### PRY BAR

A tool used to crumple the metal surrounding that clip or bracket you needed to remove in order to replace a 50-cent part.

### HOSE CUTTER

A tool used to make hoses too short.

### HAMMER

Originally employed as a weapon of war, the hammer nowadays is used as a kind of divining rod to locate the most expensive parts adjacent the object we are trying to hit.

### UTILITY KNIFE

Used to open and slice through the contents of cardboard cartons delivered to your front door; works particularly well on contents such as seats, vinyl records, liquids in plastic bottles, collector magazines, refund checks, and rubber or plastic parts. Especially useful for slicing work clothes, but only while in use.

**SON-OF-A-GUN TOOL**

Any handy tool that you grab and throw across the garage while yelling "Son of a gun" at the top of your lungs. It is also, most often, the next tool that you will need.

**Rookie Roundup Information**

The American Radio Relay League (ARRL) has announced a program to encourage a program to encourage and aid new Ham Radio operators in eliminating any reluctance or fears from making radio contacts. The ARRL announcement began with an attention-grabbing theme, "Calling All Rookies -- and Non-Rookies, Too! Get On the Air for the ARRL Rookie Roundup."

The League information outlined the background for this concept, a history of this form of activity, and the actual operational process. The following provides a simple form of "getting on the air":

The ARRL Rookie Roundup is designed to help newly licensed amateurs build their operating skills on HF. It is a contest specifically for those new to Amateur Radio, similar to the ARRL Novice Roundup that ran from 1952 until 1995. The Rookie Roundup brings the fun and Elmering of the old Novice Roundup into the 21st century. Three Rookie Roundups will be held each calendar year: SSB in April, RTTY in August and CW in December.

The Rookie Roundup will be scored 100 percent in real time through the [www.getscores.org](http://www.getscores.org) scoring system. There are three ways to participate: by using your favorite logging software with the real time scoring support, by downloading a simple logging program from the [www.getscores.org](http://www.getscores.org) Web site or by logging your contacts directly into a [www.getscores.org](http://www.getscores.org) Web page. No separate logs are required -- it all happens online in real time and final scores will be available online within hours of the end of the contest! More information is available on all of these options at [www.getscores.org](http://www.getscores.org). Of course, you can get on the air and make contacts without logging them, but you won't have as much fun!

**Who Can Participate?**

Any ham licensed for 3 years or less qualifies as a Rookie. If you were licensed in 2008, 2009 or 2010, you can compete in the 2010 Rookie Roundup. Non-Rookies may only work Rookies, while Rookies may work everybody. A major part of the success of this contest will be non-Rookies getting on the air and working the Rookies, just as in the Novice Roundup. Just like in the Novice Roundups of years past (when Novices could work anyone and non-Novices could only work Novices), Rookies may work anyone, be they Rookie or non-Rookie; however, non-Rookies are limited to only working Rookies.

**Entry Categories**

Single Operator Rookie, limited to a maximum of 100 W. Spotting assistance or using call sign and frequency alerting systems is allowed, but self-spotting or asking somebody to spot you is not. All

Rookies must identify themselves as a rookie. Example: "Kilo Bravo One Quebec Alfa Whiskey, Rookie." Non-Rookies only need give their call; no designation is needed.

**Awards**

Certificates will be available for all participants to download. The top five high scores from each US call area, Canadian province and Mexican call area will be recognized on their certificate. No national winners will be recognized.

Go to [www.getscores.org](http://www.getscores.org) for more information on how to participate. Be sure to check out the April 2010 issue of *QST* for complete rules and other information. The Rookie Roundup -- a fun event for all amateurs!

There are also benefits for the seasoned, tenured Amateur Radio operators. Not only will these veteran Amateur Radio operators help others maintain a lasting interest in our hobby, they "run the risk" of a valuable contact in any of the many goal-oriented contests that are a part of the operating appeals.

**The SWL Fest**

For new readers of the *eDipole*, The Winter SWL Fest is a conference of radio hobbyists of all stripes, from DC to daylight. Every year scores of hobbyists descend on Kulpsville, Pennsylvania, just outside Philadelphia, for a weekend of camaraderie. The Fest is sponsored by NASWA, the North American Short-wave Association, but it covers much more than just short wave; medium wave (AM), scanning, satellite TV, and pirate broadcasting are among the other topics that the Fest covers. Whether you've been to every Fest (all 23, starting with the first year at the fabled Pink & Purple Room of the Fiesta Motor Inn) or this year's will be your first, you're sure to find a welcome from your fellow hobbyists.

The Winter SWL Fest has two days of sessions where you can learn about the latest developments in the radio listening hobbies, but there's so much more going on. There's a silent auction that takes place over the two days of the Fest, where you're bound to find something of interest. There's the Hospitality Suite, where attendees partake of tuning oil and other treats and engage in spirited conversations. There is the closing Banquet, with after-dinner remarks by a luminary from the field, often one of the many broadcasters who attend the Fest, followed by the raffle, where you could win one or more of the dozens of prizes, ranging from pens from stations up to top-notch communications receivers. And of course, the infamous midnight ride of Pancho Villa that closes things out every year.

Your hosts, Richard Cuff and John Figliozzi, work throughout the year to ensure that attendees have a great time over the weekend, and by all accounts, they succeed stunningly. How else could this event have lasted for 23 years and draw people from around the world to this small

Not to be confusing, but the location of this year's SWL Fest may appear to the unknowing to be a new location. **NO**

**NO NO.** What has changed is the name of this long-standing location.

The 2010 March 5–6, 2010 will be held at The Inn at Towamencin, Kulpsville, Pennsylvania. This quality facility is located near the Quakertown Exit on I-476, which is also known as the North East Extension of the Pennsylvania Turnpike.

The most efficient method of registration can be accomplished through the electronic registration. This can be found by visiting <http://www.swlfest.com/registration/registration-form/>

Each year, this successful event has successfully added new features. For the 2010 event, the event planners have worked to make it easier for the attendees. If desired, will have the ability to pay for their Fest registrations using PayPal. This concept has been requested; now it is a reality.

The following descriptions and outlines will once more demonstrate the quality of the offerings for this well-attended gathering:

Plan to attend your favorite forums Friday and Saturday! Enjoy meeting with your friends in the Hospitality Room. Bring radio related items for the swap meet or to donate for the Silent Auction. Check out your friends' receivers, bring one of your own for others to try!

No frills; just short wave, long wave, medium wave, pirates, and scanning. Once again you will enjoy the camaraderie of your hobby friends.

Please note there is now an incentive for you to pre-register, as prices are more expensive for those who wait. Registration options are also more flexible, with one-day and student registrations. **If you wish to participate in the meals, you must register and inform us by Friday morning, March 5th.** If you choose not to participate in the meals, the hotel has a restaurant, and there are other restaurants nearby.

The following is the tentative general schedule for this year's Winter SWL Fest...

- **Thursday** – travelers arrive – hospitality room opens (pm).
- **Friday** – registration (am) – forums – exhibits – swap meet (pm).
- **Saturday** – forums – exhibits – silent auction – luncheon – banquet – raffle.
- **Sunday** – travelers depart.

Amplifying this general schedule, the currently planned events, which are subject to change, have been listed.

**Friday, March 5th**

- **Registration Table Open (Stockholm Room)**  
0815-1030 Fri.
- **Exhibit Area Open**
- Radio HF Sales, Demos, Club Tables  
(closes promptly at 1600)
- **Announcements and Directions (Stockholm Room)**  
0850-0900 Fri.
- **Forums (see below) 0900-1145 Fri.**
- **Lunch on your own**
- 1145-1330 Fri.

- **Hospitality Room open**  
1145-1330 Fri.
- **Registration Table Open (Stockholm Room)**  
1300-1400 Fri.
- **Announcements and Directions (Stockholm Room)**  
1320-1330 Fri.
- **Forums (see below) 1330-1730 Fri.**
- **Dinner on your own 1730-1930 Fri.**
- **Hospitality Room reopens**  
1730-? Fri.
- **Swap Meet in the Exhibit Room**
- **Exhibit Area Open**
- Radio HF Sales, Demos, Club Tables
- **Hospitality Room Open**  
1930 Fri.
- **Forum (see below) 2000 Fri.**
- **The Short-wave Shindig (nee The Listening Lounge)** ...will reconvene Friday night at 2045.

**Saturday, March 6th**

- **Registration Table Open (Stockholm Room)**  
0815-0930 Sat.
- **Exhibit Area Open**
- Radio HF Sales, Demos, Club Tables  
(closes promptly at 1600)
- **Announcements and Directions (Stockholm Room)**  
0850-0900 Sat.
- **Forums (see below) 0900-1130 Sat.**
- **Silent Auction (Rooms 153 and 155)**  
1000-1615 Sat.
- **Pizza and Salad Luncheon**  
1200-1245 Sat.
- **General After Lunch Discussion**
- Including **In Memoriam**, Sheldon Harvey leads a reflection on those who departed from our midst over the past year; and Tom Witherspoon informs us on the activities of **Ears to Our World**.  
*Those not registered for the luncheon are cordially invited back at 1245 to take part in the discussions!*
- 1245-1330 Sat.
- **Forums (see below) 1330-1600 Sat.**
- **Silent Auction Ends!**
- Collect your treasures and pays your monies. 1615 Sat.
- **Hospitality Room open**  
1645-1800 Sat.
- **Cash Bar**  
1800-1900 Sat.
- **Fest Banquet**  
*Those not registered for the banquet are cordially invited back at around 2015 to hear the speakers and participate in the raffle which follows*
- 1900-2100 (approx.) Sat.
- **The Grande Raffle**  
Approx. 2100-? Sat.
- **Hospitality Room reopens**  
After raffle Sat.

As cited, above, the 2010 Winter SWL Fest Forums Schedule has been announced at the time the *eDipole* is being prepared. All times EST. All forums 60 minutes in duration, unless otherwise noted.

### **Friday 5 March 2010**

- 0900 – **Netbooks, Smartphones and Cloud Computing: New Tools for the Hobby (Skip Arey)** - The forward thinking DXer needs to run with the times and use all the tools available. Uncle Skip covers the new technologies and how it can and does help us to play radio better.
- 1015 – **The Free Radio Forum (George Zeller)** – The volume of “pirate” broadcasting set new records during the past year. Learn how to hear these intriguing signals—even during the Fest, if one were to know. This year we are pleased to feature a veteran of licensed broadcasting and the Free Radio Network, Pat Murphy, as well as a representative from WBCQ, the chief 50 KW relay source for pirate radio programming via the Area 51 block on 5110 kHz. License optional. [90 min.]
- 1330 – **Scanning for Fun and Profit (Tom Swisher)** – Join those lovable scamps, the Scum, for an exploration of the wide and varied possibilities from DC to Daylight. It could be anything, so stay tuned...
- 1500 – **SW and Ham Radio in WWII (Lisa Spahr)** – The author discusses her book, *World War II Radio Heroes: Letters of Compassion*, about the Short-Wave Amateur Monitors Club (SWAM). More than 60 short-wave listeners and hams sent word to her family that her grandfather had been taken prisoner in N. Africa in 1943. Spahr set out to find them and highlight their role.
- 1630 – **Archiving Radio: Documenting the Present, Preserving the Past (Dan Robinson)** – Richard Cuff, David Goren, Dan Robinson, and Michael Pool explore the art and history of capturing the sounds of the medium and short-wave bands, using examples from their personal archives. Topics include: Recording techniques and equipment; time-shifted listening; rescue & preservation of collections; online repositories; thoughts about establishing a permanent home for medium & short wave audio recordings.
- 2000 – **Radio Free Asia – Today and in the Future (AJ Janitschek)** – Many (hopefully all) of you have heard of Radio Free Asia. Here is your chance to hear it from one of their own. Find out more about RFA’s frequencies, QSL cards, and jamming but don’t ask about the location of their transmitter sites! (Aw, go ahead. Ask.) [45 min.]
- 2045 – **The Short-wave Shindig, formerly The Listening Lounge (David Goren)** – Can a Listening Lounge by any other name sound as sweet? 10-4 Good Buddy! Grab a quart of your favorite tuning oil and open your ears to the finest in archival audio. We’ll have a roundup of

the most interesting sounds of the past year featuring Radio Zanzibar, Iran’s Voice of Justice, Radio Canada’s Northern Quebec Service, All India Radio, as well as stations from Brazil, Bolivia, and Peru. But wait! There’s more! We’ll also feature audio memorials for radio-art pioneers Maryanne Amacher, & Max Neuhaus; live musical performances from Saul Brody, Skip Arey, and Jack Widner; plus special presentations and gems from the Shortwaveology archives. [Warning: Could last ‘til dawn!]

### **Saturday, 6 March 2010**

- 0900 – **Global Tuner Network/Remote Internet Radios (Tim Lemmon)** – Tim explains and demonstrates the many benefits of FREE online Internet radios for all who can’t receive short wave from their homes. The audience will decide which global radios to use, and what frequencies to hear. He’ll wrap up with a live two-way HF contact using an Internet remote base radio.
- 1030 – **International TV DXing via the Web (Joe Buch)** – The growing availability of broadband internet access now allows those of us who once tried to listen to foreign SW news broadcasts to view English language TV newscasts from places like Canada, Ireland, BBC, Russia, China, France, and (if you pull your blinds and turn out the lights) the infamous Al Jazzier. All this is free with a low speed DSL connection, no antennas, and a netbook computer that sells for less than some SW radios. Learn how easy it is in this live demonstration.
- 1330 – **The Radio St. Helena Project (Robert Kipp)** - Live (!) from Europe (!! ) via Skype (!!!), Robert discusses the radio construction project on St. Helena, takes us on a visit to the BBC Ascension Island relay, and perhaps even a little sightseeing on St. Helena and Ascension. If all goes according to plan, you might even be able to ask Robert a few questions and thank him personally for Radio St. Helena Day. [75 min.]
- 1515 – **The Digital Cacophony of HF: Intelligence in Noise (Greg Majewski)** – A presentation to inform listeners of the sounds of HF digital communications with descriptions and demonstrations of the signals and their use. Now, you will have an idea of what that terrible QRM covering the station you’re targeting is! [45 min.]

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“Until you have learned to be tolerant with those who do not agree with you—until you have cultivated the habit of saying some kind word of those whom you do not admire—until you have formed the habit of looking for the good instead of the bad there is in others, you will be neither successful nor happy.” –Napoleon Hill

“You are where you are because of your habits of thought.” – Napoleon Hill