



# The W.A.C.O.M. Ham



## Washington Amateur Communications

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### **Presidents Message January 2011**

***Norma and I would like to wish every one a healthy and happy 2011.***

***I also want to thank on behalf of the membership Kevin Beatty KB3JHO for his service as Vice President and Dave Demotte as a member of the board of directors. Both have given great service during their terms as officers.***

***I would like to welcome the officers for 2011***

***Vice President - Dave Demotte N3IDH***

***Secretary - John Quigg N3GHR***

***Treasurer - Norma Plants N3YJJ***

### ***Board Members***

***Jim Burtoft KC3HW***

***Adam Quigg NZ3S***

***Bill Steffey NY9H***

***Congratulations to all incoming officers***

***With new officers come new ideas. We should be looking forward to this New Year with goals. Perhaps we can all make a resolution for 2011 to learn something new about Amateur Radio. Maybe this is the year you try digital communications, Satellite, DX contesting or maybe work a special event. Each one of us should set goals on what you want to achieve in 2011 in this hobby we call Amateur Radio and of course have some fun along the way.***

***Our January General meeting will feature***

***Welcome and installation of new officers***

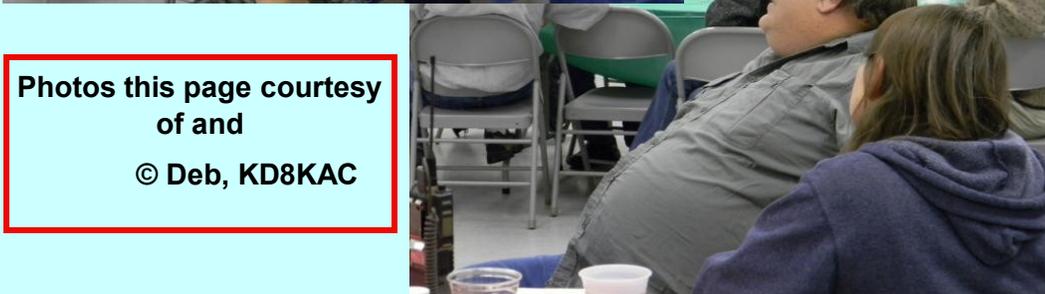
***WACOM 100 DX Contest Rules***

***73 N3TIR Bud Plants***



**The next General Membership meeting will be held  
ON THURSDAY, JANUARY 6, 2011, at 7:30 p.m. in  
ROOM 103 OF THE WASHINGTON COUNTY  
BUILDING.**

# Christmas Party



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N3ZNI





Photo left and photos above courtesy of and © Ed, N3ZNI

**WACOM CHRISTMAS  
2010**



Photo above and left courtesy of and © Bud, N3TIR

## FIELD DAY 2010 POSTED RESULTS

Field Day results showed WA3COM as #1 in the Western Pennsylvania section in its class (4A) with a score of 4,736. The club ranked 30th overall in its class and power category.

<\*> <\*> <\*> <\*>

KB3LIX, Bill, ranked #1 in class "1-D" in the Western Pennsylvania section and # 15 among all 1-D, low power entries.

<\*> <\*> <\*> <\*>

**Congratulations on an outstanding effort and good luck in next year's contest.**

### ~~ MENTOR PROGRAM COMING ~~

WACOM will start a mentor program at the time of our classes this fall.

Class times and dates TBA

Bill, NY9H, will lead the program.

**DO YOU HAVE SOMETHING TO SELL OR SWAP?  
SEND IN THE INFORMATION AND HAVE YOUR AD IN THE  
NEWSLETTER.**

**SEND INFO TO [n3zel@comcast.net](mailto:n3zel@comcast.net)**



### NO UPDATED INFORMATION ON THE FOX HUNT :

The Fox Hunt is temporarily on hold. Further information will be sent out immediately upon receipt.



**SUPPORT YOUR CLUB!** Wear Club logo items from *Created by Amy*

**Caps, T-shirts, Jackets and other items are available with the WACOM logo.**

Get your Name and Call Sign on a Hat! Vinyl Decals, Embroidered and Vinyl Apparel as well.

Amy Cicak

Email: [amy@createdbyamy.com](mailto:amy@createdbyamy.com)

Web: [www.createdbyamy.com](http://www.createdbyamy.com)

Phone: 412-795-4353 / 412-398-8833

### December 3, 2010 General Meeting Minutes

Members present

Bud(N3TIR) ,Norma(N3YJJ) ,John(N3GHR) ,Adam(NZ3S), Ed(N3ZNI), Bill(NY9H) ,Melanie(N9SOJ), Bob-Ketzell(KB3IN), Josef(WA3WMB), Sue(KB3TAJ), Wylie(KD8JNJ), Joe(N3XE), BobKinnear (KI4DHB), Steve (KB3SVX), Sam(W3CYO), Dave(N3IDH), Jim(KC3HW), Joe(KB3QQT), Dennis(K8DKS), Debbie (KD8KAC), Ernest, Cris(KB3VHB)

The meeting was held in conjunction with the Christmas party, December 3, 2010 at the Buffalo Twp community building. Bud called the meeting to order at 7:00 PM

#### Reports

Secretary - Dave moved to accept the minutes as they appeared in the newsletter, Joe seconded, motion approved.

Treasurer – Norma gave treasurers report, profits and losses from the Ham Fest were reviewed. Ed moved to accept, Joe seconded, motion approved.

#### Presidents Message

##### The following projects were accomplished in 2010:

501c status brought up to date;

Education committee ran a successful Technicians class which allowed 9 students to get their licenses;

Emergency call tree set up with Washington County E.O.C;

Club trailer modified and equipment modified;

Club moved to computerize more records

##### The following goals were proposed for 2011:

Set up visits to Ham QTHs for interested members;

Program to get more women and young people in club;

Offer more support for new members such as a mentor program;

Teach narrow band digital communications for emergency response to club members;

Conduct a general class upgrade in 2011;

Have contests within the club such as informal DX events;

Fox hunt in spring;

Explore possibility with county for a club house



#### Old Business

Elections

Nominations – nominations for one board member, vice president, and treasure were taken:

Board member – names put forth in November: Bill Steffey, Dave DeMotte, and Steve Cady; Dave declined the nomination; no new names put forth —**Continued on Page 6**



**Bud has learned from MaryAnn, Steve's widow, that there will be no public visitation or services.**

**The services and internment have been held privately.**

**MaryAnn wants to thank everyone for their friendship and kindness and said that Steve's being involved with the club and the hobby made his last year more enjoyable.**



**Stephen Cady KB3SVX (SK)**

**It is with great sadness I have to announce that a member of WACOM has become a Silent Key.**

**Steve was a very active member of WACOM and enjoyed helping the club with all events.**

**I only knew Steve for a few short years but he showed courage and never gave up in his fight against cancer.**

**He enjoyed Amateur Radio with all of his heart.**

**Steve was what Amateur Radio is all about, friendship and always willing to help anyone.**

**He always strived to improve his skills in Amateur Radio.**

**He will be missed by all.**

**Our prayers go out to his wife MaryAnn and his entire family.**

**Bud & Norma Plants**

This article is from Ross Langman, U.S. Amateur Radio: KB8NTY  
 RossRadio; Antenna Ground Radial Website: <http://radialstaple.wordpress.com/>  
 I thought it might be useful.

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**GROUND RADIALS ARE THE SUBJECT OF MANY DIFERENT OPINIONS...THERE HAVE BEEN STUDIES, EXPERIEMENTS, AND PROJECTS OF MANY TYPES. EACH RESULTING IN PROVEN THEORIES AND OPNINIONS. THIS PAGE IS ONLY TO TOUCH BASE ON VARIOUS FINDINGS AS SUCH. THE FOLLOWING IS BASED ON OTHERS FINDINGS, RESULTS, AND THEORIES, THIS AUTHOR ACCEPTS NO RESPONSIBILITY AND MAY OR MAY NOT COMPLETELY AGREE ON EACH STATEMENT, BUT HEY READ EM AND THINK ABOUT IT, THEY ALL SEEM PLAUSABLE!...THE GOAL HERE IS TO CONSOLODATE THESE FINDINGS FROM VARIOUS SOURCES, SAVING YOU THE RESEARCH TIME AND PROVIDING SOME HOPEFULLY HELPFULL INFORMATION...**

Here are rules that seem to be reasonable for ground radials (not to be confused with elevated resonant ground plane systems):

Radials can be rather small diameter wire since so many of them exist to share the return currents and they are in parallel with the ground currents in the earth as well. Each radial is going to carry very little RF current.

Ground radials need not be resonant. This is a misconception based on elevated or ground plane type elements. True ground laid radials designed to supplement ground return currents in the earth need not be resonant.

They are different from the elevated ground plane radials in this regard since ground radials supplement ground currents and do not try to replace them entirely.

Elevated ground plane radials, especially if few in number, need to be bit longer than 1/4 wave at the operating frequency.

Ground radials seldom need to be longer than .2 (two tenths) wavelength regardless of the height of the antenna, even a half wave vertical radiator. A maximum of .28 wavelength seems to certainly be an upper limit for ground radial length. Due to detuning of the ground, insulated wires laid on the ground tend to be electrically 1/4 wavelength when the physical length is close to .28 wavelength.

Ground radials do not need to be much longer than the antenna is tall. A shortened antenna with loading coils will have a more compact "near field" where the majority of the antenna field is. The ground needs only reach out as far as the near field extends. Field intensity drops off with the square of the distance from the base of the antenna.

Minimum number of ground radials is probably 8, closer to 16, well you would do better with 32... You get the idea, the more the merrier. Four ground radials is going to be a horrible system. More than 32 radials gets you into the area of diminishing returns.

The ground around a vertical monopole type antenna can be viewed as strings of series connected resistors fanning out from the base.

The purpose of the radials can be viewed as attempting to short circuit as many of these resistors near the base as possible. This is especially critical very close to the base where RF field density is highest, and its importance drops off quickly beyond 1/8th wavelength from the base of any vertical antenna, where the RF field density per unit area goes down sharply.

It is important not to confuse this application with elevated ground planes. We are talking about radials that supplement the return of ground currents to the base of the antenna, especially in the near field. They work "in parallel" with the existing earth ground surface to supplement it. Elevated radials are a resonant element and serve a decoupling function and establish a completely artificial ground. They should be resonant, quarter wave wires, but still in fair numbers, probably more than the four usually seen, for best

Antennas That Are Only Half There

In small spaces, vertical antennas are very attractive. They can generate low takeoff angles for radiation, which means long skip distances. These low radiation angles are just what are need for communicating with DX such as "Our Neighboring States."

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However, there are problems with installing verticals. Some commercial verticals address these problems and at least allege that you can use them without radials. Some like ground plane antennas have a built in ground plane radials, often drooping down to adjust the feed point impedance a bit. The drooping of the ground plane improves the match to 50 ohm coax, which is why ground plane radials on VHF antennas seldom stick straight out. Configured like that, the feed point would be closer to 36 ohms.

With the exception of the vertical dipole, a dipole on its end, vertical antennas are only "half there". The other half is a "reflection" in the ground. They rely on return ground currents and use the ground as part of the antenna system.

As a result, if the ground sucks, the antenna will also. It may load up nicely, but so does a dummy load. This applies to all end fed verticals, whether they are 1/4 wave, 3/8 wave, 5/8 wave, 3/4 wave or 1/2 wave tall, or even a random height. They all need a good ground underneath them to function well.

A perfect antenna should have an efficiency of 100 % shouldn't it? 100% efficiency means that 100 % of your output power is going into the air where it should be going, and it is not being used to heat the earth. The point of this discussion is that the only way you can have a perfect antenna system with 100 % efficiency is to have a perfect ground system

Do not skimp on your ground system.

To get 80% efficiency from your vertical quarter wave antenna, you need about 55 radials that are about 0.288 wave lengths long. Using these numbers, an 80 meter vertical will need over 4000 feet of wire for the 55 radials that are about 74 feet long. That is a whole lot of wire. Vertical antennas that have grounded radials are not cheap to build if you want one that is efficient and has a low Take-Off angle. Both efficiency and a low Take-Off angle are the key to having a FANTASTIC antenna. A good quarter wave vertical with buried radials can often out perform a dipole that is way up in the air.

The question of "efficiency" in a vertical antenna.

The "efficiency" of this antenna can be calculated by a simple algebra formula, but if you are one of those who can not remember a darn thing about your high school algebra, fear not. Remember that I will do all the math and I will be happy if you just nod your head and say things like "That is what I thought.", or "I knew that", or "Sure, that makes sense." All you really need to do is to remember the conclusion of the discussion, and I will make that clear.

The efficiency is found by dividing the radiation resistance by the sum of all the resistances in the antenna and ground. Then this number is multiplied by 100 so efficiency can be calculated in percent.

Efficiency = Radiation resistance \* 100 / sum of all the resistances in the antenna and ground.

In the case of the perfect vertical antenna, where all the ground resistances are zero Ohms, the formula will look like this...

Efficiency = 36 Ohms \* 100 / 36 Ohms + 0 Ohms = 100 percent

A perfect antenna should have an efficiency of 100 % shouldn't it? 100% efficiency means that 100 % of your output power is going into the air where it should be going, and it is not being used to heat the earth. The point of this discussion is that the only way you can have a perfect antenna system with 100 % efficiency is to have a perfect ground system.

Now, lets talk about "ground".

There are two distinct different meanings of the word "ground". First, there is the connection at the base of the vertical element so electrons can flow into and out of the antenna. Second, there is the requirement for a large area under the vertical radiator that will hold the electro-magnetic field down near the earth.

This is the area from the antenna to many wavelengths out from the antenna that is probably in your neighbors field or clear down the block. The conductivity of what is out there is what keeps the signal down along the surface of the earth.

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First, let's start with the flow of electrons in to and out of the vertical radiator. It is true that an antenna will radiate a RF field with a very poor ground. That RF field will be far weaker than it needs to be. The thing that creates the RF field is the flow of electrons up and down the vertical radiator. The more electrons that flow, the stronger the field. In order to get the greatest number of electrons to flow up and down the vertical radiator, you need to have a very low resistance storage area full of electrons.

When a rig provides a voltage at the antenna, the lower the resistance, the more electrons will flow. The larger the storage area, the more electrons that can be forced up into and back down out of the vertical radiator.

The controversy happens because amateurs have built vertical antennas with buried radials, and they have worked pretty well. The usual thought is that "since it works, I did it right." That is not the truth.

It is possible that you could have done a much better job if you understood the theory of how a buried radial antenna works. I have a first hand example. Some years ago, I installed a buried radial vertical antenna. I used heavy copper braid for the radials and used two radials tuned for each band of operation. The antenna worked fine for years, even though I was unaware at that time that buried radials lose all their tuning when buried. I should have put down lots more and longer radials for a more efficient antenna.

So, why not use a large copper ground rod for the ground connection?

Ground rods work better than no ground at all, but even though they have a low resistance, they do not have much storage area for electrons. The ground rod is surrounded by dirt, which is a very poor conductor.

Ground rods do not help control the shape of the electro-magnetic field that comes from your vertical antenna. You need a large conductive area under the antenna for that.

Radial wires that leave the base of the vertical antenna are a wonderful way to provide a ground system. These radial wires will provide the needed electrons to move up and down the antenna, but they do not help hold the signal down along the surface of the earth. Radials are not long enough to do that. The questions are ....

How many radials? , How long should they be?, and

Should they be underground or elevated?

These questions are very tricky and many amateurs have a poor understanding on what is needed. The internet is full of different information from different sources. Lots of emotion and arguments have resulted from the lack for good information.

Conclusion

#1 Buried radials are not tuned. Burying them de-tunes them significantly. Don't bother making them a length based on the frequency.

Conclusion

#2 Always use a balun. It should be a 1:1 current balun unless a different ratio is required to match the rig to an antenna with an impedance different than 36 to 72 Ohms.

Conclusion

#3 If your SWR (without the antenna tuner in the circuit) is not 1.4:1, something is WRONG. A vertical antenna has 36 Ohms of impedance (radiation resistance). Your rig and coax have 50 Ohms of impedance.  $50 / 36 = 1.4$ , which is an SWR of 1.4 to 1. This is also true if you are using a dipole. A dipole has an impedance (radiation resistance) of 72 Ohms. Your rig and coax have an impedance of 50 Ohms. The SWR is  $72 / 50 = 1.4$ , which is 1.4 to 1 SWR. If the SWR is less or more than 1.4 to 1, you have a problem. You can probably live with the problem, but you need to know the antenna is not as good as it can be.

Conclusion

#4 Always use an antenna tuner when operating. Use it to get the lowest SWR you can.

—Continued on Page 13

.Conclusion

#5 You need lots of radials. To keep the efficiency of the antenna high, which reduces losses, and stops keeping worms warm, you need to use at least (an ugly minimum of) 12 radials that are slightly more than a quarter wave long at the lowest frequency you will be using. 50 radials is not too many. Avoid keeping worms warm.

#### Vertical Radial Ground Systems

After talking with a number of low band vertical antenna gurus, Some great info has been collected that may interest some. Hopefully this will help some guys planning on putting up verticals. Remember that this is antenna talk and prone to opinions and other biases...

Condensed Opinions and Experiences with Vertical Radial Ground Systems:

1) Ground radials have very little effect on pattern formation. By laying them out longer or concentrated in favored directions, this will NOT bias directivity or efficiency in any particular direction.

2) Radials are used to reduce ground losses only. Picture a vertical as one half of a dipole. RF current normally flows back and forth thru each dipole half.

Now, like the dipole, the vertical element is one half, and other half is the Earth soil. RF current does not flow efficiently through average soil. The copper radials are laid upon the Earth as a "shield" or path to return (collect) the RF current back to the base. This happens 1.8 million times a second on 1.8 MHZ.

Another way to picture it: The vertical has a large group of long resistors all around attached to its base extending out. The resistors represent the Earth soil. Your job is to short these resistors out with wire to produce a low resistance path back to the base.

3) Very low current flows through each individual ground radial wire since the total current is divided up amongst many. So, thin copper wire is OK.

4) The best place for ground radials is on the surface, not buried. Many found it very easy to staple the wire down to the grass and let it grow around the wire... the grass will push it down. Mowing is easy. Best done in the early Spring or after a short cut mowing job. USING ROSSRADIO GROUND RADIAL LAWN STAPLE ANCHOR PINS into the ground holding down the radial every 5-10 feet or so.

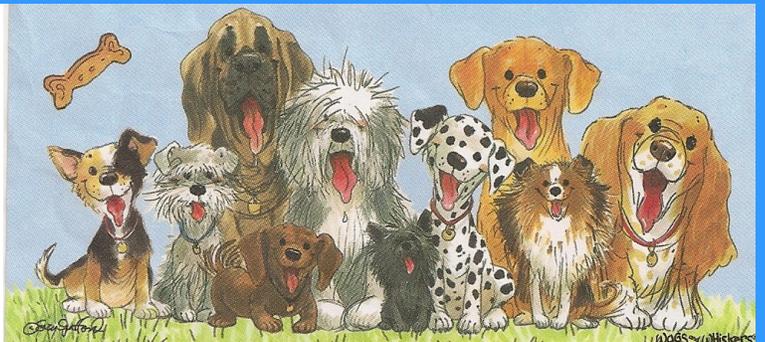
5) If you use more than one vertical element, tie the two groups of element ground radials together and terminate them using a common bus half way between the elements. This saves on wire, reduces parallel resonances, and gets ALL radials shared for each working element.

6) Some say the height of the vertical is the maximum radial length needed. But most say 1/4 wave radials are an important minimum no matter what the height.

7) 50-60 radials appears to be the amount required to get into the "flat" part of the efficiency curve for fair soil – diminishing returns. 120 radials is nice, but appears to be overkill, personally I use 125! And still adding.

**—Continued on Page 14**

Happens all the time, newsletter editors hit feast or famine— and are scrabbling for news. Be warned— if news doesn't continue to come in we will be printing photos and stories of dogs—and cats—who join us in our hobby. So keep the news coming! Thank you.... and thanks from the Editor's dog who hates cameras!



A lambda of about .03 is the maximum distance between radials for “reasonable” efficiency. This is the maximum “gap” between each radial before a reasonable efficiency is lost. I believe this means that Earth currents between the ground radials become a meaningful part of the loss if this number is exceeded.. By using 60 radials you will easily be within this parameter when using 1/4 wave long radials. Once the radials are less than about .025 to .05 wavelength apart at the farthest point (the tips), adding more wire is a wasted effort. This is 13'-26' apart on 160M.

9) An additional, concentrated short ground screen is a waste. If 60 radials or more are used, the first 40' or so of the radial field is very dense already – an additional screen will have no worthwhile effect. I was told this screen is rarely used at BC stations – and if used, it's usually a copper flashing material that is used more to keep from tripping over radials and perhaps to protect equipment placed at the base from lightning.

10) The successful technique of using only 2-4 elevated radials may be overstated.

The jury is still out – many guys do not agree as to what amount of elevated radials equate to ground radials. According to the Low band digest news group list, four elevated radials on HF work fine . Still others say four have very little shielding effect and are down as much as 3-5 db over a full-blown 120 ground radial system. Four will work for a VHF ground plane that is essentially in free space, but for HF, the Earth is a major part of the equation and RF currents must be collected around the vertical in the near field and returned to the base in an efficient manner. A few elevated radials cannot do this efficiently simply due to the wide open missing gaps. Some say that at least 30 elevated radials are needed to do the job of 120 ground radials. Maybe more. Elevated radials 1/8 wave high or higher may be an exception to this.

My question is this:

If 3-4 elevated radials are equivalent to an elaborate ground radial system, why do the AM broadcast stations continue to pour tens of thousands into elaborate 120 radial ground systems when they could hang four simple elevated wires? Do the pros like to spend money for nothing or are the hams holding back a valuable secret? Many wish they had the answer. Either way, I have personally installed (120+) 1/4 and 1/2 wave long ground radials under my Butternut HF9V ground mounted vertical here – I'm happy.

11) In multi vertical systems unless 1/4 wave parasitic vertical elements (reflectors and directors) have their own good ground radial systems they will degrade the expected gain. Even a few ohms in the base will drop db quickly. F-B will also be degraded since the element will have less current due to resistive ground losses to form the proper pattern. They should have as good a radial system as the main driven element.

12) A symmetrical radial pattern around the base is important! It's just a matter of collecting RF currents away from the lossy Earth soil. Even a directional vertical array has energy off to the sides in the near field, as very little pattern formation is completed close in. All energy in all directions needs to be collected. The main purpose of the radials is to reduce losses. IE, the elements radiate in all directions in the near field , so you need a screen in all directions to intercept current and return it to the base.

13) Once the ground losses are minimized through a heavy concentration of radials, it is up to the propagation God's and the Earth miles away as to how good your low angle efficiency will be. If your far field ground is poor, a chunk of the lowest angle lobe will be bitten out. Search “Brewster angle” for more information on this.

14) I've found that #14 insulated PVC Stranded copper wire is great for radials. It a bargain at Home Depot's Builders square or Lowes a good deal. Easy to splice into when connecting interlaced radials to form a grid and easy to lay on the ground, as the solid type seems to have a mind of its own.

15) When connecting interlaced radials together, bind with wire, solder, then tape real well and then coat with RTV or some good weatherproofing compound. The solder will fall apart into a white powder if exposed for long in the soil without protection. If sealed off, the sealed insulated wire will keep the copper inside bright and shiny for years...sealed against water and soil contaminants.

—Continued on Page 15

16) When using a single vertical with radials, interlacing or connecting the radials together with a single wire from radial to radial is a waste of copper.

17) Some feel that adding another wire to help narrow the gap or "fill in" by forming a 'Y' is useful when the radials are very long instead of increasing the number.. This applies to the radial areas far out from the base where the radials become spaced far apart.

18) Radials on 160M should be AT LEAST 100' long. If they are too short, increasing the number and density will not cure this problem. It's a matter of covering all areas. Once a certain density (as described earlier) is achieved , adding more radials the same length is a wasted effort.

JUST SOME INFORMATION COLLECTED TO HELP YOU, YOU MAY FIND YOURSELF COMING BACK AND RE-READING SELECT SECTIONS AS WE HAVE COVERED A LOT HERE!

I HOPE IT HAS BEEN USEFULL FOR YOU.

## UPCOMING LICENSING EXAM

An exam session sponsored by the Wireless Association of South Hills (WASH) will be held on Wednesday, January 26, 2011, at 6:30 p.m. local time. It will be held at the North Strabane Township Municipal Building, 1929 Route 519 South, Canonsburg, PA 15317.

What to bring to an Exam Session:

1. Two forms of identification ( preferably photo ID ) must be presented:
  - a. non-photo ID/driver's license (some states still have them)
  - b. birth certificate (must have the appropriate seal)
  - c. driver's license and/or passport
  - d. library card
  - e. utility bill, bank statement or other business correspondence that specifically names the person; or a postmarked envelope addressed to the person at his or her current mailing address as it appears on the Form 605.
2. Students may bring any of the above items and/or a school ID, minor's work permit, report card, or a legal guardian may present a photo ID.
3. Bring your Social Security Number (SSN) or your FCC issued Federal Registration Number (FRN). VEC's are required by FCC to submit either your SSN or your FRN number with your license application form. If you prefer not to give your SSN, then you may use your FCC issued FRN, if you have one. For instructions on how to register your SSN with the FCC and receive a FRN, visit the [FCC's FAQ page](#) and the [FCC's registration instructions page](#).
4. If applicable, bring the original and a photocopy of your current Amateur Radio license and any Certificates of Successful Completion of Examination (CSCE) you may hold from previous exam sessions. The photocopy(s) will not be returned.
5. Number two pencils with erasers and a pen.
6. A calculator with the memory erased and formulas cleared is allowed. You may not bring any written notes or calculations into the exam session. Cell phone must be silenced or turned off during the exam session. The phones' calculator function may not be used.
7. Bring a check, a money order or cash to cover the exam session fee(s). **The current exam fee is \$15.00.**



For information or reservations contact Jacque, N3ZEL at 724-746-9235 or [n3zel@arrl.net](mailto:n3zel@arrl.net)

The upcoming Wireless Association of South Hills (WASH) 2-meter simplex contest will take place on Saturday, January 8, 2011 from 7:00 PM till 11:00 PM EST. The attachment provides detailed information and log sheets for this year's contest. The rules are changed (have been simplified).

As always if a participant in the contest submits a log and an SASE to us, a free 2011 WashFest main prize ticket will be mailed back regardless of the number of contacts logged. This is a low pressure fun event and we look forward to hearing from as many hams as possible on January 8.

The annual WASH 2 Meter Simplex contest will be undergoing an overhaul with the 2011 running of the event.

Contest Chairman Ed Oelschlager N3ZNI, following discussion with the club membership at the November meeting, has simplified the scoring system.

- ◆ There will no longer be a point differential for club members, non-club members, or club stations. All contacts will be worth 1 point.
- ◆ There will no longer be a multiplier based on power level.
- ◆ Although the ZIP code will remain part of the exchange, they will no longer be used as multipliers either.
- ◆ The scoring will be very simple: Number of QSO's worked. Period.

The reason for these changes? Well, it proved to be too, well, challenging for some people to fill out the scoring summary.

Too many complaints came about power level, including griping about high power. And there were too many differing opinions on how to score the mobiles.

So, in an effort to keep the event light hearted and fun, simply try to work as many different stations as possible. You can work a station once per mode (FM, CW, SSB. Sorry, no digital this year) And as usual, mobiles can be re-worked as they change ZIP codes.

One thing will not change. All summary sheets mailed in by the deadline in February, along with an SASE, will qualify the operator for one free prize ticket to **WASHFest 2011**.

### **Please remember to include that SASE!**

And please, use the 2011 Contest summary sheet, which will be available on the **WASH** web site shortly. Although W3WN filled in — once! — as the “mail drop,” he still receives summary sheets and logs, years later. All logs, summary sheets, and SASE's **MUST** go to Ed N3ZNI to ensure you get tallied in the results, and get your prize ticket!

Send the logs to: WASH 2 Meter Simplex Contest  
c/o Edward K Oelschlager  
60 Carl Ave B2  
Eighty Four PA 15330



Again, the objective is to get on the radio and have fun. Consider also that this will give you an idea of the sort of simplex coverage we all have.

**IF THE SUMMARY AND SCORE SHEETS ARE NOT AVAILABLE BY THE TIME THIS NEWSLETTER IS SENT OUT, THEY WILL BE SENT IN A FOLLOW-UP EMAIL.**

Sent in by Bill, NY9H, a very interesting publication:

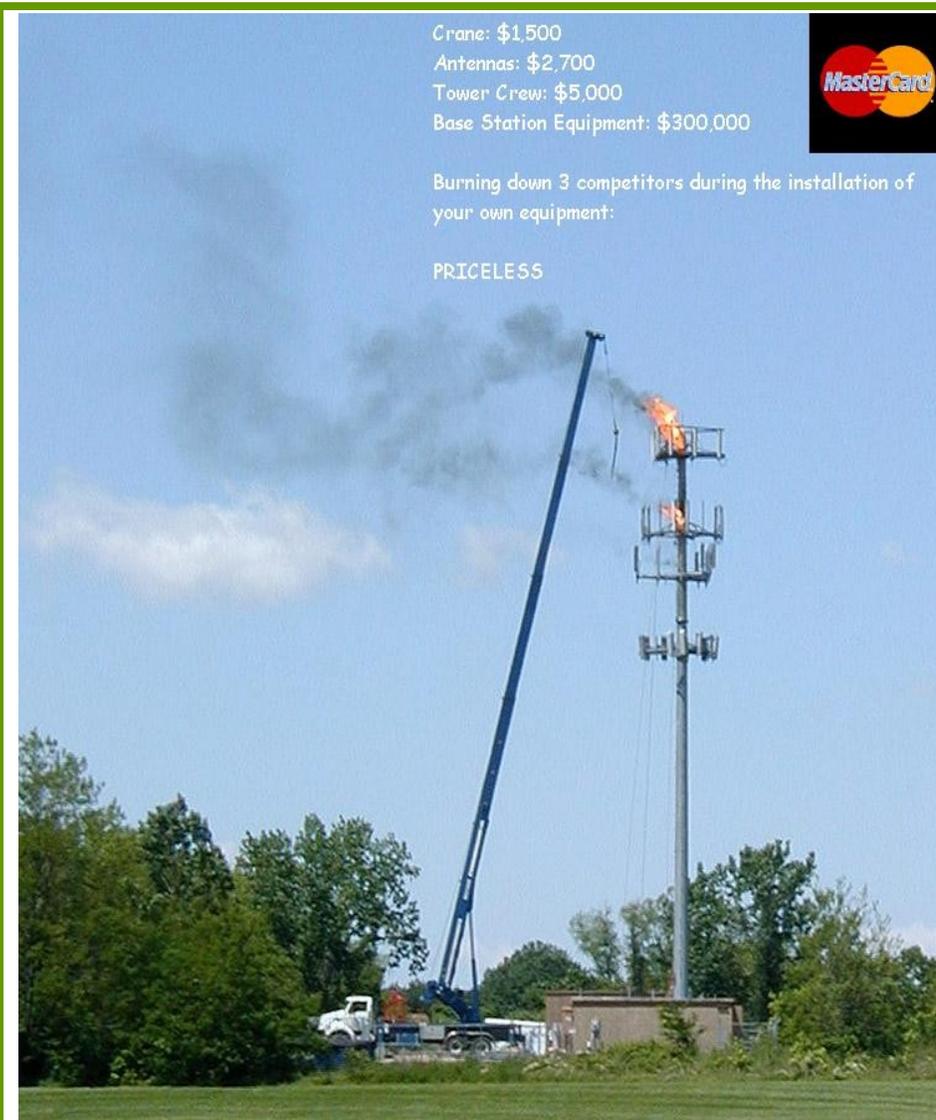
free 400 page book on building a station.....a super station

Thought I would forward this on to anyone interested in building a super station .It is an ebook with a lot of great photos from the early 80s to present,best part it is completely free.Might make a nice read while you snuggle up in front of the fire

Click on the download button and you'll get a 25 MB, 441 page PDF...

[http://www.lulu.com/product/file-download/building-a-super-station---25th-anniversary-e-book/4218409?productTrackingContext=product\\_view/recently\\_viewed/left/1](http://www.lulu.com/product/file-download/building-a-super-station---25th-anniversary-e-book/4218409?productTrackingContext=product_view/recently_viewed/left/1)

bill/3



...Also  
submitted by  
Bill, NY9H....

This is a good  
one!

Thank you  
again

Bill ... !!!





# Young Ladies' Radio League

ARRL AFFILIATED



## YLS AND XYLS!!!

There is an organization for you. It's called the Young Ladies Radio League

Come join other Lady Hams and enjoy the fellowship.

See all we have to offer at

[www.qsl.net/yrlr/index.html](http://www.qsl.net/yrlr/index.html) or contact Jacque,

N3ZEL at [n3zel@comcast.net](mailto:n3zel@comcast.net)



## Quarter Century Wireless Association Inc.

**Have you been a radio amateur for 25 years or more?**

**Were you originally licensed 25 years ago or more, even if not continually?**

Well then please join us at the Quarter Century Wireless Association, Chapter 6 quarterly luncheon at Rocky II's. Located on PA Rt. # 51, just north of McKees Rocks, in Stowe Twp.at the Fleming Park bridge. Join our members who are like you, the foundation of amateur radio.

There is much we can learn from them and from each other. And it's fun too.

No reservation necessary.

Contact Jacque, N3ZEL at [n3zel@fyi.net](mailto:n3zel@fyi.net) for information