

# Noise Floor

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Pacific Northwest VHF Society

Fall 2007

## Changing of the guard!

There's pretty much a "new look" in the leadership of the PNWVHFS these days! Three original officers and directors...Lynn Burlingame, N7CFO; Jim Aguirre, W7DHC; and Bob Lee, N7AU...decided not to run for re-election in 2007. In addition, a new director for Western Washington has been appointed to fill a vacated position.

On November 1, 2007, the society took on a new look. Scott Honaker, N7SS, became the society's second president. Similarly, Steve Pack, WB7VAS, became the society's new secretary-treasurer. Vice president Kevin Imel, KF7CN, ran unopposed and fills out the officer team.

Greg Chartrand, W7MY, was elected as the new Eastern Washington section, replacing the retiring N7AU. Additionally, Kenny Richards, KU7M, has

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### 2007 conference wrap-up

VHF+ operators from seven states and Canada gathered at the Shilo Inn in Bend, Oregon, on the weekend of September 28-30 for the 14th annual Pacific Northwest VHF+ Conference. They came from Washington, Oregon Idaho and British Columbia, in addition to Connecticut, Utah, California and Alaska.

The weekend began with some informal activities on Friday afternoon and moved to a series of mini-seminars before adjourning to a no-host "Pizza Bash."

Promptly at 8:30 am on Saturday, the formal programs kicked off with presentations covering a wide variety of subjects. The ARRL's Dan Henderson, N1ND, led off with a discussion on "Log-Checking Reports for ARRL VHF+ Contests". Other presentations included "High-Power Amplifier Design" (K4XU), "Building High-Performance 1296 Yagis" (W6PQL), "VHF+ DXpedition to Prince of Wales Island" (K7CW), "Forum on PNWVHFS-Sponsored VHF Contest" (K3UHF) and "VHF/UHF Advisory Committee Update" (W7DHC).

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**New officers and directors:**  
(clockwise from top left) Scott Honaker, N7SS, Steve Pack, WB7VAS, Kenny Richards, KU7M, and Greg Chartrand, W7MY.

# 2007 Pacific Northwest VHF+ Conference photos



At top, some 80 VHF+ operators from throughout the Pacific Northwest and beyond attended the 2007 conference. Here, they are gathered for the "traditional" group photo.

Below, left are two of the happiest people at the conference; Barbara Alexander, KD7OFC, and Allen White, KD6GIY, winners of the Icom IC-910H all-mode VHF/UHF transceiver and the Yaesu FT-857D all-mode HF/VHF/UHF transceiver. These terrific prizes were donated by Icom America and VertexStandard/Yaesu respectively.

(All photos on this page by N7KGA)

**See Pages Seven and Eight for additional photos.**

**Noise Floor** is the official publication of the Pacific Northwest VHF Society. All opinions expressed herein are those of the individual authors unless specifically stated as being otherwise.

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ARRL Division Director Jim Fenstermaker, K9JF, presents Ed Cole, KL7UW, with the affiliation certificate for the Alaska VHF Group.

## Conference wrap-up...

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After the presentations were completed, a brief annual meeting was held, the highlight of which was the presentation to Don Krug, K7HSJ, of the 2007 "VHFer of the Year" award. It is fair to say that Don was "speechless." Congratulations to Don on the award. It recognizes his many years of work in promoting VHF+ activity in Central Oregon.

The door prize drawing featured a wide variety of great items, including a brand new Icom IC-910H provided by Icom America and a brand new Yaesu FT-857D provided by Vertex Standard/Yaesu. Many thanks to all the donors for their gracious gifts.

Wrapping up the Saturday events was a no-host dinner at McGrath's Fish House just across the street from the hotel. This provided attendees with the opportunity to visit with old friends and make new ones.

# Changing of the Guard...

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been appointed to fill the remainder of the Western Washington director term after N7SS moved up to the presidency.

The only remaining member of the original society management team left in place is Idaho director Bob Hallock, K7TM. In addition, two other directors...Gabor Horvath, VE7DXG, and Jim Garver, K7YO...remain on the board with terms that run through October 31, 2007. Respectively, they represent the British Columbia and Oregon sections. Neither, however, was one of the original directors taking office when the society was formed in 2002.

"Change is good and the society needs some new perspectives," said former society president Lynn Burlingame. "I intend to remain active in the society and will help out wherever I'm needed." Retiring secretary-treasurer W7DHC echoed those thoughts. "I plan to remain active and will continue to edit the newsletter as well as help out where needed."

## W7MY: Eastern Washington Director

Greg Chartrand, W7MY, is the new PNWVHFS director for Eastern Washington. He replaces Bob Lee, N7AU, who did not seek re-election after serving three terms.

Greg was first licensed as WN9EYY in 1962 in Chicago. He told Noise Floor, "I operated most bands including 2m AM with a Heath "lunchbox." I used my lunchbox in college and in the 70's and 80's, worked the "birds;" Oscar 6, 10, and 15. I also worked 2m SSB/CW long haul for several years but my first love was 160m DX. I operated many 160 and DX "tests" as a single and multi operator."



He moved to Richland, Washington, in 1994 and subsequently became W7MY. "I operated 160-10 meters, but mostly 160. About six years ago, my old high school buddy, W7IUV, moved to Quincy and I became more "radioactive." Larry does 160 also but goaded me into the UHF/UHF bands. I slowly built up the station from a 6m dipole to my current 6m through 23cm collection."

Greg is an electrical engineer who has worked in some exotic fields such as "high energy physics." As you might expect, he works for the US Department of Energy's Northwest National Laboratory in Richland. He is married and has two children attending WSU.

His VHF+ interests are varied. "I began operating in the VHF contests and, in 2006, was lucky enough to set a new record for the June ARRL VHF Contest in the low-power category. I'm looking forward to getting a mini rover setup going just for fun and possible contest use, and I always enjoy attempting the impossible path and going after the weakest signal!

Find out more about Greg by visiting his web page at <http://webpages.charter.net/w7my/>.

## KU7M: Western Washington Director

Kenny Richards, KU7M, of Newcastle, Washington, has been appointed to fill the remainder of the term for the recently vacated Western Washington Section Director position. The vacancy was created when former WWA director Scott Honaker, N7SS, was elected society president and assumed office on November 1, 2007.

The society constitution provides for just such an occurrence and requires the president to appoint a director for the remaining term of a vacated position. Kenny's term as WWA director will run through October 31, 2008.

Licensed since the age of 15, Kenny progressed through the ranks and received his Extra Class license several years ago. Early on, he operated a packet BBS out of his dorm room at Oregon State University while pursuing a BS degree in Computer Engineering. After graduation from OSU, he became inactive for a number of years until returning to the Northwest and seeing an announcement for a local ham club.



His introduction to the PNWVHFS came, he says, when "during my first VHF contest, I was awakened at 6:00 am by N7CFO pounding on the window of my RV. He was screaming something about six meters being open and that I needed to stop sleeping."

Kenny says that "in addition to enjoying VHF contesting and, especially operating as a rover, I also enjoy operating on the satellites and building new pieces of gear. Now that my son is two years old, I hope to have more free time to enjoy melting some solder and heading into the hills. I have really enjoyed having the chance to interact and learn from everybody I've met since joining the society and look forward to giving back to the organization by serving on the board of directors."

# Mobile installation basics

By Lynn Burlingame, N7CFO

Mobile installations can be complicated, whether it is for a complex rover rig setup or just a relatively simple two-meter FM installation. Here are some lessons that I have learned in that area over the years.

## Getting power to the rig

Connect directly to the battery. This provides a degree of filtration against alternator whine and ignition noise. A direct connection allows you to use your gear without turning the ignition on, though you must take care to turn the radios off or you will end up with a dead battery. Some rigs have an "auto off" function that solves this problem.

I suggest putting fuses on both legs of the power lines as close to the battery as possible. This protects your equipment and your vehicle if you have a catastrophic short circuit. In addition, you'll need individual fuses for each piece of equipment. Don't forget to stock up on extra fuses too. Check out the accompanying photos to see the installation I recently did in my Toyota truck.

Cigarette lighter circuits are light duty and are usually unsatisfactory for radio installations. If you must use one you should reduce power on the rig to limit the current draw. There are several power distribution panels on the market, and nearly all of them use Anderson PowerPole® connectors. They make a much better distribution system than a cigarette lighter socket.



**Fuse box** - This is the fuse box installation in my 2005 Toyota Tundra. The box is a small fishing tackle box with some partitions removed. It is affixed to the air filter housing with Superlock® fasteners. The large PowerPole® connectors enable me to unhook the power in an emergency. Note that this container even provides for the storage of spare fuses.

PowerPoles are the national standard for many organizations and a wide variety of accessories using them are available.

These panels usually have individually fused circuits and some even provide audio alerts for low voltage. When doing a mobile installation I prefer to put in a power panel to provide for future needs. The panels come in handy for connecting other radio's, a GPS, a power inverter or other accessories.

## Routing cables

Getting cable through a firewall can be a hassle, but it can be done. Most vehicles have holes in the firewall that are sealed with plastic or rubber plugs. Once you have determined that you can get to both sides of the plug, pull it out and punch an appropriate size hole through it using a gasket punch. Use a hole that provides a snug fit to the cable. Inexpensive gasket punches are available at Harbor Freight, item 6770-9VGA. This gives you a clean hole for your cable and will prevent the grommet from splitting.

Once the cable is in place, seal around the cable opening with RTV or silicone caulk. This will reduce drafts, engine noise and the possibility of carbon monoxide entering the cabin. When running cables inside the engine compartment, be sure to avoid hot exhaust components



**Power panel** - This is one of two power panels in the Tundra. The other one is located on the transmission tunnel just forward of the passenger seat. Each will handle 30 amps and has a main fuse plus individual circuit fuses. These panels are available from the nice folks at <http://www.dcpwr.com>.

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## Mobile installations...

*Continued from Page Four*

and moving parts such as the steering linkage. Likewise, if you are routing cables under the dashboard make sure that they do not rub against or interfere with moving parts such as heater control cables, brake cables, etc.

Installing cables inside the vehicle can require some effort. You can usually lift trim panels on the door sills by removing screws. If you are lucky, there will be a cable trough under the panel. An electrician's snake can be handy for pulling wires, especially under carpet or between the headliner and roof. If you route cables under carpet do not route under heavy wear areas.

### **Where to put the rig**

The placement of the transceiver is critical. It should be in a convenient location for operation and should not interfere with vehicle controls. Many mobile rigs have remote control heads which makes installation a lot easier. The only downside to remote heads is that the speaker is in the main body of the radio and it may be hard to hear. This problem is solved by installing a small mobile speaker. If possible, place the rig and control head where it cannot be readily seen from outside the vehicle. This will reduce the chances of theft.

I prefer to have the microphone cord routed so it comes from behind me and has tension on the cord when I am using it. This allows me to drop the microphone without it getting tangled in the controls. I learned this lesson the hard way when I wrapped a mike cable around the steering wheel and ended up in the ditch! Securing the microphone can be a distraction when driving, so you might wish to use self-adhesive Velcro rather than the catches that come with the gear. I like to put the scratchy side of the Velcro on the dashboard or console so I can feel it with the backs of my fingers when I am stowing the microphone. I also use Velcro to secure brackets for control head mounts.

Radio Shack sells "Superlock Fasteners" that are a lot like Velcro, but much heavier and stronger. It is not cheap, but it allows you to mount gear without drilling holes in the car if you have a clean flat surface.

### **Mounting an antenna**

Antenna mounts can be tricky, especially with newer cars. If you are willing to punch a hole in a fender or the roof, use a Greenlee punch or a metal-cutting hole saw. This gives you a nice clean hole that is easier to weatherproof. If you own a pickup, consider the GeoTools pickup stake hole mounts. Their web page is



**Mounting the control head** – Here's a view of the control head for my IC-706MKIIG mounted on the dash of the Tundra. I was able to snake the remote cable under the dashboard and out through a gap by the windshield. The mounting bracket is bolted to an aluminum mount that is affixed to the dashboard with Velcro. The Velcro on the top of the control head is to affix a sun shield. This shield is necessary to keep the unit from overheating in direct sunlight. It extends over the defroster vents and directs cold air to the control head.

(All photos by the author)

at <http://www.geotool.com/antmount.htm>. I've used two of them on my 2005 Toyota Tundra. They are beautifully made and it is easy to make a clean installation with them.

You should take care when routing antenna cables. They also must be kept away from moving parts, exhaust parts and sharp edges. Consult your auto dealer to determine the location of on-board computers and give them a wide berth for fear of interfering with vehicle electronics.

Do yourself a favor and tag your antenna lines at the radio end. This is especially important if you have more than one antenna. If the antenna connections on the rig are not easily accessible, you might consider running a piece of coax to a more easily accessible location and installing an antenna splitter switch there. This will enable you to switch to a portable antenna should the need ever arise.

The next step is to check the continuity between major body parts such as the roof, fenders, trunk lid and hood. If you do not have continuity between these parts it will affect the antenna ground plane and reduce ignition noise shielding. Fortunately, it is usually easy to bond these components with small pieces of ground braid.

Once everything is in place, check the SWR and make appropriate adjustments. An antenna analyzer is the ideal tool for this, but you can also use a SWR bridge that registers in the appropriate frequency range.

## “Sight for sore eyes!”

By Jim Aguirre, W7DHC

All the surveys I've seen recently point to the fact that the amateur radio population is aging. As a result, many of us have to deal with the effects of aging, including changing eyesight issues. I'm one of those people and I've found that working on circuit boards and other small items is getting harder because of it.

While I have taken to using a bench-mounted magnifier-light setup for much of my work and I sometimes wear a pair of traditional head-mounted magnifier lenses, both can be a little clunky at times. I had a dental appointment a while back and noticed that the hygienist was wearing a pair of eyeglasses with what appeared to be two jeweler's loupes mounted on them in a flip-up holder.

Curious, I asked her about them and was told that they were, indeed, magnifying lenses. Apparently, they are a standard item in the dental field. She also told me that they cost several hundred bucks for a “cheap pair!” So much for that idea!

Well, not quite! The hygienist suggested that I check out an inexpensive clip-on, flip-up magnifier lens available from Cabela's, the mail-order sporting goods purveyors. She said many in her dental hygienist class had purchased them and found these lenses to be excellent substitutes for the more expensive version.

A quick look in the on-line Cabela's catalog found what is called the Flip & Focus Clip-On Magnifying Glasses. They are designed for fly fishermen to use when tying knots in small leaders. These lenses clip onto a standard pair of eyeglasses and flip up out of the way when not in use. You don't wear eyeglasses? Well, if you are doing any soldering or clipping of component leads, you sure should be...safety glasses, that is! They work just fine on safety glasses too!

Available in 2X, 2.5X and 3X magnification, these clip-on magnifiers are very inexpensive at \$9.95 each. I like the 2.5X version. Shipping will cost another \$4.95, making the total cost just under \$15. If you buy two pair in different magnifications, the shipping cost will still be \$4.95. Or, buy a second pair for a friend! Check 'em out at <http://www.cabelas.com>.



(Cabela's photo)

*Cabela's "Flip & Focus Clip-On Magnifying Glasses - the magnifying lenses flip up out of the way when not needed. They are available in 2X, 2.5X and 3X magnification.*

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## Corralling your paddles!

By Jim Aguirre, W7DHC

Do you ever find yourself chasing the CW paddle around the desk? I sure do! The rubber feet seem lose their grip as they age, allowing the paddle to slide around.

Recently, at my local True Value Hardware store, I found some self-adhesive “Gripping Pads” that really work. I'm sure you can find a similar product at other stores as well. Look for them in the area where you find replacement chair feet, etc.

These pads are round, clear, vinyl disks with adhesive on the back. They come in various sizes, including 3/8,” 1/2” and 3/4,” and have a rather amazing grip to them.

I find the larger 3/4” size works well on several of my paddles and the 3/8” size is perfect for smaller feet like those found on my Bencher paddle. I keep a sheet of the 1/2” ones around in case I need something in between.

I've been using these “gripping pads” for about a year now and they don't seem to have lost their grip in that time. If they eventually do, I'll simply replace them with fresh ones. They are not all that expensive, running about \$4 for a sheet of six 3/4” pads or 12 1/2” or 3/8” pads.

You can also find a lot of other uses for these pads around the hamshack, keeping small pieces of equipment from sliding around. Your spouse will also appreciate them for keeping table lamps and other items in place.

# More 2007 conference photos...



(N7KGA photo)

**VHFer of the Year** - Don Krug, K7HSJ (right), accepts the 2007 PNWVHFS "VHFer of the Year" award from Eric Olson, N7EPD, the society's awards chairman.



(xyl-W7DHC photo)

**10 GHz in the parking lot** - VE7DXG sets up his gear with onlookers.



(N7KGA photo)

**KL7FF DXpedition** - K7CW makes a presentation on his recent KL7FF contest DXpedition to Prince of Wales Island.



(N7CFO photo)

**Socializing over dinner** - Time to "kick back" and renew friendships.



(N7KGA photo)

**Alaska VHF Group** - KL7UW talking about VHF+ activity in Alaska.



(xyl-W7DHC photo)

**Mini-seminars** - Several "mini-seminars" were held on Friday afternoon. Here, W7DHC discusses installing "N" connectors.

# Still more 2007 conference photos...



(N7KGA photo)

*Contest presentation - K3UHF makes a society contest proposal.*



(K7AWB photo)

*Between sessions - There was lots of visiting going on.*



(N7SS photo)

*Laid back! - ARRL Division Director K9JF takes a break.*



(N7KGA photo)

*Getting it straight! - ARRL's N1ND (left) and Door Prize Chair K7HSJ discuss the details of the drawing. N1ND pulled the winning tickets.*



(N7KGA photo)

*Registration table - xyl-W7DHC ably handling the conference registrar duties on Saturday morning.*