



WASHRAG™

www.n3sh.org www.washarc.org

VOLUME 14 ISSUE 05

MAY 2012

N3SH
WA3SH
NP2SH/B



Wireless Association of South Hills

Bone Marrow Screening

& Replenishment Blood Drive on behalf of Kevin Smith N3HKQ

After routine blood work returned abnormal, Kevin Smith N3HKQ, 58, was diagnosed in January 2012 with myelodysplastic syndrome, more commonly known as MDS, a precursor to leukemia. He has been receiving maintenance chemotherapy treatments and needs a bone marrow (stem cell) transplant. He is waiting to find a donor through BE THE MATCH™, the national marrow donor registry.

Kevin and his wife, Peg, live in Monongahela and have two children, a son, Michael, married to Kim; and a daughter, Jennifer Borne, married to Mike. Kevin continues to work at Carmeuse North America, where he is a Technical Project Manager. He is an enthusiastic Amateur Radio Operator, a member of the WIRELESS ASSOCIATION OF SOUTH HILLS, and an active member of St. Damian's Parish in Monongahela.

This special blood drive is planned to help replenish the community blood supply and encourage donors to join BE THE MATCH. Joining the registry is easy — simply complete additional paperwork and submit a sample mouth swab. Please donate blood in honor of Kevin!

Central Blood Bank is the not-for-profit organization that supplies blood products and transfusion-related services to approximately 40 hospitals in Western Pennsylvania, Northern West Virginia, and Eastern Ohio.

This special blood drive will be held on Saturday, May 26th, 2012, 9:00 AM to 3:00 PM, at the Brentwood VFW, 3810 Saw Mill Run Blvd.

Please schedule an appointment to donate blood at this drive by logging on to

www.centralbloodbank.org, using

sponsor code **ZRTN0925** or call Mike Smith at (412) 223-4124.

Please bring ID with you on the day of the blood drive. Proper ID is required to donate blood. A Central Blood Bank or military ID, driver's license, or employee badge with picture and full name are all approved forms of ID. Birth Certificate along with a picture ID that includes the donor's full name will also be accepted.



Carol's Comments

What can I say? It is May already. To all those going to Dayton have a great time. Buy lots of goodies and come home safely.



Field Day will be here before we know it, last weekend in June. And I am sure with all the planning and work we do, it will go just fine and everyone hopefully will have a good time. Don't want to rush it to fast because that means June will have come and gone.

Remember the *Breezeshooters Hamfest* on June 3rd comes first and our picnic lunch will take place at our usual spot. I know the turn out will be good because our food is good.

We will have a lot to discuss at the May meeting. See everyone on the 10th.

— 73. Carol Danko KB3GMN
President, Wireless Association of South Hills
N3SH / WA3SH / NP2SH

Inside this issue:

"Seen" Pictures	2
WASH Club News	3
Meeting Minutes	4
WASH Club Agenda	5
Tales of a Scrounger	6
BSA & Morse	8
DX News & Notes	12
WASH Classified Ads	13

Next Meeting: May 10th, 2012

The next monthly meeting of the WIRELESS ASSOCIATION OF SOUTH HILLS, INC. will be on Thursday, May 10th, 2012, at the Crossroads Ministries Church, 88 Walter Long Road of f Route 88, Finleyville PA, starting at 7:00 PM.

Meeting topics will include Dayton, Breezeshooter's Hamfest, Field Day and other plans for the summer & fall.

Talk-in on the 146.955(-) N3SH/R and 443.650(+) N3FB/R Repeaters (131.8 PL). All members, guests and interested parties invited!

"Seen" at the WASH April (Pizza! Pizza!) Meeting



Photos courtesy of and ©Copyright 2012 Ron Notarius W3WN

WASH 2012 OFFICERS

EXECUTIVE COMMITTEE:

President	Carol Danko KB3GMN
VP / Secretary	Glen Roberts KE7FD
VP / Treasurer	Mark Stabryla N3RDV

AND WE COULDN'T DO IT WITHOUT:

N3SH / WA3SH Trustee	Steve Lane W3SRL
NP2SH Trustee	Paul Jordan NP2JF
N3SH / WA3SH / NP2SH QSL Manager	(vacant)
NP2SH 2009 QSL Manager	Carl Schroeder K9CS
VE Team Liaison	(vacant)
Webmaster	Randy George N3ZK
Asst. Webmaster	Sean Sleeman N3NWR
Quartermaster	Harold Rosenberger K3HCR
WASH FM Net Manager	Kevin Smith N3HKQ
WASHFest 2013 Committee	Kevin Smith N3HKQ, Chairman
Activities & Operating Events	Carol Danko KB3GMN, Co-Chair
Ways & Means	Bob Timmins AB3ED
Field Day 2012 Coordinators	Carol Danko KB3GMN
	Larry Comden K3VX
	Rick Bell KB3IAC

CLUB-AFFILIATED REPEATERS, BEACONS, & DIGIPEATERS:

Mt. Lebanon	N3SH / R	146.955 MHz (-)	PL 131.8
Mt. Lebanon	W3SRL / R	442.550 MHz (+)	PL 131.8
Canonsburg	N3FB / R	443.650 MHz (+)	PL 131.8
St. Johns, VI	NP2SH / B	28.276 MHz	Propagation Beacon
Canonsburg	N3SH	144.390 MHz	APRS Digipeater

N3SH / WA3SH WASHNet, the weekly on-air net of WASH, meets every Sunday Night, 9:00 PM ET, on the 146.955 & 443.650 repeaters. All radio amateurs, WASH members or not, are welcome to join in!

THE LEGAL STUFF

"The WASHRag™" (formerly "The Mariner™") is the Official Newsletter of the **WIRELESS ASSOCIATION OF SOUTH HILLS, INC. (WASH)**

Published Monthly with occasional Special Editions as warranted.

This issue is © Copyright 2012 by the **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.**

Editor & Publisher: Ron Notarius W3WN

Permission is granted to other Amateur Radio publications to reprint articles in this issue, provided the original author and "The WASHRag™" are given credit. Comments, articles, and requests for copies of or information about "The WASHRag™" should be mailed to the editor:

Ron Notarius W3WN
3395 Rosewood Drive
Castle Shannon, PA 15234-2546

e-mail: [newsletter at n3sh dot org](mailto:newsletter@n3sh.org) or [w3wn at arri dot net](mailto:w3wn@arri.net)

"The WASHRag", "The Mariner", SHARCfest, South Hills Hamfest, WASHfest, WASHfest 2012, N3SH Net, WA3SH Net and WASHNet are™ trademarks of the **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.**

The **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.** was founded on August 23rd, 1993, as the original **SOUTH HILLS AMATEUR RADIO CLUB**, and operated under that name through 1998. WASH was also known briefly in late 1998 as the **N3SH AMATEUR RADIO CLUB**. It is not in any way affiliated with the "South Hills Amateur Radio Club, Inc." and is not responsible for that group, it's members, or it's actions in any way, shape, or form.

As always, special thanks to the owners of both the N3SH-W3SRL Repeater System and the N3FB/R Repeater System for permitting the **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.** and it's members to use their repeaters for club purposes.

WASH Amateur Radio Club News Briefs

Next WASH VE Test July 25th

The Next WASH VE exam sessions will be **Wednesday, July 25th, 2012, 6:30 PM**, at the **North Strabane Township Building, 1929 Route 519, Canonsburg, PA**. Talk-in on the 146.955 MHz and 443.650 MHz repeaters. All examiners are ARRL VEC affiliated.

Walk-ins are always welcome, but if you plan on attending the test session, please contact VE Team Liason ~~Ed Oelschlager N3ZNI~~: (TBA)

Telephone (~~724~~ 746-9235 or E-Mail: ~~n3zni@comcast.net~~) (TBA)

Please bring the following to your test session:

- Picture ID or other suitable identification (2 forms of ID required)
- Pen / Pencil / Calculator
- Original FCC license plus a copy of license (if upgrading)
- Original CSCE plus a copy of CSCE (if upgrading)
- Check or Cash in the amount of **\$15.00** (payable to: ARRL VEC)

Future test dates: Wednesday, **September 12th, 2012**

2013 tentative dates & location to be scheduled

Considering how warm March was (and you could really tell on our gas bills!), nobody expected Saturday, April 29th to be a cool morning reminiscent of... a typical March. But it was, which may just prove that Mother Nature has an ironic sense of humor. Still, that wasn't enough to stop **the WASH Breakfast Gang** from it's monthly gathering at **The Beach House** in Finleyville. This month's cool customers included W3WH, N3FB, KBG3GMU, WB4GCS, K3HCR, AB3DL, K3SGT & Barb, N3HKQ & Peg, and W3WN. Hot food combated a cool morning, along with conversations including call centers in India, a 10 GHz beacon, car repairs under warranty, refrigerator repairs under warrant, iPhones, parallel parking, "putting the boat back together," parallel parking, changing transmission fluid in a motor home, taxes, the updated proposal to AAAP, and snippets of WB4GCS's latest UHF exploits... the table gets too long some times!

Will the end of May bring flowers? Or a snowstorm? There's only one way to find out... join the group for a great start on Saturday, May 26th at **The Beach House**, Library Road, Finleyville, just south of Trax Farm. See you there!

They're leaving on a jet plane: We've learned this last month that two of our long-time members are leaving the area.

First, Ed Oelschlager N3ZNI, who's been a long-time mainstay both of **WASH** and **WACOM** the last few years, serving as numerous roles for both clubs (way too many to list here), is moving West. We'll be seeing Ed at Dayton, and for a short time thereafter, before he leaves for good.

Second, Paul Lusardi NØVLR, another long-time mainstay of **WASH**, surprised just about everyone that after 17 years based in SWPa, he has accepted a position at a small company in Oregon that working in the nuclear field. He leaves for OR on May 12th, with the family due to follow within a few weeks.

There just isn't enough space to start listing all of the things these guys have done, how important they've both been to the club, and how much we're going to miss them. But they will be sorely missed, and we all wish them well in their future endeavors.

And if you'd like to say something more about that, we'll have space available in the June newsletter.

With Ed leaving us, the positions of **VEC Team Liason, 2 Meter Simplex Contest Manager**, and **N3SH/WA3SH QSL Manager** have opened up. Carol will be seeking volunteers to fill these spots in the upcoming weeks. Interested? Give it some thought and talk with her about it at the next club meetings.

The 2012 **Breezeshooters Hamfest** will be here in just a few more weeks. Yes, we will have a club picnic as usual. "The usual" announcement is on Page 12, and we're all really looking forward to it this year. If you're planning to be at the hamfest, make sure you stop by and join your fellow club members for a nice, relaxing little mid-fest cookout. And if you're setting up... why not join us in the flea market area and save yourself a lot of walking when lunch time comes?

Hard to believe... you're reading this in May!, and **Field Day** is less than 2 months away. We're going to be back at the Model Airplane Field at South Park, and we're looking forward to another great FD trip. But for FD to be successful, it takes a little effort from everyone. So now is the time to start letting the **N3SH Field Day** organizers, Larry K3VX and Rick KB3IAC, what you can do to help out, and when you think you'll be able to operate. Remember that we're looking to set up some "classic" equipment — Field Day isn't just about operating, but having fun, and it can be real fun operating some of the old gear. (And if Ye Editor can get that Swan 350 back on the air in time, we'll be able to cover the whole phone band on 20 without changing the VFO once!)

By the way, once again, Field Day weekend coincides with a Pirate's Home Stand. However, Saturday's game is an afternoon (4:05 PM) game, so there will be plenty of FD evening left to operate after the game's over! (Let's hope for a quick win, not extra innings!). There may be some out of town hams coming in for the game, who may just join us for a little FD fun... so if you see them, make them welcome!

It's that time of the year:

The FCC released an NPRM on May 4th, seeking to increase the fee for new or renewed Vanity call signs. Vanity call fees are currently \$14.20 for ten years; the proposed fee is \$15.00, a modest increase, but less than the fee first proposed in 1994 — \$70.

Vanity calls first issued prior to 1993 are exempt from this fee.

WASHNet 2012 NCS Schedule

01/01/2012	Dave N3DFK	07/08/2012	Carol KB3GMN
01/08/2012	Glen KE7FD	07/15/2012	Bob AB3ED
01/15/2012	Harold K3HCR	07/22/2012	Kevin N3HKQ
01/22/2012	Carol KB3GMN	07/29/2012	Dave N3IDH
01/29/2012	Bob AB3ED	08/05/2012	Sean N3NWR
02/05/2012	Kevin N3HKQ	08/12/2012	Dave N3DFK
02/12/2012	Dave N3IDH	08/19/2012	Glen KE7FD
02/19/2012	Sean N3NWR	08/26/2012	Harold K3HCR
02/26/2012	Dave N3DFK	09/02/2012	Carol KB3GMN
03/04/2012	Glen KE7FD	09/09/2012	Bob AB3ED
03/11/2012	Harold K3HCR	09/16/2012	Kevin N3HKQ
03/18/2012	Carol KB3GMN	09/23/2012	Dave N3IDH
03/25/2012	Bob AB3ED	09/30/2012	Sean N3NWR
04/01/2012	Kevin N3HKQ	10/07/2012	Dave N3DFK
04/08/2012	Dave N3IDH	10/14/2012	Glen KE7FD
04/15/2012	Sean N3NWR	10/21/2012	Harold K3HCR
04/22/2012	Dave N3DFK	10/28/2012	Carol KB3GMN
04/29/2012	Glen KE7FD	11/04/2012	Bob AB3ED
05/06/2012	Harold K3HCR	11/11/2012	Kevin N3HKQ
05/13/2012	Carol KB3GMN	11/18/2012	Dave N3IDH
05/20/2012	Bob AB3ED	11/25/2012	Sean N3NWR
05/27/2012	Kevin N3HKQ	12/02/2012	Dave N3DFK
06/03/2012	Dave N3IDH	12/09/2012	Glen KE7FD
06/10/2012	Sean N3NWR	12/16/2012	Harold K3HCR
06/17/2012	Dave N3DFK	12/23/2012	Carol KB3GMN
06/24/2012	Glen KE7FD	12/30/2012	Bob AB3ED
07/01/2012	Harold K3HCR	01/06/2013	Kevin N3HKQ

Join WASH or Renew your Membership for 2012 Today! Membership Application on Page 13!

Minutes, April 12th Meeting

Kevin Smith N3HKQ, Acting Secretary, **WASH**

Bill W3WH, standing in for Carol KB3GMN called the meeting to order at 19:00 hours. There were 22 members and guests in attendance.

The meeting was briefly adjourned so that hot pizza could be enjoyed by all in attendance. Meeting resumed at 19:20

The Pledge of Allegiance was recited by all, followed by introductions.

A moment of silence was observed for recent silent keys and other deserving persons.

A motion was made by Rich N3SBF to waive reading of the February minutes as published in the newsletter. Seconded by Don AE3DL and carried unanimously.

Committee reports:

Treasurer (N3RDV): A balance on the bank account was read & accepted.

Secretary (KE7FD): No report.

VE Report (N3ZEL): Next VE session to be held on April 25th at the North Strabane Municipal Building. Bud will be running the session in Ed's absence, as Ed will be moving out of state.

Repeaters (N3FB): Repeating "clock not set"!

Net Report (N3HKQ): Kevin discussed & reviewed the problems during the last simplex net & apologized for them.

Contests (K3VX): Field Day: Larry reviewed the tentative layout for the FD site at South Park. He and Bill have already located ropes in some of the trees for antenna use. Those with Vintage equipment are asked to bring some out this year, to run a "classic" station or stations as part of the operation, just for fun.

WASHFest 2012 (N3HKQ): Final financial report read and accepted.

Public Service (N3IDH): Upcoming events include the SET, the Run for Alex on the first Saturday in June, and the Pittsburgh Marathon May 6th.

Ways and Means: 50/50 tonight, with a bonus drawing.

Newsletter (W3WN): Published.

President's Report (KB3GMN): Carol passed along greetings to all from Ted W4ZE. She briefly discussed the hamfest they attended there (see photos last newsletter). She would also like to see more participation on the Sunday night nets.

Old Business: None

New Business: Brief discussion of the proposal being considered to the AAAP (see main article last newsletter). Consensus was to find out more about how this might be accepted and discuss further in May.

Good of the order: Technician class book presented to Darryn Sleeman

- Kevin N3HKQ reported that we still owe the AAAP for another EME attempt at the Mingo Park observatory. September looks most likely.
- Rick KB3IAC will be getting the tower trailer to the repair shop soon. They should be able to complete repairs before Field Day

Motion to Adjourn by Bill W3WH, second by Larry K3VX and carried.

Meeting adjourned at 20:10 hours.

Following refreshments & 50/50 drawing, Fred KB3DCO continued the 2 meter portable beam assembly project.



WASH Spotlight: N3FB



Congratulations are in order to Frank Bobro N3FB, who is the new Frequency Coordinator for the Western Pennsylvania Repeater Council.

Frank was appointed to the position at the April 15th, 2012 WPRC meeting.

Frank takes over the position from Joe McElhaney KR3P, who has been the WPRC Frequency Coordinator for many years.

Photo taken outside the 2 Rivers ARC Hamfest, courtesy of and ©Copyright 2012 Ron Notarius W3WN

Every month we're going to feature a **WASH** club member, something about them, something they're involved in or a club-related activity that we're involved in, in the **WASH Spotlight**. Submissions for the Spotlight should be sent to Ron W3WN at [newsletter at n3sh dot org](mailto:newsletter@n3sh.org)

Monthly WASH Breakfast

Please join us for the next **WASH** Breakfast! We usually get together on the LAST Saturday of every month for a chance to informally sit down, shoot the breeze, compare notes, drink lots of coffee, and just have a good time!



Join us this month at **The Beach House**, on Route 88 in Finleyville, just south of Trax Farms and adjacent to Mineral Beach. Start time is about 8 AM until ????? Monitor 146.955 & 443.650 for talk-in or any last minute changes.

All are welcome, **WASH** members or not, amateurs or not!

Wireless Association of South Hills Membership

AB3ED	KB3SPE	N3RDV	WASH FL	WASH VI	Silent Keys K3EED (George) KA3NMG KB3ENX KB3FNM KB3FQT N3FZ N3KEH N3OBD N3SKR N3SRC N3ZEL N3XFE W3ZLK WA3JPP
AB3EN	KB3SRC	N3RHT	KA3UPY/M	NP2JF	
AB3KA	KB3TOA	N3SBF	W4ZE		
AC4KU	KB3WRO	N3UE	WASH GA		
AE3DL	KC4WTT	N3ZK	K3OL		
K3HCR	KE7FD	N3ZNI	KB3JX		
K3SGT	KJ3D	W3RWS	WASH NE		
K3VX	N2QIV	W3VFA	NØPEU		
KA3TWI	N3AWF	W3WH	WASH OH		
KB3DCO	N3CZZ	W3WN	N8DPW		
KB3ERQ	N3DFK	W4ONC	WASH SC		
KB3GMN	N3FB	WB4GCS	N3RNX		
KB3GMP	N3FPF	Darryn	WASH TN		
KB3GMU	N3HKQ	Sleeman	KE3XB		
KB3IAC	N3IDH		N3YPB		
KB3IVX	N3KFD		WASH TX		
KB3MHM	N3NWR		K3LGM		
KB3SPD	N3OVO		Jane Wagner		

Through April 25TH, 2012

List compiled by

Mark Stabryla N3RDV, Vice President/Treasurer

2012 WASH Upcoming Events Calendar

Meeting Topics & Other Significant Club Events — Subject to Change

May 6 th	City of Pittsburgh Marathon	
May 10 th	WASH Meeting	@ Crossroad Ministries Church
May 18 th —20 th	Dayton Hamvention	HARA Arena, Dayton, OH
May 26 th —27 th	Worldwide Prefix Contest CW	http://www.cgwpx.com/
June 3 rd	Breezeshooters Hamfest	Roe Airport, Butler PA
June 3 rd	WASH Picnic @ Breezeshooters	Roe Airport, Butler PA
June 14 th	WASH Meeting	@ Crossroad Ministries Church
June 23 rd —24 th	ARRL Field Day	http://www.arrl.org
July 7 th	North Hills ARC Hamfest	Hampton Township, PA
July 13 th	WASH Meeting	@ Crossroad Ministries Church
August 9 th	WASH Meeting	@ Crossroad Ministries Church
September 9 th	BCARA Butler SwapFest	Unionville Fire Department, Butler PA
September 13 th	WASH Meeting	@ Crossroad Ministries Church
October 13 th	WASH Meeting	@ Crossroad Ministries Church
October 13 th & 14 th	Pennsylvania QSO Party	http://www.nittany-arc.net/PAQSO.html



Tales of a Scrounger

Frederick R. Vobbe W8H DU courtesy of www.eham.net

We all know people who are scroungers. There are some who look for useful things, such as decommissioned radios from business and public service users that can be turned into ham repeaters and bases. Then there are those who fall into the insane category, such as the folks that collect catsup packets from fast food joints, and electronics that end up in piles in the basement or garage. These folks have Intend Disease. They intend to do something with the discarded junk but never get around to it. (I'm waiting to see if they show up on the TV show "Hoarders").

I fall somewhere in the seventy percentile of sane with my scrounging. At breakfast this morning, a couple of local hams and I were commenting on some of the things we have found and reused for the good of ham radio. Note, all these things are being used, and not laying around collecting dust.

After a party in 1997, a Coke bottle served a wonderful purpose as an insulator. I wanted a 40 meter vertical. I found some aluminum tube with the largest piece being 1.250". The large piece of tube fit over the neck of the bottle, and smaller tubes then made up the 34' tall radiator. Small non-conductive guys hold it erect, and with the bottle sunk into the dirt some 3" and the downward momentum, the antenna has stayed in place for years. The 6" glass gap from ground is more than enough for even legal limit power. One hint... tub caulk the opening so the bottle doesn't fill with water and shatter in the cold when the water turns to ice.

At work, we have a plotter machine that runs 24" wide paper. The HP paper comes on a plastic tube, 2-3/16" round. Normally these tubes and the end pieces that go in the boxes are tossed out. But these have served wonderfully for coil forms. I've had no problem with using this stuff for coils handling some pretty impressive power and wattage.

My friend Bill found an old VHF antenna next to the curb on trash day. All the stations in the area are transitioned to UHF, so the old antenna had no purpose. Bill grabbed it, and with some re-engineering, and modified feed point, the antenna made a dandy 2-meter beam. As far as we can figure from plotting it out in EZNEC and with field measurement, the antenna yields about 7.8 dB gain.

Speaking of antennas, I found an old pair of rabbit ear antennas sitting at the curb. Those have been remounted on the end of a broomstick and have been repurposed for D.F. work, and once correctly lengthened to the appropriate distance, can handle up to 50 watts of power from a 2-meter rig while camping in the wilderness.

Know an electrician? Many times these guys have wads of THHN wire in the back of their truck after redoing someone's commercial electrical service. This was just the case when I noticed my friend Vince had a pile in his truck. Normally he takes this back to a special dumpster at work, and when they fill the dumpster it goes to salvage. These 10' and 40' ends of wire made great radials for my Butternut antenna. And it cost me \$8 meal at the local watering hole to get enough to do about 60 radials for the antenna.

A nice touch to the WiFi world was an antenna my friend Ken made. He has a WiFi antenna on his router so he can pick up the weather station in his barn some 180 yards from the house. The signal was always coming and going, and was mostly gone. I made him up a cable with SMA connectors on it, and we took the antenna at the barn end and placed it in front of his old DirecTV antenna he don't use, and pointed it back to the house. Through trial and error we found the "sweet spot" when the apex of the DirecTV antenna focused the RF on his home for 100% signal. Taking a laptop around the property we found the signal was very directional. The little "rubber duck" antenna is supported in the apex of the antenna by (3) 1/8" threaded rods, which were then heavily painted to keep from rusting.

At a recent hamfest I found a guy trying to sell un-etched PC board. A 12" x 12" piece of double-sided board was 50-cents. This was too good to pass up. With some calculations of the spacing between the board, and using a capacitance meter while cutting, I came up with some 1.375" by 3" strips. These fit nicely inside a PVC tube. With a coil across one side of the board to the other, you have a nice trap you can make for about \$5 in parts. Hint: Sand back the copper on the edges to keep voltages from arcing over the side. You don't need much, just .1875 or so will do it.

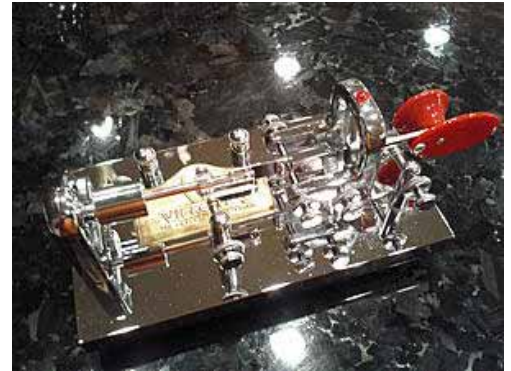
I'm sure there are plenty of stories from those of you of things you've salvaged and repurposed for ham activities. How about sharing some of your experiences. What have you made from a discarded item?

You Know You're a CW Addict...

Jim Key NT2F courtesy of www.eham.net

You know you are a CW Addict IF:

- 1) Rather than saying "Huh?" you say "didi dahdah didit."
- 2) You wake up in the middle of the night with a million crickets chirping and all you can think of is trying to bust the pile-up.
- 3) Rather than talk in your sleep, your fingers twitch out code.
- 4) The first time you heard Beethoven's 5th symphony all you heard was "V" being sent over and over and over and... Then it dawned on you why it is called the 5th symphony.
- 5) You find yourself saying "didahdit" rather than "Yes."
- 6) Someone calls you a "freak" and you yell back "Up 5."
- 7) Rather than make rude gestures at idiot drivers, using you car horn, you tap out that they are a "!! *@@###!!."
- 8) You can pick out that QRP 3PY in a massive pileup but don't hear you wife calling from the next room.
- 9) On your honeymoon night, you pretended to go to the bathroom so you could work the Heard Island expedition on your RockMite.
- 10) You've gotten in a fist fight on field day over iambic A-mode versus iambic B-mode.



Retired FCC amateur radio enforcement chief Riley Hollingsworth K4ZDH, has been named a CQ magazine contributing editor, and will succeed "Washington Readout" editor Fred Maia W5YI, who recently became a Silent Key.

Hollingsworth, a ham since 1960 and a longtime FCC attorney, became a household name in amateur radio in 1998 when he was named Special Counsel for Amateur Radio in the Commission's newly-created Enforcement Bureau. His highly-visible enforcement actions were cheered by a vast majority of the amateur community after more than a decade during which FCC enforcement on the ham bands was virtually non-existent. Hollingsworth retired from the FCC in 2008, but has continued to be in demand as a speaker.

His new monthly column, - "Riley's Ramblings," will incorporate "Washington Readout's" coverage of legislative and administrative actions that affect amateur radio, as well as additional topics of importance in the distinctive common-sense style that has made Riley a sought-after speaker. His first column will appear in the July, 2012, issue of CQ

Views from the 2 Rivers ARC 2012 Hamfest



Photos on this page are courtesy of and ©Copyright 2012 Ron Notarius W3WN



A Blast From the Past... In Code

Bryan Wendell, Senior Editor, [Scouting Magazine](#)

Get ready to dot-dot your I's and dash your T's.

Today (May 4th), the Boy Scouts of America released the Morse Code Interpreter Strip, an official patch for Scouts and Scouters who can demonstrate their ability to "speak" this special language.

Morse Code joins languages like Spanish, French, Italian, German, Japanese, Arabic, Chinese, Hebrew, Sign Language, and several others as interpreter strips available for wear on Scout uniforms (above the right pocket).

To get a typical interpreter strip, you must carry on a five-minute conversation, translate a two-minute speech, write a letter in the language, and translate 200 words from the written word.

But Morse Code, a vital communications tool during World War II, doesn't really work with those requirements. So Jim Wilson and the BSA team crafted new ones:

Morse Code Interpreter Strip requirements

- ◆ Carry on a five-minute conversation in Morse Code at a speed of at least five words per minute.
- ◆ Copy correctly a two-minute message sent in Morse Code at a minimum of five words per minute. Copying means writing the message down as it is received.
- ◆ Send a 25-word written document in Morse Code at a minimum of five words per minute.



Official requirements: Find them here: <http://scoutingmagazine.files.wordpress.com/2012/05/morse-code-interpreter-strip-final.pdf>

©Copyright 2012 Scouting Magazine, Boy Scouts of America



Japan To Launch Student High-Voltage Satellite

HORYU-2 Team, AMSAT-UK, AMSAT News Service Weekly Bulletin 120

HORYU-2, an amateur radio nano satellite, or CubeSat, built by students at the Kyushu Institute of Technology (KIT) in Japan will launch aboard a Japanese H-IIA rocket planned for May 17th, 2012 at 1639-1642 UT.

This Cubesat includes several experiments:

- ◆ 300 volt power generation in LEO
- ◆ COTS technology demonstration of surface potential measurement
- ◆ Orbital debris observation
- ◆ Earth photography

The satellite downlink will be 437.375 MHz using 1200 bps FSK and CW, running approximately 1 Watt output power.

300 volt power generation in LEO

Power generation in space in practice is limited to 160 volt generation with 120 volt transmission aboard the ISS due to electrostatic potential of the solar array with respect to its platform. High power generation will require heavier cables or increased loss due to resistances. Future high power generation in LEO will require 300-400 volts. The HORYU-2 mission, 300V power generation in space without any discharge, is the first space environment test of the new technology.

COTS technology demonstration of surface potential measurement

A contact surface potential meter developed by TREK, Inc. for terrestrial commercial application will be flown. This is a high impedance meter which will not affect the charge state of the object being tested. As HORYU-2 passes through the aurora zone, differential charges may develop between the insulator surface and the satellite chassis. The potential meter will measure the potential of the insulator that is the same material to be used for SCM. The two measurements are compared to validate against each other.

Orbital debris observation

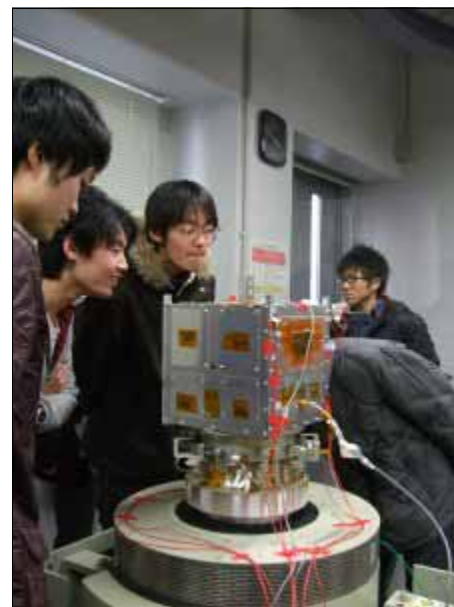
This experiment will detect micro-debris impact on the surface of HORYU-2. The debris sensor consists of many conductive thin wires laid down in parallel in the area of 8x8 cm. Upon impact, some of the lines are cut and the resistance becomes infinite.

Earth photography

A small CMOS camera, developed by the University of Surrey, called the Surrey Camera Payload (SCAMP) will take pictures in JPEG format at 640 x 480 pixels. From 700km altitude, one pixel will correspond to 1.6 km.

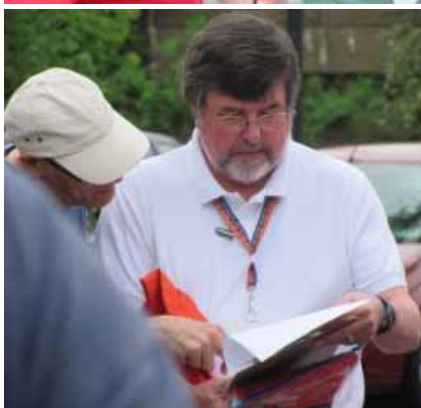
More information is available on the web: <http://tinyurl.com/HoryuSatellite>, <http://www.uk.amsat.org/6638>, <http://www.uk.amsat.org/4279>

For more information, contact the HORYU-2 Project Manager at K350905k@tobata.isc.kyutech.ac.jp



HORYU2 Thermal Model
Photo courtesy of AMSAT-UK

Views from the 2012 Pittsburgh Marathon Pre-Meeting



Photos on this page are courtesy of and ©Copyright 2012 Ron Notarius W3WN

Amateur Radio from XZ

Simon Luttrell HSØZIB / XZ1K

This is NOT a DXpedition station, but a (hopefully) permanent station that is operated by HSØZIB, who works in Myanmar as a volunteer for provision of educational and humanitarian aid. (please visit my charity web-site at www.myanmarteachers.org)

For full details of my tentative band plan and schedule, and how you can receive a commemorative QSL for your amateur radio QSO or your SWL report, please visit my web-site at www.xz1k.org

My original plan was to try for a DXpedition, and I spent about 9 months in fruitless correspondence with the Myanmar authorities from my base in south Thailand, close to the Myanmar border.

Then I considered a longer-term plan to actually construct a small hotel and amateur radio room in south Myanmar. (That plan is still 100% on the table, but it's a longer-term project)

Finally, I started travelling to Myanmar every week, in my quest for this authorization. Those trips also opened up my eyes to the educational and humanitarian needs of the people of Myanmar. In agreement with my wife, I decided to split my time between Thailand and Myanmar, travelling to and fro each week and working in Myanmar as a volunteer English and Thai language teacher at the local primary schools.

My presence in Myanmar also helped me to make some new contacts and to enquire again about getting authorization to operate a 'low-key' ham station from the country. That authorization was then surprisingly easy to obtain, with the call sign of XZ1K (K stands for Kawthang which is the town where I am located). But the emphasis by the authorities was on this 'low-key' site of operation, with no team of operators, no large antennas, no high power etc. Hopefully, it will be possible in the future to expand my ham operations in Myanmar.

So the status right now is that I've set up a dedicated web-site at www.xz1k.org which details my operating plans and QSL route.

Initially, I mentioned in previous posts that operation would only be made using PSK31, however it is very likely that I will commence using SSB and then also operate in PSK31 mode (not at the same time...)

Operation will initially be made only on 10 meters (SSB only), 20 meters (SSB and PSK), possibly 40 meters (SSB and PSK). I currently have no 6 meter equipment and need to build some wire antennas for the low bands. CW operation may follow when my Morse rate is adequate!

Operation has to fit in with my volunteer work and regular trips to/from Thailand

I will attempt to upload all QSOs to my online log in near real-time (I am near enough to Thailand to receive their mobile phone networks)

I will not use LOTW or eQSL or any bureau. Verification of logged QSOs and for SWL reports will only be made via OQRS. I will use PayPal and/or credit/debit card online payment to cover postage costs and a small, optional donation towards my social enterprise in Myanmar.

QSL cards will be printed in due course, and will indicate whether it is for a confirmed QSO or for a SWL report. Please do not worry if there is a delay in receiving your QSL card – I need to get these printed and then mailed out from Thailand.

Please do not treat this like a DXpedition! I intend to work in Myanmar as long as I can, and so you have time to try for a QSO. I will usually operate in split mode, typically up 5.

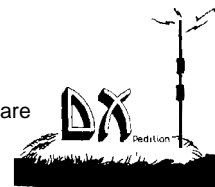
Please respect the DX Code of Good Conduct. Please keep your QSOs with me short – give others a chance to make a contact

I hope to do some initial operations within the next few days – best of luck to all for a QSO (but absolutely do not worry if you cannot hear my signal – I will get to know my new QTH and experiment to find the best set-up/antennas for getting my signal out). I'm sure my signals will be flakey to start with.



DX News Briefs

The Cordell Expeditions group has announced a DXpedition to **FOØ Clipperton Island** in 2013. They are looking for 24 operators, and will be QRV for 10 days starting on or about 1 March, "all bands & all modes." More info at <http://www.cordell.org/CI/index.html>



E7ØA/J28AA will be QRV as **6O3A** 25 - 31 May, SSB RTTY & 6 Meters. QSL via K2PF or E7E — RN3AKK

A team consisting of I2YSB, IK2CIO, IK2CKR, IK2DIA, IK2HKT and IK2RZP will be active from Galkayo, Somalia as **6OØCW** between May 7-18, 2012. More info at <http://www.i2ysb.com/joomla5/> QSL via I2YSB — I2YSB

AB7FS will be QRV as **E51AND** from Rarotonga OC-013, 2 July - 25 August. He plans to be active on the ANZA net. QSL via AB7FS — AB7FS

Look for Ken **J79TK** (JN1THL) – Yoshikatsu **J79YK** (JK1KHT) – Yoshiko **J79YL** (JQ1LCW) and Misae **J79JF** (JF1UOX) to be active from Dominica between 10 to 17 May, 2012. QRV on 40-10m, possibly 6m using a TS-590 and IC-706MKII + amps. CW, SSB & RTTY. QSL all calls to JN1NDY.

Karl, LA8DW & Kjell LA9HH will be active from Svalbard as **JW8DW** 12-19 September 2012. More info at <http://la8dw.com/Svalbard%202011/> QSL via LA8DW -- LA8DW

Look for **T3ØPY** from Tarawa 16 - 25 October, **T3ØSIX** on 6 meters. 3 stations are planned to be QRV simultaneously, SSB CW & RTTY. More info at <http://www.mdxc.org/t30py/> QSL via PY2PT — T3ØPY Team

W5JON will again be QRV as **V47JA** from his vacation home on NA-104, 12 July - 2 August. XYL W5HAM will also be on occasionally as **V47HAM**. QSL via W5JON — W5JON

JA1JQY (**A52JY**), JK1EBA (**A52BA**), JA3MCA (**A52MA**), JA1KJW (**A52KJ**) and JA8VE (**A52VE**) will be active from Thimpu, Bhutan between June 6 to 14, 2012. They plan to stay at a hotel (altitude 10,000 ft) and be QRV 160m to 6m, SSB, CW and RTTY, with an emphasis on 6 meters. A beacon will be on 50.125 around the clock. QSL via individual home calls — DX World

A team of 10 ops will be active from Coloane Island AS-075, Macau as **XX9E** between May 17-23, 2012. They plan to be active from 6 to 160 meters (include WARC) in CW, SSB and RTTY with at least 3 stations simultaneously in different bands and modes. More info at http://www.adxg.org/xx9/?tw_p=tw QSL via EB7DX — DX World

VK2PM, VK3FY & OK1NG will be QRV from Lord Howe Island 27 May thru June 2nd. They will be using **VK9PN** and **VK9LHI**, and will operate in the CQ WPX CW Contest. — VK2PM

ZA/F4DØT & ZA/F4GFE will be QRV as **ZA1ØØI** 22—29 April, 40—10 SSB only. QSL via F4DØT — F4DØT

QSL Routes

3D2T via VK4FW — W2IRT
 4WØVB via UA4WHX — JA1HG
 6O3A via K2PF — JA1HG
 8P5A via NN1N — 8P5A
 8P5Y via K9CS — K3VX
 8P9WH via K9CS — W3WH
 9N7BM via JA8UWT — JA1HG
 A71BU via NI5DX — W1ZD
 CO2WL via HA3JB — W2JU
 HI3K via KB6J — HI3K
 HKØNA via N2OO — N2OO
 HU2DX via DH7VW — JA1HG
 J7Y via K1LI — K1LI
 OA4SS via KB6J — OA4SS
 P49Y via AE6Y — P49Y
 PJ2T via W3HNK — PJ2T
 PJ4C via F9IE — PJ4C
 PJ4Z via K4BAI — K4BAI
 PJ7PT via SP9PT — JA1HG
 PSØS/PS7JN via PS8JN — PY2YP

PS5F via PP5BZ — W3AWU
 R1F1JA via RX3MM — MMØBQN
 T2T via VK4FW — N1IBM
 TI5W via N3IYM — TI5W
 TLØCW via DK7PE — W2IRT
 TO3A via VE3EY — G3SWH
 TO4M via IK5CRH — W1ZD
 TX7M via RZ3EC — LU2DKN
 V21ZG via DL7AFS — MMØBQN
 V31TP via WCØW — WCØW
 VKØTH via JE1LET — K8SIX
 VP2EC via N5AU — N5AU
 VP5OU via N7OU — N7OU
 VP6T via G3TXF — LU2DKN
 YI9EO via N4EO — AA5AM
 ZA1ØØI via F4DØT — F4DØT
 ZD8Z via AI4U — ZD8Z
 ZD7XF via G3TXF — LU2DKN
 ZWØS via PS8JN — PY2YP
 ZYØSAT via PS8JN — PY2YP

Thanks to the NJDXA DX News & DX Chat Reflectors, the DX-QSL Reflector, 425 DX News, OPDX News, Diamond DX Club News, ICPO Bulletin, & ARRL DX Bulletin for our DX News information. Thanks also to Bill Moore NC1L / ARRL DXCC Desk, & Bernie McCleeny W3UR / The Daily DX for confirmations & additional information.



WASH Classifieds

Information shown here is as supplied to the **WASHRag**. Condition as stated, and all sales should be considered "as-is" unless otherwise noted. All subject to prior sale or withdrawal from sale at the owner's discretion. All responsibility for this information lies with the source and not the **WASHRag** or the **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.**

HAM RADIO INSURANCE ASSOCIATES, INC.
 P.O. Box 201
 Canonsburg, PA 15317-0201
 Toll-Free 1-800-545-8881



Fax: (412) 746-5944

bill.hill@hamradioinsurance.com

"All-Risk" Amateur Radio Equipment Insurance Plan for:

- Radio Equipment
- Computer Equipment
- Antennas Rotors & Towers
- Computer Media & Software
- Cellular Telephones
- Mechanical Breakdown & Electrical Damage Coverage

Antenna Zoning or PRB-1 Issues?

Contact: **Michael S. Lazaroff K3AIR, Esquire**

Murrin, Taylor, Flach, Gallagher & May
 110 East Diamond Street, Butler PA 16001
 Phone: 724-282-3141 mlazaroff@murrinlaw.com

Custom Decals, Signs, Plaques and Wood-working from **Randy George N3ZK**

More information at his web site, Randy George Woodworking <http://www.randygeorgewoodworking.com/>

See his eBay store for special deals at http://stores.shop.ebay.com/Randy-George-Custom-Signs_W0QQ_armrsZ1



Solderer's Wanted: Aerotek, "the largest staffing company in North America, is looking for experienced," is looking for Skilled Solderer's for a firm in Harmorville and possibly other firms as well, for their Electronic Assembly positions.

Aerotek is also seeking individuals interested in any type of work in the manufacturing or production field.

If you are interested in pursuing one of these positions, or interested in other positions available, please contact:

Matthew Lord, Commercial Recruiter
 Aerotek Inc.
 4 Penn Center West Suite 200
 Pittsburgh PA 15276
 (412) 489-9829 (phone) (412) 489-9860 (fax)
mlord@aerotek.com

Feel free to mention the **WASHRag** when you call him!

For Sale: Flex Radio FLEX-1500 SDR QRP Transceiver. Never used. List price is \$649... asking \$500 firm (plus shipping if applicable)

Contact Rich N3SBF n3sbf@comcast.net

The new Digital Edition of QST will debut toward the end of May. If you are an ARRL member and you haven't yet signed up to be notified automatically when the Digital Edition becomes available, you can do so easily. Just go to EDIT YOUR PROFILE at www.arrl.org. Click EDIT EMAIL SUBSCRIPTIONS and then check the box next to NOTIFICATION OF MONTHLY DIGITAL EDITION OF QST. That's all there is to it.

A new FAQ about the Digital Edition has the answers to the questions ARRL members have been asking. It can also be accessed from www.arrl.org/qst.

FCC News

ARRL Web Extra courtesy of the American Radio Relay League

Newington, CT, April 12th, 2012 — The Federal Aviation Administration (FAA) is deploying a new generation of Common Air Route Surveillance Radar (CARSR) that has some implications for the use of the 1240-1300 MHz (23 cm) band by amateurs. The Amateur Service allocation in this band is on a secondary basis, with aeronautical radionavigation and several other services primary in the United States Table of Frequency Allocations. FCC rules require that amateur stations operating in the 23 cm band may not cause harmful interference to stations in the radionavigation-satellite service, the aeronautical radionavigation service, the Earth exploration-satellite service (active) or the space research service (active). One case of harmful interference in Southern California has been reported.



CARSRs are being installed in several dozen locations throughout the country and will use various frequencies in the 1240-1350 MHz range with an occupied bandwidth of about 3 MHz. In the vicinity of the radars, amateur operation may be precluded in a portion of the 23 cm band. The ARRL is in contact with FAA engineers. We anticipate that the constraints on amateur use of the band will be limited to those necessary to protect aviation safety, which of course cannot be compromised.

In the May 5th FCC Daily Digest, the FCC denied the petition of James Whedbee NØECN for a declaratory ruling regarding the CC&R and HOA restrictions. The FCC stated, in part:

"[This letter](#) responds to your petition for a declaratory ruling that private codes, covenants, and restrictions including homeowner association rules (CC&Rs) that restrict amateur radio facilities violate Section 310(d) of the Communications Act of 1934, as amended. You request that the Commission declare such CC&Rs to be contrary to the public safety and interest, thereby terminating their enforceability. For the reasons set forth below, we deny the petition. < snip >

Congress recently enacted the Middle Class Tax Relief and Job Creation Act of 2012, which requires the Commission to report to Congress regarding the uses and capabilities of Amateur Radio Service communications in emergencies and disaster relief. The statute requires that the study identify impediments to enhanced Amateur Radio Service communications and recommendations regarding the removal of such impediments, including "the effects of unreasonable or unnecessary private land use restrictions on residential antenna installations." On April 2, 2012, the Wireless Telecommunications Bureau and Public Safety and Homeland Security Bureau issued a Public Notice seeking comments relating to the topics of the study to be submitted to Congress. Comments are due May 17, 2012.

In your petition, you argue that early comments to the Public Notice demonstrate a controversy regarding whether CC&Rs that restrict amateur radio facilities violate the Communications Act, and you request a declaratory ruling terminating the controversy by holding that such CC&Rs are unenforceable. Section 1.2 of the Commission's Rules provides that the Commission may "issue a declaratory ruling terminating a controversy or removing uncertainty." The Commission's policy regarding preemption of CC&Rs that restrict amateur radio facilities is clear, and has not changed since 1985. The recent congressional directive to conduct a study that, inter alia, examines the effects of such CC&Rs does not change the Commission's existing policy. Because there is no controversy to terminate or uncertainty to remove regarding the enforceability of CC&Rs, we deny your petition."

In the April 13th FCC Daily Digest, the FCC announced that they had entered a [consent decree](#) with Mr. Richard Mann, *dba* The Antique Radio Collector.

Mr. Mann was ordering unbuilt / unassembled AM BCB transmitter kits (which are legal to sell -- as kits), model AMT3000, from a firm called SSTRAN; assembling them; and then selling the "fully assembled" transmitters. However, assembled units must first pass FCC certification, unlike the kits (which as sold are just a collection of parts, after all).

As part of the consent decree, Mr. Mann agreed to cease building and selling the assembled transmitters.

He was initially fined \$7000 for selling the assembled transmitters that lacked certification. As part of the decree, in light of mitigating factors, the fine was reduced to \$130.

Has Roadway found the tower yet?



58th Annual BreezeShooters Hamfest & Computer Show

Sunday, June 3rd, 2012 8:00 AM to 3:00 PM
at the Butler Farm Show Grounds, Roe Airport, Butler PA
\$5 Per Person Admission Donation

Tailgate / Flea Market Spaces Available at \$5 per Space
Indoor Tables \$20 per table and may be reserved by contacting
Bob Benna N3LWP (412) 366-0488

Or mail reservations to 1010 Willow Drive, Pittsburgh PA 15237
Table reservation cut-off date May 20th, 2012

More information on prizes and tables, please contact:
Bob Benna N3LWP (412) 366-0488 (ph) (412) 366-0486 (fax)

Download directions & the latest flyer from the BreezeShooters Web Site at
<http://www.breezeshooters.net>



Fourteenth Annual WASH Picnic at the Breezeshooter's Hamfest

Sunday, June 3rd, 2012
from approximately 11:30 AM to 1:00 PM
At the **WASH** Club Location
Somewhere Out in the Flea Market

(Look for us in the vicinity of the Grandstand, along the fence, near the Wash House)

*A tradition at the Breezeshooter's Hamfest for over 25 years on & off,
and a WASH formal or informal activity for the last 14!*

Spend the morning meeting your fellow WPA & Regional Hams, buying or selling stuff & dodging roving golf carts full of Breezeshooters — then join your fellow **WASH** members and our invited friends for lunch, friendship, bragging rights, and (if set up and operational) operating N3SH/3 from the Flea Market — with the Tower Trailer (if brought)!

This will be a "Pot Luck/Covered Dish" Picnic — The Club has traditionally provides the burgers and hot dogs; we're asking everyone coming to bring buns, soft drinks, water, a side dish, snacks, fruit, cookies, dessert, ice, or whatever they can.

Contact Ron W3WN w3wn at n3sh dot org to coordinate who's bringing what.

There is no charge to attend (outside of bringing something to share) but the picnic is not open to the general public, only **WASH** members (including their families), friends & invited guests.



WIRELESS ASSOCIATION OF SOUTH HILLS, INC.

Membership Application/Renewal for 2012



I would like to join WASH!. I am interested in the following type of membership: **New Membership** **Membership Renewal**

(check quarter (check one)) \longrightarrow

1st Qtr Jan-Mar **2nd Qtr Apr-Jun** **3rd Qtr Jul-Sept** **4th Qtr Oct-Dec**

- (F1) Full Membership: \$20.00 \$15.00 \$10.00 \$5.00
- (F2) Full Membership < 18 or > 65 yrs of age: \$10.00 \$7.50 \$5.00 \$2.50
- (A1) Associate Membership: \$10.00 \$7.50 \$5.00 \$2.50

(FM1) Family Membership (\$3.00 x No. of household family members): \$ _____

Name(s): _____

Name: _____

Call Sign: _____

Address: _____

License Class: _____

City, State: _____

Expires On: _____

Home Phone: _____

Work Phone: _____

Email Address: _____

Birthday: _____

New Members Only:

- I do NOT want to be added to the Club E-Mail Reflector
 - I do NOT want to be added to the Electronic Newsletter Mailing List
- [If you have an Email address, you Will be added to both lists UNLESS you choose to Opt-Out]

ARRL Member? Yes No Family ARRL Member? Yes No

Date: _____

Signature: _____

Amount Enclosed: \$ _____

Please make your check or money order payable to the club treasurer, Mark Stabryla. The Wireless Association of South Hills, Inc. reserves the right to accept or reject new memberships or renewals. Please return completed membership form along with check/money order to the club treasurer or mail to:

WIRELESS ASSOCIATION OF SOUTH HILLS, INC.
c/o Mark Stabryla N3RDV, VP/Treasurer
1120 McKnight Drive
Bethel Park, PA 15102-2456



Join the American Radio Relay League or Renew Your Membership through the WIRELESS ASSOCIATION OF SOUTH HILLS, INC.



Members of the WIRELESS ASSOCIATION OF SOUTH HILLS can start a new membership or renew an existing membership in the American Radio Relay League, the National Organization of Radio Amateurs, through the club. Benefits for you: Joining and participating in everything the League has to offer, including a QST subscription. Benefits for the club: A few more shekels for our coffers.

Just fill out the form below, include a check or money order made out to WASH/ARRL, and return all to the club treasurer or mail to:

WIRELESS ASSOCIATION OF SOUTH HILLS, INC.
c/o Mark Stabryla N3RDV, VP/Treasurer
1120 McKnight Drive
Bethel Park, PA 15102-2456

Name: _____

Call Sign: _____

Address: _____

Date of Birth: _____

City, State, ZIP: _____

Total Enclosed: \$ _____

Please Check the Appropriate One-Year Rate:

- \$39 in US
- Age 21 or younger, \$20 in US (only if you are the oldest licensed amateur in your household)
- Canada \$49
- Elsewhere \$62
- Other (including Blind, Life, QST by First Class Postage — please contact ARRL for rate)

Additional Family Members at the same address (\$8 per family member)

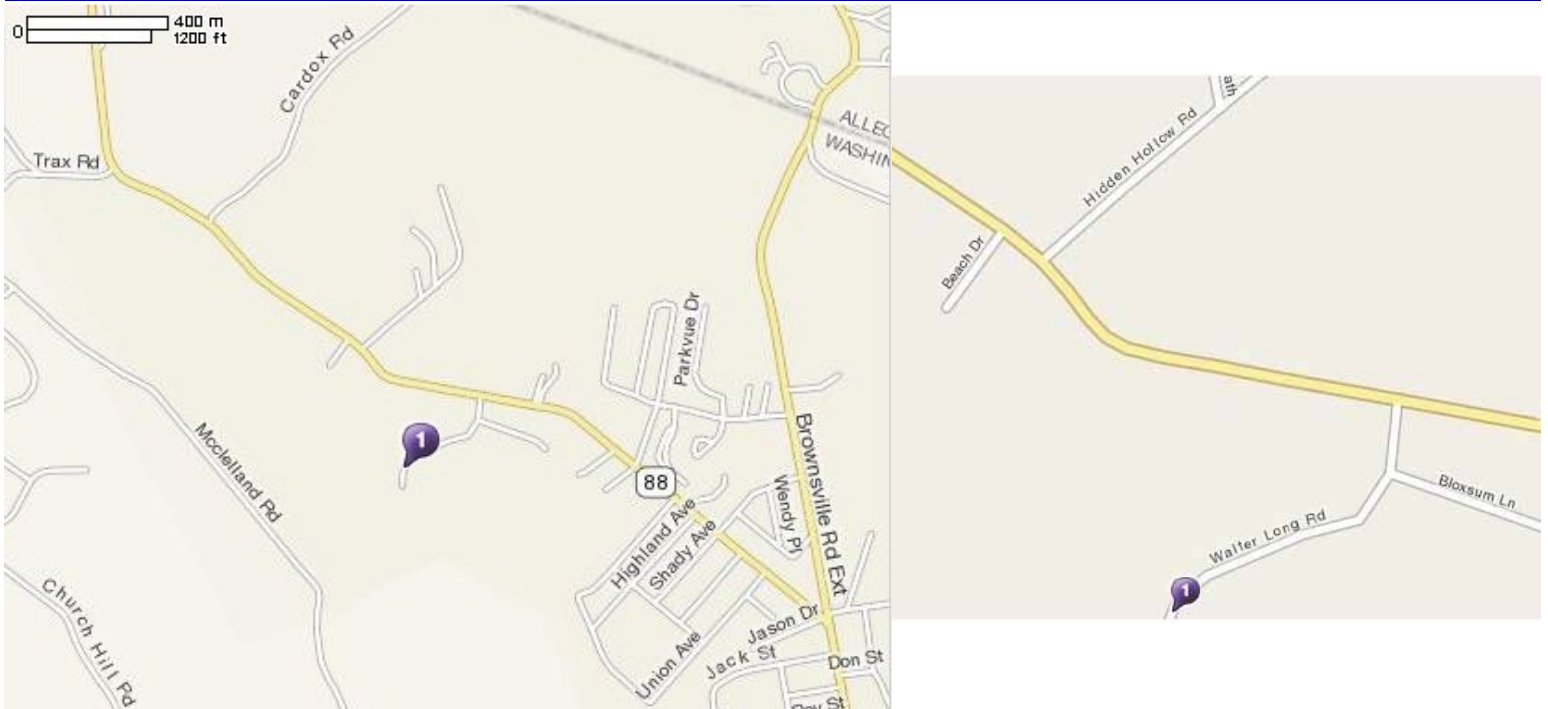
Dues subject to change without notice

Name & Call Sign: _____

Name & Call Sign: _____

Name & Call Sign: _____

Directions to Crossroads Ministries Church



Take Library Road / State Route 88 to Walter Long Road (just past Mineral Beach & The Beach House), North of Finleyville. Turn onto Walter Long Road, follow it back to the church (which should be visible from the road).

The *WASH*Rag

Wireless Association of South Hills, Inc.
Ron Notarius W3WN, Editor
3395 Rosewood Drive
Castle Shannon, PA 15234-2546



N3SH / WA3SH
NP2SH/B

www.n3sh.org
www.washarc.org
www.washrag.info

