



WASHRAGTM

TM



VOLUME 16 ISSUE 10
OCTOBER 2014

Wireless Association of South Hills

New Meeting Place!
New Meeting Date!
See Page 3 for Details

N3SH WA3SH NP2SH/B www.n3sh.org www.washarc.org



WASH RAG™



VOLUME 16 ISSUE 10

OCTOBER 2014

Next Monthly Meeting: Thursday, October 2nd, 2014

The next meeting of the **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.** will be on **Thursday, October 2nd 2014**, in the Conference Room at the **St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park, by South Hills Village & Village Square** (map on the back page). The room is available at 6:30 PM. The meeting will be starting at 7:00 PM. See you there!

Cover Photo: Everyone digging in to the annual Club Picnic on September 14th, at Outlook Grove in South Park. Our annual Fox Hunt followed, and we're happy to report, no one wandered up by the South Park High School this year!

Photo courtesy of & © Copyright 2014 Ron Notarius W3WN

WASH 2014 OFFICERS

EXECUTIVE COMMITTEE:

President	Carol Danko KB3GMN
VP / Secretary	Ben Williams KB3ERQ
VP / Treasurer	Mark Stabryla N3RDV

AND WE COULDN'T DO IT WITHOUT:

N3SH Trustee	Larry Comden K3VX
WA3SH Trustee	Rich Danko N3SBF
NP2SH Trustee	Paul Jordan NP2JF
N3SH WA3SH NP2SH/B QSL Manager	Ron Notarius W3WN
NP2SH 2009 QSL Manager	Carl Schroeder K9CS
VE Team Liaison	Ron Notarius W3WN
Webmaster	Sean Sleeman N3NWR
Asst. Webmaster	Ben Williams KB3ERQ
Quartermaster	Harold Rosenberger K3HCR
WASH FM Net Manager	Glen Roberts KE7FD
WASHfest 2015 Committee	Carol Danko KB3GMN, Chairman
	Bill Hill W3WH, Co-Chair
Activities & Operating Events	Rick Bell KB3IAC
Ways & Means	Carol Danko KB3GMN
WASH 2M Contest Chair	Ron Notarius W3WN
Field Day 2015 Coordinators	Larry Comden K3VX
	Rick Bell KB3IAC

CLUB-AFFILIATED REPEATERS, BEACONS, & DIGIPEATERS:

Mt. Lebanon	N3SH / R	146.955 MHz (-)	PL 131.8
North Side	N3SH / 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 2014 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 or w3wn at arrl dot net**

"The WASHRag", **"The Mariner"**, **SHARCfest**, **South Hills Hamfest**, **WASHfest**, **WASHfest 2015**, **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 & operators of both the N3SH/R Repeaters 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 October 16th

The Next WASH VE exam sessions will be **Thursday, October 16th, 2014, 7:00 PM**, at **WPXI TV Community Room**, 4145 Evergreen Road, Pittsburgh, PA. Talk-in on the 146.955 MHz and 443.650 MHz repeaters. All examiners are ARRL VEC affiliated.

Walk-ins are welcome, although, **pre-registration is preferred** to ensure that we have tests and other materials available for all candidates. If you plan on attending the test session, please contact VE Team Liaison Ron Notarius W3WN:

Telephone (412) 572-6723 or E-Mail: w3wn@n3sh.org

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)

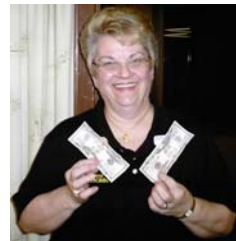
Check or Cash in the amount of **\$15.00** (payable to: ARRL VEC)

Future test dates: February 22nd, 2015

Location: **WASHFest 2015**

Carol's Comments

As you all know last month's meeting was held at South Park. I believe every one had a nice time. It was a combination meeting/picnic/Fox hunt. The food was good, the meeting was short and the Fox hunt worked out well. Thanks to Rick and Jan for putting the hut together. It is always nice to spend time with our members and their families.



Hopefully every one knows that **our next meeting will be held this Thursday, October 2nd, 2014**. I will not be able to attend this meeting, Bill W3WH will be your host.

The meeting will start at 7:00 pm. It will be held at St. Clair Hospital Outpatient Center located at 2000 Oxford Drive, Bethel Park, across from South Hills Village, in the conference room.

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

Actor Tim Allen, whose character holds the fictional call KAØXTT on his ABC TV show "Last Man Standing" has gotten licensed for real.

Under his real name, Timothy Alan Dick, he became KK6OTD on September 4th.

The ARRL reports that over 2 dozen members of the show's crew have been "inspired" to get their own Amateur Radio licenses. Congrats Tim!

Thanks to the efforts of Rick Bell KB3IAC, and Venard Campbell from St. Clair Hospital, **our new meeting location is** the Conference Room at the **St. Clair Hospital Outpatient Center**, 2000 Oxford Road, Bethel Park, adjacent to Village Square, across Ft. Couch Road from South Hills Village Mall. Maps are located on the last page.

The room is available starting at 6:30 PM, the meeting will start at 7 PM.

Due to prior scheduling commitments, we will be meeting on the **FIRST Thursday** of the month for the remainder of the year. 2015 scheduling will be posted on the WASH Web Site once it is available.

Saturday, September 28th was a cool, crisp early Autumn morning — sure seems strange to be saying that all of a sudden. For some reason, maybe so many patrons recovering from Friday Night High School Football games, it pretty much left **the WASH Breakfast Gang** to their own devices at **Suzie B's**, Route 910 at the intersection of Route 519 at US 19 in Canonsburg (although the crowd was picking up as we were leaving... surely a coincidence!). This month's lonely gatherers included WB4GCS, N3DFK, N3FB, KB3GMU, N3IDH and W3WN. Morning topics covers software issues, phone calls from work at 1 AM, "Better Living through Chemistry," tower lights replacement issues, heat transfer and fluid flow, pet peeves, "he's in the Army now!," Pa QSO plans for Frank & Randy, where's Randy?, "he had a summer job building the pyramids," ratings spikes, taking "stupid pills" during cold weather, Snowmaggodon, running a generator at home, car block heaters for North Dakota winters, B-52's and Tiger Teams, Windows 8 vs. Linux vs. Windows 9... and quite a bit more.

Our next gathering will be on Saturday, October 26th, as usual at **Suzie B's**, Route 910 at the intersection of Route 519 at 19, Canonsburg. Our "usual" tables will be reserved, but please let Jim WB4GCS know ahead of time. See you there?

As noted above, the good news is that we received approval to **move our meetings** to the St. Clair Hospital Outpatient Center in Bethel Park. Unfortunately, due to prior commitments of the room, we have to move our meetings to the first Thursday of the month for the foreseeable future. The final approvals came through fairly late, so we realize that this will be a problem for some members. If this is a problem, please accept apologies from everyone involved! The good news is, we anticipate that this will be our "permanent" meeting location for the foreseeable future... finally!

It also means that the newsletter is coming out a week early, to try and stay ahead of the club meeting.

We are just a few weeks away from the annual **Pa QSO Party**. Right now, we know of four teams from the club or including club members — N3SBF & KB3GMN in **Clarion**; N3FB & N3ZK in **Forest**; W3WH, K3VX & K3HCR on the **Fulton/Franklin** line, and the N3SH operation from the Heritage BSA facility in **Fayette**. N3SH/FAY needs a few more operators, so if you are interested, please contact Rick KB3IAC as soon as possible!

We're almost out of space, but don't forget that this month's meeting includes **nominations for 2015 WASH Officers**. Up this year are President and Vice President/Secretary. Voting on 2015 club officers will take place at the November meeting. If you are interested in running for office, please be at the October meeting to have your nomination entered, or ask someone who will be there to enter your nomination.

WASHNet 2014 NCS Schedule

10/05/2014	Bill W3WH	11/16/2014	Sean N3NWR
10/12/2014	Larry K3VX	11/23/2014	Fred KB3DCO
10/19/2014	Harold K3HCR	11/30/2014	Glen KE7FD
10/26/2014	Dave N3DFK	12/07/2014	Bob AB3ED
11/02/2014	Carol KB3GMN	12/14/2014	Rick KB3IAC
11/09/2014	Rick KB3IAC	12/21/2014	Larry K3VX
		12/28/2014	Glen KE7FD

Join WASH or Renew your Membership for 2015 Today! Membership Application on Page 15!

Minutes, September 14th Meeting

Ron Notarius W3WN, Acting Secretary, **WASH**

Carol KB3GMN called the meeting to order at 13:32 hours. There were 24 members and guests (including family members) in attendance.

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

Motion to waive reading of the minutes based on the minutes printed in the newsletter by Rick KB3IAC, second by Larry K3VX, passed unanimously.

Committee reports:

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

Secretary (KB3ERQ): No report

VE (W3WN): Next VEC session Thursday, October 16th at WPXI. See newsletter for the details. 2015 VE Schedule to be set.

Repeaters (KB3IAC for N3FB): "They're repeating." Frank wants to get up to look at the UHF site. Still needs some site work done, he needs a day that's not windy.

New cables for the 2M/70cm link are in hand. Cost of hardware should be about \$1000-1500 for the new controller and sundries. Frank may be able to donate some equipment to help lower the costs.

WASHNet (KE7FD): Need more check-ins.

Contests (K3VX): Larry is not aware of all club Pa QSO ops, please let him know. Rick needs more ops for N3SH Fayette from the Heritage BSA. CQ WPX and ARRL Sweepstakes are the next major contests.

WASHFest 2015 (KB3GMU): Carol is working on getting the door prizes. She wants to get something "special" for our 20th hamfest, possibly commemorative pens to all attendees. We have the prize tickets, and are working on the prize donations. 1st Prize will be a Kenwood TS-590S. Carol would like the club to consider buying the Begali key she won at WACOM to use as 2nd prize.

Public Service (KB3IAC for N3IDH): Planning undergoing for regional SET with St. Clair Hospital. Could we connect multiple hospitals together with the club repeaters? We should be getting the CAP surplus VHF repeater within a few days, it is to be picked up from Ft. Indiantown Gap this weekend.

Newsletter (W3WN): It's out.

President's Report (KB3GMN): Officer elections upcoming; nominations in October, elections in November.

Old Business: none

New Business: none

Good of the Order:

- W3WH & KE7FD will be hosting a QRP operating event on September 27th at the Chartiers-Houston Library. Details are in the September newsletter.
- We have a visitor from Japan, a CMU grad. Taiki was formally introduced by Larry K3VX and welcomed by all.
- Christmas Party planning is underway, according to Jan KB3IVX.

Motion to Adjourn by Jim WB4GCS, second by Patty KC4WTT and carried.

Meeting adjourned at 13:57 hours.

Picnic festivities including a Fox Hunt commenced.



WASH Spotlight: Winners



Frank N3FB & Lori KB3GMU took their 1969 Cutlass to the Oldsmobile Car Show in Seven Springs on September 21st, and came away with 2nd Place in Class D (1960-69 Vehicles)

Photos courtesy of & © Copyright 2014 Frank Bobro N3FB

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 **Suzy B's**, Route 910 at the intersection of Route 519 at US 19, 1 mile North of Downtown Canonsburg. 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	KB3GMN	N3FB	WASH FL	WASH OH	Silent Keys
AB3EN	KB3GMP	N3IDH	KA3UPY/M	N8DPW	
AB3NM	KB3GMU	N3NWR	W4ZE	WASH SC	AB3KA
AB3PJ	KB3IAC	N3OVO	WASH GA	N3RNK	K3EED
AC4KU	KB3IVX	N3RDV	K3OL	WASH TN	K3LIE
AE3DL	KB3JHR	N3RHT	KB3IJX	KE3XB	KA3NMG
KØLIN	KB3PSB	N3SBF	WASH NE	N3YPB	KB3ENX
K3AIR	KB3WZT	W3LE	NØPEU	WASH TX	KB3FNM
K3GW	KB3YCX	W3RWS	WASH OR	K3LGM	KB3FQT
K3HCR	KB3YKL	W3VFA	NØVLR	Jane Wagner	N3FZ
K3JDS	KC3ANX	W3WH	NØWPV	WASH VI	N3HKQ
K3LGM	KC3BQI	W3WN	KB3NVL	NP2JF	N3KEH
K3SGT	KC4WTT	W4CKR	KB3NVM		N3OBD
K3VX	KE7FD	WB4GCS			N3SKR
KA3ANU	KJ3D	Darryn Sleeman			N3SRC
KA3RXY	N1NCZ				N3ZEL
KA3TWI	N2QIV				N3XFE
KB3DCO	N3BPB				W3ZLK
KB3ERQ	N3DFK				WA3JPP

If your call should be listed here & isn't, please contact Mark N3RDV

Through July 30th, 2014
List compiled by
Mark Stabryla N3RDV, Vice President/Treasurer

2014 /15 WASH Upcoming Events Calendar

Meeting Topics & Other Significant Club Events — Subject to Change

October 2 nd	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park
October 4 th -5 th	California QSO Party	http://www.cqp.org
October 11 th -12 th	Pennsylvania QSO Party	http://www.nittany-arc.net/PAQSO.html
October 16 th	WASH VE Exams	Community Room, WPXI—TV 11
October 19 th	WPRC Meeting, Altoona	http://www.wprcinfo.org
October 20 th – 24 th	ARRL School Club Roundup	http://www.arrl.org
October 25 th – 26 th	CQ WW DX Contest SSB	http://www.cqww.com
November 1 st -3 rd	ARRL Sweepstakes CW	http://www.arrl.org
November 2 nd	WACOM 2014 Hamfest	http://wacomarc.org
November 6 th	WASH Meeting & Annual Elections	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park
November 8 th -9 th	ARRL EME Contest	http://www.arrl.org
November 15 th -17 th	ARRL Sweepstakes SSB	http://www.arrl.org
November 29 th -30 th	CQ WW DX Contest CW	http://www.cqww.com
December 4 th	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park
December 5 th -7 th	ARRL 160 Meter Contest	http://www.arrl.org
December 6 th -7 th	ARRL EME Contest	http://www.arrl.org
December 13 th -14 th	ARRL 10 Meter Contest	http://www.arrl.org
December 21 st	ARRL Rookie Roundup CW	http://www.arrl.org
December 31 st	Straight Key Night	http://www.arrl.org
2015		
January 8 th	WASH Meeting (tentative pending holiday party)	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park
January 10 th	WASH 2 Meter Simplex Contest	http://www.n3sh.org
February 22 nd	20 th Annual WASHFest 2015	Castle Shannon VFD Memorial Hall Library Rd, Route 88, Castle Shannon

"Seen" at the September WASH Meeting & Summer Picnic

Photos courtesy of & © Copyright 2014 Ron Notarius W3WN

KB3IAC, WB4GCS, K3VX, KB3DCO

KB3IVX

K3VX

KB3GMN

KC4WTT

K3SGT

WB4GCS

K3HCR sporting a stylish new WASH Club Jacket

KB3DCO & Patsy

KB3JHR



KB3DCO & Taiki, our visitor from JA (and CMU)

KB3IAC

KB3ERQ

What if they gave an election and nobody came?

Ron Notarius W3WN

This fall will be hosting the elections for three regional ARRL offices: Atlantic Division Director, Atlantic Division Vice-Director, and WPA Section Manager.

With the incumbent WPA SM and Atlantic Division Director stepping aside, for the first time in many years, we should be seeing some new faces in those leadership positions.

But I'm wondering... do any of the candidates running really want the jobs?

In recent years, months prior to the Division elections, I would have had a phone call from Bill Edgar N3LLR formally soliciting my vote & support. That assuming that I had not already spoken at length with him at a local hamfest or other event. Months prior the Section elections, I would have had a long conversation with John Rodgers N3MSE to the same effect, and often a call from Bill as well asking me to support HIS preferred candidate for WPA SM. With both of these fine gentlemen retiring from their positions, I didn't expect exactly the same thing to happen.

But I did expect to hear something.

During the last two WPA SM election cycle, one of the opposition candidates "pressed the flesh" at most spring and summer hamfests. One of them even passed out buttons, pens, and other tsotchkes. Of the three candidates for SM, I've only seen two of them at a hamfest or two; no sign of the third.

I've also received PR pieces from many of the candidates in the past, as have most other WPA ARRL members. Not all have done this, but many have sent out letters asking members for their votes. Sometimes that material is nothing more than the same couple of paragraphs that the ARRL sent out with their election ballots, but at least it was something. Whenever I get this material, I put it in the next possible issue of the newsletter, so that people who will be voting can have some information other than a name. I've personally asked two of the candidates for something. All I've received to date is an endorsement from a Section Manager, urging people to vote for his preference... but nothing from the candidates saying why we should vote for them.

[I have decided not to print that endorsement. Only printing one would imply an endorsement from this newsletter, which is not the case. There is little of substance to indicate WHY someone should vote for this candidate, save that he's a great guy and a great ham, which is purely subjective. More importantly, though, it's not what I requested, and I have to wonder... if this is how this candidate responds to a request for HIS views, well...]

Now, I don't think I'm anyone special. But I would like to think that people read the newsletter and use the information presented to make up their own minds. At least one of those candidates from years ago thought so; he never sent me anything, but chewed me out via email because I printed N3MSE's blurb "unfairly" without including his own.

Also, since the ARRL is in the process of switching to online voting, the materials normally being sent, well, aren't. They may be available on the web site where voting will take place... once voting starts. I don't think it's right, though, that they're not available now. You shouldn't be reading the positions of the people running, for the first time, in the few minutes before casting your vote. That makes the election almost a popularity contest. The winner should be the best candidate for the job — not the most well known, or most recognized name (for or against), or the one everyone likes, or the one with the best picture shown. If you don't know the candidate's positions or anything else about them, how can you effectively know who deserves your vote?

I've asked ARRL Hq. where the statements are online. If I get them prior to deadline, they will be in the newsletter. If not...

These positions are important, but thankless jobs. Anyone willing to take them on has to have a lot of time to devote, a lot of people skills to maneuver around membership egos and disagreements. They have to be able to travel, often on their own nickel, around the section or division, to meet with ARRL members and listen to the concerns brought up — and doing something about it, or intervene with ARRL Hq. on behalf of those members. So if someone has the time, money, and interest to run for these offices & do the job for a few years, more power to them. Personally, I wouldn't want the jobs.

But if someone wants these positions for the title, for the perceived authority, to boost their egos, and the heck with actually doing what the jobs entail... then they are running for the wrong reasons, and they don't deserve our votes. Even if we like them personally.

It is not my intention to insult any of the candidates. Certainly, I would not want the winners for these offices to hold a grudge against the club or me personally.

I am, however, a little disappointed that none of them seem to care enough to tell me, or anyone else, why we should vote for them.



WB4GCS & K3SGT



KB3YCX



N3NWR



Picnic photos courtesy of & © Copyright 2014 Ron Notarius W3WN

Even more photos over on Page 9

QRP to the Library

Bill Hill W3WH

Saturday, September 27th dawned clear and beautiful — actually perfect is the right word for the weather. QRP stations are typically small in terms of their physical size and usually their signal and the gathering of hams for QRP to the library was also small. A total of four people showed up at the Chartiers-Houston Community Library for this event. In attendance were Bill W3WH, Glenn KE7FD, Gary N3NPW and Larry K3VX.

In addition to finding an excuse to spend some more time with ham radio, this event was to try and fine-tune Glen and my efforts for future Summits on the Air Expeditions. At first blush one could say we didn't accomplish anything but on the other hand we actually learned quite a bit and I believe we all had some fun being outside on a beautiful morning.

Our first shot out of a cannon (pun intended) was literally using Glenn's air cannon to launch antenna. Unfortunately his ball stuck in a tree about 50 feet off the ground so we ended up using Larry and Bill's launcher to put a wire up in a tree somewhere around 40 to 50 feet in the air.

The first antenna we tried was a 100 foot long and fed long wire with about eight short radials. I don't think it was the antenna's fault, but we had no luck using Glenn's FT-857D on RTTY. For whatever reason it seemed like no one was hearing us. We then tried Glenn's radio on CW but there must've been a setting glitch which prevented the internal keyer to function.

We then switched to Bill's KX 3 and worked a few stations on CW with the hundred foot wire. Then satisfied that the antenna worked, we switched antennas to a new sloping end fed half wave antenna. This antenna has insulators every half wavelength which can be switched in or out by using jumpers. Therefore you can have a resonant length antenna on every band although it's not instant because you have to let the antenna down and put a jumper in or out depending on your needs. The antenna worked fine. We worked several stations are 40 and 15 including W1 AW /5 in New Mexico on 20 meters. Of course all the contacts were at QRP power levels.

What did we accomplish? Well we learned that RTTY is not the easiest mode to use in the field. More work needs to be done at home to make sure everything is working well. We also learned that end fed sloping wires really do work quite well even at QRP power levels making antenna installations in the field pretty simple. If you have a convenient tree or if not an easily installed push-up mast will work well for a sloping wire. We also had a discussion about how well CW works compared to other modes but we shouldn't give up on anything just because it didn't work the first or second time.

Another thing we may have accomplished is whetting the appetite of Gary N3NPW to leave the inactive roles and become an active ham once again.

All in all it turned out to be three hours well spent and I hope a good time was had by all.

(Pictures courtesy of and © Copyright 2014 Glen Roberts KE7FD)



Get Rid Of That Lossy (Lousy) T-Match

Dale Conrad W6TZI

L-match vs T-match, when properly designed they have about the same insertion loss but the antenna handbook says the L-match is harder to make due to unwieldy capacitance values.

I have read that what you get out of a T-match will be (-1.5 db) 23% less than what you put into it, OR WORSE. The "or worse" scenario is when the two series capacitors have low values, meaning the radio is lightly coupled to the antenna. The radio sees a good match, but much of the power is wasted in the tuner instead of being coupled to the antenna.

Tuning a G5RV type antenna with a MFJ type universal T-match would not be considered a properly designed matching network, specifically on any band where smaller values of series capacitance are needed to acquire a match. This also applies to the majority of all internal and external automatic tuners, as with rare exception, THEY ARE ALL T-MATCHES.

I recently built a 1/4 wave ground mounted vertical for 80 meters and wanted to incorporate a remote tuner at the base of the antenna to resonate the antenna on 40 and 30 meters. This antenna resonates on 80 meters with no tuner on the design frequency of 3.576 MHz with a SWR of 1:1 and a 1.5:1 bandwidth of around 150 kHz.

Not wanting the losses associated with a T-match, I decided to build a remotely tuned L-match for 40 and 30. After some trial and error I came up with a simple matching network that could get a 1:1 match anywhere on 7 - 7.3 MHz and 10.1 - 10.15 MHz using one variable capacitor (the shunt element) and band-switching the coil (the series element) by using one relay for each band. To remotely rotate the capacitor I used a 3 RPM gear-reduced motor and two relays for FWD and REV control of the DC motor.

Tuned the antenna on 7.076 MHz to a 1:1 match using the remotely controlled capacitor, and then switched the tuner to 30 meters and found that the SWR on 10.138 MHz was already a 1:1 match with no further tuning needed. Needless to say I was very happy about that! Essentially get 80-40-30 meters with no tuning (only band switching) on the design frequencies of 3.576, 7.076, and 10.138 MHz.

I was so happy that I bought a MFJ-948 antenna tuner for the purpose of converting it to a L-match to see how well it worked with my 80 meter ladder line-fed dipole. Well it worked amazingly well, resonating my dipole from 80 - 10 meters without having to modify any of the taps on the coil or the tap switch. The two capacitors were wired in parallel for the extra capacitance needed for 40 and 80 meters. I get 1.3:1 SWR or better on all bands with my G5RV type antenna, but what is truly amazing is that since the antenna is resonated with NO SERIES CAPACITORS I could hear what a GREAT RECEIVE antenna it really is. Yeah, for the FIRST TIME I could hear everything my antenna was receiving without the 23% OR WORSE loss of the T-match I used to use. Loss is a double-edged sword folks, cutting both TX AND RX.

I have a 20 meter 1/4 wave ground plane antenna that has a 1.2:1 match at 14.076 kHz, but it would be nice to work this antenna on 10,12,15, and 17 meters also, wouldn't it? Soooo I bought ANOTHER MFJ-948 and converted it to a L-match. Replaced its overly large coil with a smaller one and only needed one of the tuning capacitors to get the range needed for a good match on these higher bands. Could also get this antenna to tune well on 40 and 30 meters, but I have a better vertical antenna for those bands!

To recap, the L-match is simple to make and has no air gaps, just solid wire from the radio to the antenna. Great for ladder line-fed dipoles (G5RV) or any other coax-fed antenna that requires a tuner.

Yet More "Scene" Photos

continued from Page 7 Photos courtesy of and © Copyright 2014 Ron Notarius W3WN



FT4TA Aims To take Tromelin Off the Top 10 Most Wanted Lists

American Radio Relay League www.arrl.org

September 24th, 2014 — The [FT4TA DXpedition](http://www.ft4ta.org) to Tromelin Island in the Indian Ocean is in its final stages of preparation, and in less than 1 month the six-man team will depart. Operation is scheduled to commence on October 30th and continue until November 10th. The DXpedition is the recipient of an ARRL [Colvin Award](http://www.arrl.org) grant.

"I and about 10,000 of your 'best friends' will be tuned up and listening for you," Warren Croke, NW4C, quipped on the [Tromelin2014](http://www.tromelin2014.com) Facebook page. "Be safe and have fun."

The FT4TA DXpedition said its operation is a chance to get Tromelin Island off the Top 10 most-wanted lists. Right now, it's number 8 (mixed) on the [ClubLog DXCC Most Wanted List](http://www.clublog.org). A small French possession in the Indian Ocean some 280 miles east of Madagascar, Tromelin has not been activated on Amateur Radio since 2000, when a four-person team logged some 50,000 contacts using the somewhat unwieldy call sign of FR/F6KDF/T. No one has been authorized to operate from the island since. Tromelin Island is administered as part of the French Southern and Antarctic Lands (abbreviated in French as "TAAF").

The DXpedition has announced plans to be active on 160 through 10 meters on CW, SSB, and RTTY. "Openings toward the USA and Japan are short," the DXpedition has advised. "We will do our utmost to give this entity to worldwide deserving hams while openings last."

The DXpedition has said that its operators will take into consideration information from their pilot stations regarding propagation and feedback from the Amateur Radio Community.

Operators are expected to concentrate on "the higher-volume bands," but will give a second priority to the low bands. Logs will be updated daily to ClubLog via a satellite connection, but there will be no leader board. An as-yet-unreleased postage stamp commemorating the 60th anniversary of the first Tromelin Island Amateur Radio operation will be applied to all direct, OQRS, or donor-requested QSL cards.

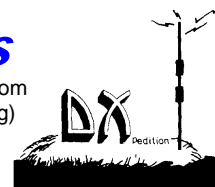
In June, the FT4TA team shipped three boxes of gear to Réunion Island, and the DXpedition team members will fly between there and Tromelin.

"Our operators will make their best to exploit the propagation windows towards certain areas," a pre-departure news release said, asking for the cooperation of everyone. "Let's hope that our equipment and effort will provide good results."



DX News Briefs

The Perseverance DX Group is planning to be QRV from the Chesterfield Islands OC-176 as **TX3X** (call pending) late in 2015. They expect to have a team of 12 operators who will be QRV for up to 12 days. More information at <http://chesterfield2015.pdxq.net/>, or contact K5GS or HA5AO. — Team Chesterfield 2015



The upcoming **VKØEK** Heard Island DXpedition reports that they have made "considerable progress" and some "significant changes in the plan". A different ship will be used, it will depart from a different port in Australia, and they may make a side trip to Kerguelen during the 21 days of the stay. Most importantly, it is expected that radio propagation from Heard will be "optimum" in November, instead of January 2015 as previously announced. For more information, contact the team leader at schmieder@cordell.org — KK6EK/Cordell Expeditions

LZ1GC will be QRV as **C21GC** 29 September – 14 October, 160 – 10, CW & SSB with some RTTY. More information at <http://www.c21gc.com/>. QSL via ClubLog or LZ1GC – LZ1GC

VK6MH will be QRV as **VKØMH** from Macquarie Island AN-005 for a 6 month tour of duty. His ship leaves Tasmania on 21 October, he is not expected to be QRV before mid November. More info pending — GM3WOJ

VK4WR and VK4FI will be QRV as **E6RQ** and **E6SG** 2 – 9 November, 40 – 10. QSL both calls via VK4FI – DX World

DL5XL will be returning to Neumayer Station, AN, and QRV as time permits as **DP1POL** early December 2014 – late February 2015. Mainly on CW, with some SSB & RTTY. QSL via DL1ZBO – DX World

"**VK6ISL** was an IOTA expedition, directed at giving everyone an opportunity to chase a brand new island group, the last one to be activated in Australia. One contact was sufficient to claim it as a credit, but many stations transformed this event into an unofficial leaderboard contest. Consequently, the members of "Team Sandy" would like to express their disappointment with the very large number of stations who disregarded our specific requests to restrain their number of QSOs and particularly avoid CW and SSB contacts on the same band.

Instead, many stations made up to 11 QSOs with us on 7 bands, cluttering the pile-ups, leading to hundreds or even thousands of unnecessary contacts, thus indirectly preventing more individual stations to contact this IOTA reference, which won't be likely back on the air for some time. Amazingly, our efforts in trying to overcome this situation by looking from time to time for new callsigns only has been criticized on the DX Cluster.

We are determined to prevent the repeat of a similar situation in the future. As such, we will analyse the benefits of establishing a limit for the total number of QSOs one station can have with the team, confirming a maximum of one contact for the bureau requests, proposing a cost increase for direct requests of multiple QSOs, etc." — Team Sandy, VK6ISL

Has Roadway found the tower yet?

From The Great Race, September 28th, 2014. Bob AB3ED and Bob NU3Q, operating as Net Control Station for the City Parks net.

Photo courtesy of Bob & Lana Timmons, and © Copyright 2014 Lana Timmons



QSL Routes

3B8/HB9ARY via NI5DX -- JA1HGY	E51NOU via N7OU -- N7OU
4O3A via VE3EXY -- KB8NW	ED9Z via EA5KB -- EA9LZ
5IØDX via ISØAGY -- JA1HGY	GJØVVK via DJ8NK -- JA1HGY
5WØXH via KD6XH -- KD6XH	J79F via SP2FUD -- SP9FIH
7Q7VW via DJ2WV -- DK2WV	J79L via SP9FIH -- SP9FIH
9G5ZZ via DL1CW -- JA1HGY	J79X via SP9FIH -- SP9FIH
A52IVU via JA3IVU -- JA1HGY	OJØAM via OH2BH -- OH2BH
C6AYS via G3SWH -- G3SWH	P49X via WØYK -- KB8NW
CO6LC via IZ1GDB -- CO6LC	V26K via AA3B -- AA3B
CO8JY via KU9C -- KB8NW	VK9AN via N7QT -- VK9AN
CR3L via DJ6QT -- CR3L	VP2ERM via K3TRM -- JA1HGY
DU7/N7ET via KB7NSN -- W3AWU	YBØAZ via W4JS -- W4JS
E3ØFB via JH1AGY -- KB8NW	YF1AR/5 via N2OO -- W3AWU
E41MT via KB9GSY -- KB8NW	YF1AR/6 via N2OO -- W3AWU
E41WT via KB9GSY -- KB8NW	ZD8N via G3ZVW -- JA1HGY

Thanks to the NJDXA DX News & DX Chat Reflectors, the DX-QSL Reflector, 425 DX News, OPDX News, DX World.Net, ICPO Bulletin, & ARRL DX Bulletin for our DX News information. Thanks also to Bill Moore NC1L / ARRL DXCC Desk, & Bernie McClenny 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

The **WASHRag** Masthead is courtesy of Jeff Murray K1NSS creator of DASHToons & Dash the Dog Faced Ham!!

Find the online cartoons and stories of Dash the Dogfaced Ham & more at www.dashtoons.com!

Shop for Dash items at his online store on Café Press, www.cafepress.com/shopdash



The National Telecommunications Agency of Brazil (**Anatel** in Portuguese) will propose new Amateur Service allocation from 5275 to 5450 kHz in the next meeting of the PCC.II (Permanent Consultative Committee II: Radiocommunications) of **CITEL** (Inter-American Telecommunication Commission), from September 29 to October 4, 2014 at Merida City, Mexico.

The new allocation in secondary status for Amateur Service around 5300 kHz has been discussed since 2012 as agenda item 1.4 of the World Radiocommunication Conference 2015 (WRC-15), while since 2002 the band is subject of various authorized experimental transmissions did by amateurs around the world.

The decision occurred last September 11, 2014 at the Brazilian Communications Commissions (CBC in Portuguese), a consultative committee for WRC-15 subjects lead by Anatel and formed by government, industry and representatives of the society.

LABRE, the Brazilian Amateur Radio Association, is one of the very active members of CBC through your ad-hoc working group devoted to Spectrum Defense and Management (**GDE** in Portuguese). The LABRE suggestions were approved at CBC and will constitute a Preliminary Proposal for CITEL.

The 5275-5450 kHz contiguous secondary allocation is the widest segment recently suggested by compatibility and sharing studies at ITU, but the Preliminary Proposal will also consider national adaptations since it will include a footnote where is described that each national administration can provide additional constraints to provide further compatibility with existed services, considering their national and local spectrum realities, for example taking effective by their national regulations lower power outputs levels, selections of specific modes, adoptions of restricted frequency segments or channels, etc.

Despite **Canada** and Brazil being the first countries in Region 2 to officially support Amateur Service around 5300 MHz, several others already have authorized domestic allocations considering past successful experiments. LABRE is working with Anatel to provide experimental licensees and also join the international activities and keep studying the spectrum.

The GDE working group of LABRE not only involves spectrum management field, but also radio monitoring and national EMC rulemaking process.

LABRE Sao Paulo and volunteers are regularly supporters for keep the institutional activities. For more information visit: www.radioamadores.org

— GDE/LABRE courtesy of Flavio Archangelo PY2ZX



Courtesy of the American Radio Relay League

Newington, CT, September 11th, 2014 — It does not appear that US radio amateurs will gain a new band at 70 MHz anytime soon. The FCC has denied a *Petition for Rule Making* filed earlier this year by Glen E. Zook, K9STH, of Richardson, Texas, seeking to add a 4 meter band to Amateur Radio's inventory of VHF allocations. Zook had floated the proposal in 2010, and his petition was dated January 27, 2010, but the FCC said it did not receive it until last May. Zook asked the Commission to allocate 70.0 to 70.5 MHz to Amateur Radio because, Zook's *Petition* asserted, "the recent migration of broadcast television stations to primarily UHF frequencies basically eliminates any probable interference to television channels 4 or 5." VHF TV channel 4 occupies 66 to 72 MHz.

"Because the Zook *Petition* is based on a faulty premise — that broadcasting use within the 70.0-70.5 MHz band will diminish or cease — its argument that amateur band users could operate without causing harmful interference to any existing service lacks sufficient support to warrant our further consideration, The FCC said in a September 17 *Order* denying the *Petition*.

The FCC pointed out that three full-power TV stations, 110 low-power TV stations and translators, and six Class A TV station now occupy channel 4 in the US. In addition, the Commission, through an "ongoing incentive auction proceeding," is attempting to "repurpose" a portion of television broadcast spectrum for broadband operations and "repack the remaining TV stations into a smaller frequency range." Under certain scenarios, the FCC said, channel 4 could become even more heavily populated by broadcast users in the future.

"Given the complexity of the of the incentive auction proceeding, we also conclude that it would not serve the public interest to further complicate that unique undertaking by proposing to introduce a new service into the broadcasting frequencies at this time," the FCC said. The *Order* noted that fixed and mobile services will continue to operate in the frequencies between channels 4 and 5 (76 to 82 MHz).

As Zook noted in his petition, a 4 meter band has been authorized for Amateur Radio use in the UK and in a number of other European and African countries. The FCC said that since it wasn't planning to grant Zook's petition, it declined to evaluate his claims "regarding the benefits that amateurs would derive from use of the band." Zook's original proposal asked to have the FCC open up the allocation to all classes of Amateur Radio licensees.

Brian Justin, WA1ZMS, operated an Experimental Service beacon transmitter from Virginia on 70.005 MHz under the call sign WE9XFT. At the time his Experimental license was granted in 2010, Justin told the ARRL that he was not seeking to have the FCC create a 4 meter band. "This beacon is purely for radio science for use as an E-skip detection device," he explained.

The new Amateur Service vanity call sign regulatory fee of \$21.40 became effective on September 11. The FCC released a *Report and Order and Further Notice of Proposed Rulemaking (R&O)* on August 29, in which it recalculated the fee to \$21.40 for the 10-year license term. The \$5.30 increase represents the largest vanity fee hike in many years. In past years, new vanity fees did not become effective until 30 days after their publication in *The Federal Register*, which occurred on September 11.

The FCC reported there were 11,500 "payment units" in FY 2014, and that the vanity program generated an estimated \$230,230 in FY 2013 revenue. The Commission estimated that it would collect nearly \$246,100 in FY 2014 vanity call sign fees.

The vanity call sign regulatory fee is payable when applying for a new vanity call sign or when renewing any vanity call sign designated as "HV" in the FCC's ULS database.

As of October 1, 2013, the Commission no longer accepts checks — including cashier's checks — for the payment of regulatory fees. All payments must now be made by online ACH payment, online credit card, or via wire transfer. Any other form of payment will be rejected and returned to the applicant.

The FCC Enforcement Bureau has released *Warning Notice* letters it sent in July to two radio amateur, advising them that it monitored transmissions in which they failed to identify properly. The Bureau *posted* the correspondence earlier this month on its Amateur Radio Service Enforcement Actions web page. The two notices from FCC Enforcement Bureau Special Counsel Laura L. Smith, both dated July 21, contain essentially the same language.

In a *Warning Notice* to Gary E. Davis, W1IT, of Inman, South Carolina, Smith told Davis that he was monitored on July 15 and 16 at the FCC's High Frequency Direction Finding Center (HFDFC) in

Continued on Page 12

WACOM HAMFEST 2014

Washington County Fairgrounds

2151 North Main Street, Washington PA

Sunday, November 2nd

8:00 AM to 3:00 PM

Setup at 6:30 AM

Talk-In on 146.790 (No PL)



First Prize:
Second Prize:
Third Prize:

Ameritron 811-H HF Amplifier
Flat Screen Hi-Definition TV
Yaesu FT-8800 Dual Band Mobile

VE Testing at 10:00 AM

Black Box:

What is it? It's a Mystery!

— Only 50 Tickets Sold! —

iPad Drawing:

— Only 2000 Tickets Sold! —

Main Prize Drawing at 1 PM

Winner Need Not Be Present To Win

Check www.wacomarc.org for Updates

Vendors contact:

Bud Plants N3TIR bud@n3tir.com 724-350-6745

WACOM, c/o Norma Plants N3YJJ, 236 Chambers Ridge Rd, West Alexandria PA 15376

As I have traveled around the country from state to state in our RV I like so many others noticed how the repeaters are for the most part useless.

So why not use simplex? Many times I noticed a VHF antenna on a car traveling down the road, but not knowing how to contact the person there goes a lost contact and maybe a life long friend to be.

So here is my solution: why not go back to the beginning like we used to do and monitor 146.52.

If we had a manufacture design a small voice interface between the mic and the rig that would announce every few seconds or so my call "K7PE listing on 52", then when replying to a call the mic would shut the device off to continue the QSO. After the QSO a double click on the mic would reset the device.

There may be something out there although I'm not aware of it. What do you folks think?

— 73 Bob Hopkins K7PE

A Wisconsin radio amateur lost his life on September 16 as he was performing maintenance on the 100 foot tower of a fellow ham.

Killed in the fall was 59-year-old James G. Linstedt W9ZUC, of Eau Claire, who succumbed to injuries sustained after he fell 95 feet from a tower owned by Ronald Anderson W9RMA, in Eagle Point, just outside of Chippewa Falls, on the shores of Lake Wissota. Linstedt was said to have been an experienced climber. Although he had been wearing an over-the-shoulder safety harness, he apparently had failed to secure himself to the tower before the mishap occurred. Anderson, a former Chippewa County Sheriff, called authorities promptly.

Chippewa County Sheriff James Kowalczyk told the [Leader-Telegram newspaper](#) that Linstedt was wearing safety equipment, but did not use it. "When we use it for years, we get a little lax...", the newspaper quoted Kowalczyk as saying. "If he had used it, we wouldn't be investigating an accidental death."

Kowalczyk said Linstedt had been strapped in before moving 10 feet up the tower, apparently without securing himself.

An active radio amateur, Linstedt was a member of the Chippewa Valley Amateur Radio Club and once served as the club's president.

Thanks to John Bigley, N7UR/Nevada Amateur Radio Newswire <http://www.nevadahamradio.com/>; media accounts

— ARRL Letter

FCC News Continued from Page 11

Maryland, failing to properly identify while operating on 7.185 MHz. "[Y]ou were heard by a Commission employee operating your Amateur Radio station for 20 minutes without identifying in a timely manner," Smith wrote. "The Commission employee used direction-finding equipment and confirmed the transmissions were coming from your location."

Smith pointed out that Section 97.119(a) of the Amateur Service Rules requires each amateur station to "transmit its assigned call sign on its transmitting channel at the end of each communication, and at least every 10 minutes during a communication."

In a nearly identically worded [Warning Notice](#) to John J. Krajewski, KB3MZQ, of Newark, Delaware, Smith said the HFDFC also had monitored transmissions by him on July 15 and 16, on 7.1 85 MHz, in which he failed to identify properly.

Smith said the FCC had "recorded the offending transmissions" in both instances and offered to make copies available to Davis and Krajewski. She further advised Davis and Krajewski that recurring "operation of this type" after receipt of the warning letters, could subject them to "severe penalties, including license revocation, monetary forfeiture (fines), or a modification proceeding to restrict the frequencies upon which you may operate."

In 2006, in response to a *Petition for Rule Making*, the FCC declined to modify its Amateur Service station identification rules. The petition received some 100 comments. In dismissing the petition the following year, the FCC concluded that the changes requested were "neither necessary nor supported by the Amateur Radio community," and that the failure-to-identify problem "would be better addressed by enforcement of the present rule, rather than a rule change."



WIRELESS ASSOCIATION OF SOUTH HILLS, INC.

Membership Application/Renewal for 2015



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

(check quarter _____) →
(check one) ↓

	<input type="checkbox"/> 1st Qtr Jan-Mar	<input type="checkbox"/> 2nd Qtr Apr-Jun	<input type="checkbox"/> 3rd Qtr Jul-Sept	<input type="checkbox"/> 4th Qtr Oct-Dec
<input type="checkbox"/> (F1) Full Membership:	\$20.00	\$15.00	\$10.00	\$5.00
<input type="checkbox"/> (F2) Full Membership < 18 or > 65 yrs of age:	\$10.00	\$7.50	\$5.00	\$2.50
<input type="checkbox"/> (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: _____

Address: _____

City, State: _____

Home Phone: _____

Email Address: _____

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]

Signature: _____

Call Sign: _____

License Class: _____

Expires On: _____

Work Phone: _____

Birthday: _____

ARRL Member? ☐ Yes ☐ No Family ARRL Member? ☐ Yes ☐ No

Date: _____

Amount Enclosed: \$ _____

N3RDV has requested that 2015 membership requests and renewals include an application so that his information is up to date

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: _____

Address: _____

City, State, ZIP: _____

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)

Dues subject to change without notice

Call Sign: _____

Date of Birth: _____

Total Enclosed: \$ _____

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

Name & Call Sign: _____

Name & Call Sign: _____

Name & Call Sign: _____

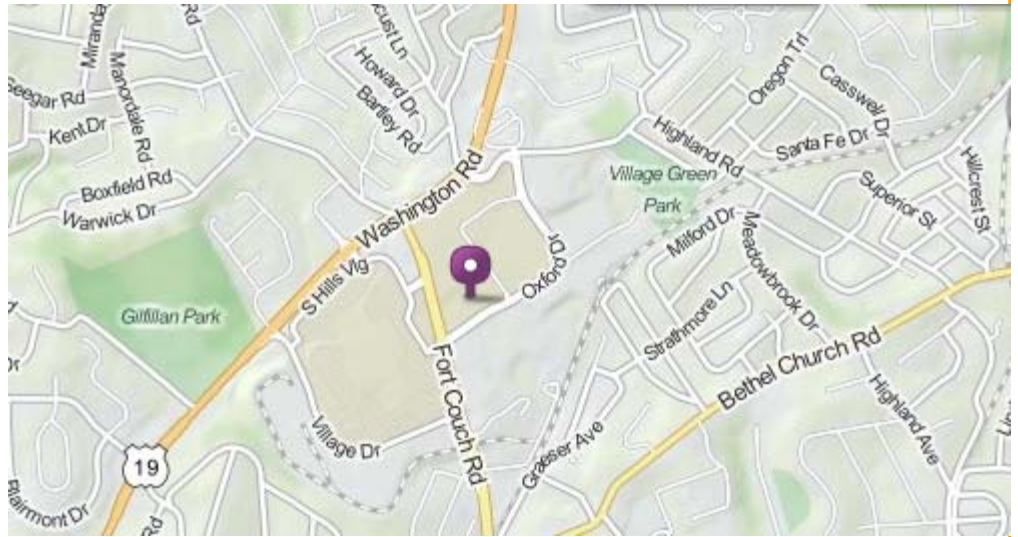
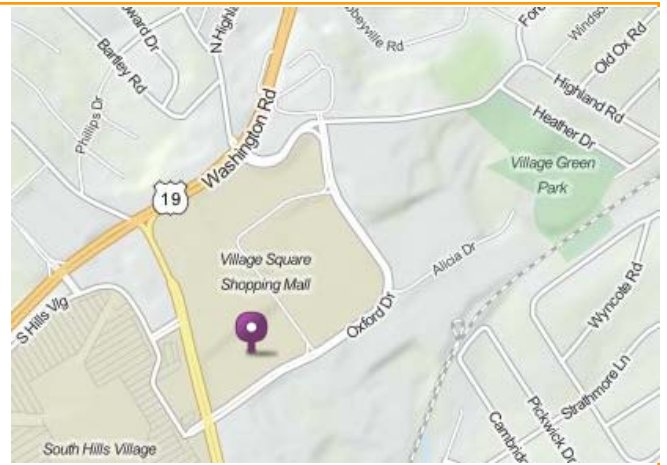


New WASH Meeting Location

St. Clair Hospital Outpatient Center Conference Room

2000 Oxford Drive, Bethel Park PA 15102

Adjacent to Village Square Mall, across Ft. Couch Road from
South Hills Village Mall, just off of US Route 19



The WASHRag

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

