

# WASHRAG<sup>TM</sup>

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VOLUME 24 Issue 10  
OCTOBER 2022

Wireless Association of South Hills

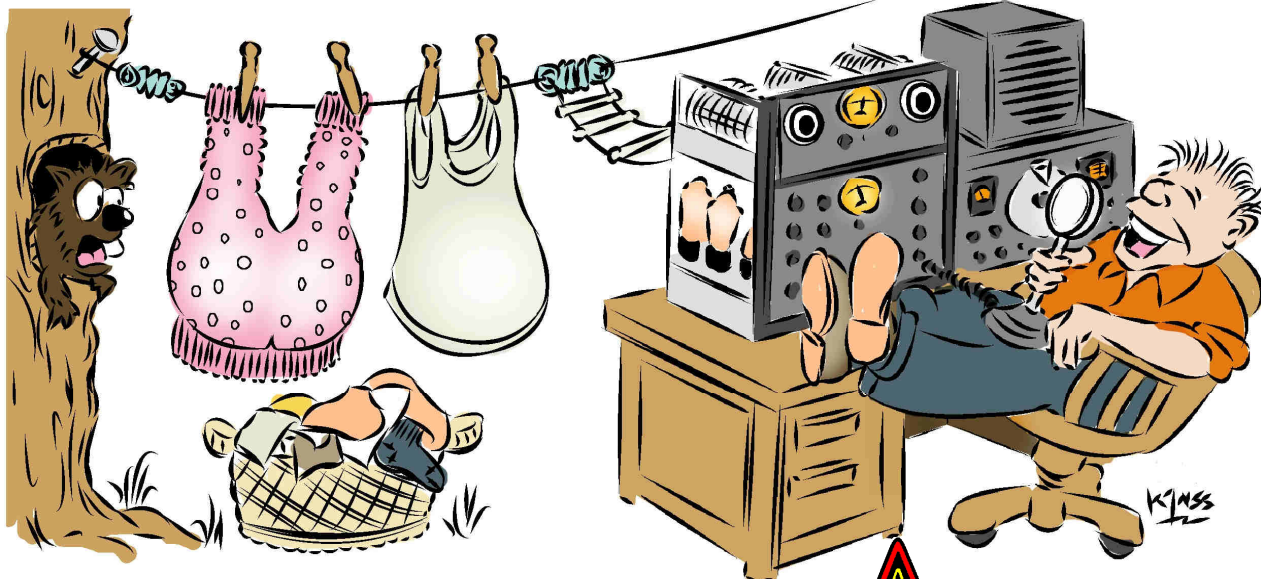
N3SH WA3SH NP2SH/B

[www.n3sh.org](http://www.n3sh.org)





# Wireless Association of South Hills



## WASHRAG™



VOLUME 24 ISSUE 10

OCTOBER 2022

### Next Monthly Meeting: Thursday, October 6<sup>th</sup>, 2022

The next scheduled meeting of the WIRELESS ASSOCIATION OF SOUTH HILLS, INC. will be on **Thursday, October 6<sup>th</sup>, 2022**, starting at 7 PM, at **PANERA BREAD South Park Shops**, 5243 Library Road, Bethel Park PA 15102

Topics Include: Pa QSO, Field Day 2023, **WASHFest 2023**, **WASH** 2023 planning, and more.

See you there!

Cover: Working on setting up the Tower Trailer during last month's Field Day testing/demonstration at Babcock Grove, South Park. Cover Photo courtesy of & © 2022 Bill Hill W3WH

## WASH 2022 OFFICERS

### EXECUTIVE COMMITTEE:

President	Curtis Turner KB3CMT
VP / Secretary	Nathan Suehr KC3GMM
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	Grant Olson KC3MLC
Webmaster	Curtis Turner KB3CMT
Quartermaster	Harold Rosenberger K3HCR
WASH FM Net Manager	Chuck Bihun KC3ELA
WASHFest 2022 Committee	Glenn Roberts KE7FD, Co-Chair
	Bill Hill W3WH, Co-Chair
	Paul Lusardi N0VLR, Co-Chair
Activities & Operating Events	Rick Bell KB3IAC
Ways & Means	Carol Danko KB3GMN
WASH 2M Contest Chair	Chuck Bihun KC3ELA
Field Day 2022 Coordinator	Glen Roberts KE7FD

### 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 **Monday** Night, 8:00 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)**, a 501.C.3 not for profit organization.

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Editor & Publisher: Ron Notarius W3WN

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Ron Notarius W3WN  
3395 Rosewood Drive, Castle Shannon, PA 15234-2546  
e-mail: [newsletter@n3sh.org](mailto:newsletter@n3sh.org) or [w3wn@arrl.net](mailto:w3wn@arrl.net)

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The **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.** was founded on August 23<sup>rd</sup>, 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 TBA**

The Next WASH VE exam session will be on **Saturday, September 24<sup>th</sup>, 2022, 12:00 Noon**, at **Sunset Hills Grove, South Park**, 100 Acres Drive at Texas Road, South Park Township. Talk-in on the 146.955 MHz repeater. All examiners are ARRL VEC affiliated.

**Pre-registration is encouraged. Walk-ins taken on a space/time available basis.**

If you plan on attending the test session, please contact VE Team Liason Grant Olson KC3MLC: [kgo@grant-olson.net](mailto:kgo@grant-olson.net)

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 in the amount of \$15.00 (payable to: ARRL VEC)

Note that the FCC now only accepts FRNs as identification numbers. If you don't have an FRN, please create one in advance at <https://apps.fcc.gov/coresWeb/publicHome.do>

Future test dates: To Be Determined

### ***Curtis's Reflections***



Fall is in the air which means PA QSO party and warm campfires. I hope everyone has plans to participate in the PA QSO, and if not then I would question as to why? The PAQP is one of the more enjoyable operating events of the year and a perfect time to dip your toes in the water and make a few contacts around the commonwealth.

Otherwise, I hope everyone is well and that those 160m antennas are all fixed up and ready for a prime top band season.

Hope to you your smiling faces at the meeting!

— 73, Curtis Turner KB3CMT

President, WIRELESS ASSOCIATION OF SOUTH HILLS, Inc.  
N3SH / WA3SH / NP2SH

According to an email from John Henry KI4JPL, Dishtronix has completed the move of Ten Tec from Sevierville, TN to Dayton, OH as of the end of September.

There are also indications that Ten Tec now has "99%" of the parts on hand to build a new run each of Omni VII+ and Eagle transceivers at some point in the near future.

***Reminder: The October WASH Meeting will be held at PANERA BREAD in South Park Shops, 5243 Library Road, Bethel Park, starting at 7 PM. Map on the last page. The room is reserved starting at 6:30 PM, for those who wish to grab a bite or a nosh prior to the meeting.***

***(You are under no obligation to buy anything, but it would be appreciated as a "Thank You" to the restaurant for hosting us!)***

***See you there!***

As always, this is the last section of the newsletter assembled, and the hardest (most of the time) to do.

We still haven't heard, as of deadline, anything regarding a 2022 **WACOM Hamfest** this year. Nothing appears to be posted on the web page or public Facebook page. We were really hoping to post some good news... if we learn of something before the end of the month, we'll pass it on directly.

The Fall and Winter contest seasons are upon us! The Salmon Run and California QSO Party have come and gone, and next weekend is, of course ... **The Pennsylvania QSO Party!** Word is that once again, all 67 Counties will be represented, one way or another. Several teams of operators from the Club will be out and about. It is shaping up to be another fun year. Want to participate but don't know how? Check the Pa QSO website, or check with other club members. No doubt someone will be looking for an extra hand to help operate, so if you want to join in, it can be arranged!

And needless to say, **WASHFest** isn't that far behind. Carol KB3GMN is hard at work putting the 2023 event together. First Prize has been picked! She's now looking for other prize suggestions, and is just in the beginning of organizing things. So help and suggestions are very much appreciated. Now is the time!

On a more personal note...

It was **just over 25 years ago** that Greg (then) KQ3DX (Now NB3C) and I were walking around the Butler Hamfest at Roe Airport, expressing to each other some concern about how the club was going. One thing led to another... we wanted to do SOMETHING... and I mentioned that I had edited my college club's newsletter many a year in the past. From that conversation, one thing led to another (including the thought of a semi-serious unofficial effort dubbed "THE MARINADE" because it was half-baked... sorry...) and before you know it, the first "revived" issue of **"THE MARINER"** was out in everyone's hands. And then a few things happened, and the club changed our name, and so did this newsletter. So while we haven't quite hit the anniversary mark for **The WASHRag** under that name, the newsletter itself has just done so. Hard to believe? Yup. So I want to thank everyone who, over the years, have contributed something... article, photos, wisecracks, constructive (and sometimes not so constructive) criticisms.. Whatever. I could not have done this without your support and encouragement.

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

## Minutes, September 1<sup>st</sup> Meeting

Nathan Suehr KC3GMM, Vice President / Secretary, WASH

Call to Order: 19:13. Presiding Officer: Curtis KB3CMT

No guests present.

Pledge of Allegiance, Moment of Silence for Silent Keys and others deserving.

Roll Call.

### Committee Reports:

**Treasurer:** Mark Stabryla, (N3RDV): Report read. Motion to accept by Glen (KE7FD), seconded by Bill (WA3VSS). Carried.

**Secretary:** Nathan Suehr (KC3GMM): No updates to the August minutes. Motion to accept by Bill (W3WH) seconded by Larry (K3VX). Carried.

**Repeaters:** Nathan (KC3GMM) for Frank (N3FB) – Repeating. Frank still needs a contact for St. Clair Hospital.

**WASHNet:** Charles (Chuck) Bihun, III (KC3ELA): All good things. Acceptable level of activity. No net Labor Day.

**Thursday Night Tech Net:** Glen Roberts (KE7FD) No suggestions for topic received yet. Has a couple of topics in mind.

**Public Service:** Mike (WA3PYU): Great Race on Sunday, September 25<sup>th</sup> - Contact NU3Q. Find him on ARES net.

**Newsletter:** Ron (W3WN): Published

**Volunteer Examiners:** Grant Olsen (KC3MLC): VE session September 24<sup>th</sup> noon during field test. One person confirmed. Info to be published to web site.

**Ways & Means** (including Member Contributions): Rich (N3SBF) for Carol (KB3GMN): Things are moving along.

**WASHFest 2023:** Rich (N3SBF) for Carol (KB3GMN):

- Vendors at Skyview told Carol they will be at Washfest.
- Yaesu FTDX10/FT710 seem to be the same radio. No price listed yet. To be approved by FCC in September. Wait to see what happens before ordering. FTDX10 price may drop if it becomes discontinued. Price can be dependent on rebates.

**Contests:** Larry (K3VX): No report

**President's Report -** Curtis (KB3CMT): (No report)

**New Business:** (None)

### Old Business:

- Bill (W3WH): Babcock Grove reserved for September 23<sup>rd</sup>, 24<sup>th</sup>, and 25<sup>th</sup>.
- Field Day testing on the 24<sup>th</sup> with VE session and HF demonstration. Setup Friday.
- Richie is bringing a generator.
- Test N3FJP and N1MM side by side. Sunday the 25<sup>th</sup> for picnic and final teardown. 1PM start time for picnic. Bill (W3WH) with motion for club to bring drinks second by Nathan (KC3GMM). Carried. Mark (N3RDV) providing ice.
- Signup sheet to go out on reflector.
- 9AM for Friday 23<sup>rd</sup> setup.
- Saturday test start 12 Noon.
- Mark (N3RDV) - Items ordered for new patch panel. No bill yet. Quote was under budget

Larry (K3VX) - Suggest announcing radio demo on the net the week prior.

### Good of the order:

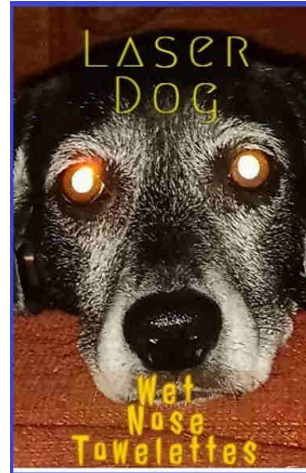
- Curtis (KB3CMT) - Email from Donna DeSantis - Congregation of the Holy Spirit. Looking for help for help with antenna setup for priest.
- Glen (KE7FD) - Received email invoice from Paypal from Springfield Armory. Contacted Springfield and found it to be a scam. Discussion about scams followed.

**Motion to adjourn** by Bill (W3WH).  
Second by Ron (W3WN)  
Carried

Adjourned at 7:46 PM 9/1/2022



## WASH Spotlight:



Have you ever found yourself needing a little more moisture on your hands, your face or perhaps on a clean garment? Well want no more! Introducing Wet Nose Towelettes from Laser Dog! These pre-moistened towelelts come in handy pocket sized sealed, easy open packs of refreshing wet dog nose moisture from canines around the world. Choose from Poodles from Paris, Dachshunds from Germany, Pekingese from Beijing or our most favorite, Mutts from many places. There are hundreds of dog breeds to choose from. And if you order today, include our coupon code 2020doggone50 for 50% off your first order!

### LaserDog

We're afraid to ask. We'll just leave this one on it's own merits.

For more information, please contact Glen KE7FD, Entrepreneur

Image courtesy of Glen Roberts KE7FD

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 **Eat'n Park**, 3380 Washington Road (US 19), McMurray. Start time is about 8 AM until ????. Monitor 146.955 & 443.659 for talk-in or any last minute changes.

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

## Wireless Association of South Hills Membership

AA3MR	KC3NFV	W3DTP	WASH FL	WASH TN	Silent Keys
AA3XY	KC3OCT	W3LE	KA3UPY/M	K3OL	
AE3DL	KC3QZY	W3WH	WASH NE	KE3XB	AB3KA
K3GW	KC3RAA	W3WN	N0PEU	N3YPB	AB3ED
K3HCR	KC3RGV	W8LEV	WASH OH	WASH TX	AD3Q
K3SGT	KC3TDX	WA3PYU	N8DPW	NB3C	K3EED
K3VX	KC4WTT	WA3VSS	WASH OR	K3LGM	K3LIE
K6DWR	KE7FD	WB4GCS	KB3NVL	KB3IJX	KA3NMG
KA3VXM	N0VLR		KB3NVM	Jane Wagner	KB3ENX
KB3BYA	N3DFK	Melissa	WASH SC	WASH VI	KB3FNM
KB3CMT	N3FB	Greenwald	N8NEU	NP2JF	KB3FQT
KB3GMN	N3IDH	Charlotte			KB3JHQ
KB3GMU	N3JSF	Peterson			N3BPB
KB3GUZ	N3KFD	Charmel			N3CZZ
KB3IAC	N3RDV	Spirk			N3FZ
KB3IVX	N3SBF				N3HKQ
KB3JHR	N3TDV				N3KEH
KB3YCX	N3UE				N3OBD
KC3ELA	N8NEU				N3RNX
KC3GMM	NB3C				N3SKR
KC3MLC	NL7XM				N3SRC
					N3ZEL
					N3XFE
					W3ZLK
					W4ZE
					WA3JPP

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

Through October 1<sup>st</sup>, 2022

List compiled by

Mark Stabryla N3RDV, Vice President/Treasurer



# 2022 WASH Upcoming Events Calendar

## Club Meetings & Other Significant Events — Subject to Change

October 1 <sup>st</sup> & 2 <sup>nd</sup>	57 <sup>th</sup> California QSO Party	<a href="http://cqp.org">http://cqp.org</a>
October 6 <sup>th</sup>	WASH Meeting	TBD
October 8 <sup>th</sup> & 9 <sup>th</sup>	66 <sup>th</sup> Pennsylvania QSO Party	<a href="http://www.paqso.org">http://www.paqso.org</a>
October 14 <sup>th</sup> - 16 <sup>th</sup>	Jamboree On The Air	Boy Scouts of America, Irving, TX
October 29 <sup>th</sup> & 30 <sup>th</sup>	CQ WorldWide DX Contest SSB	<a href="https://www.cqww.com/">https://www.cqww.com/</a>
November 3 <sup>rd</sup>	WASH Meeting	TBD
November 5 <sup>th</sup> - 7 <sup>th</sup>	ARRL Sweepstakes CW	<a href="https://www.arrl.org">https://www.arrl.org</a>
November 19 <sup>th</sup> - 21 <sup>st</sup>	ARRL Sweepstakes Phone	<a href="https://www.arrl.org">https://www.arrl.org</a>

## JOTA 2022

courtesy of the Boy Scouts of America

Irving, TX, September 2022 – Jamboree-on-the-Air, or JOTA, is the largest Scouting event in the world. It is held annually the third full weekend in October (October 14<sup>th</sup> – 16<sup>th</sup> 2022). JOTA uses amateur radio to link Scouts and hams around the world, around the nation, and in your own community. This jamboree requires no travel, other than to a nearby amateur radio operator's ham shack. Many times you can find the hams will come to you by setting up a station at your Scout camporee, at the park down the block, or perhaps at a ham shack already set up at your council's camp.

### Tell Me More

Scouts of any age can participate, from Cub Scouts to Boy Scouts and Venturers, including girls. Once at the ham radio station, the communication typically involves talking on a microphone and listening on the station speakers. However, many forms of specialized communication may also be taking place, such as video communication, digital communication (much like sending a message on your smartphone but transmitted by radio), or communication through a satellite relay or an earth-based relay (called a repeater). The exchanges include such information as name, location (called QTH in ham speak), Scout rank, age, and hobbies. The stations you'll be communicating with can be across town, across the country, or even around the world! The World Scout Bureau reported that the 2017 JOTA-JOTI had over 1.5 million Scout participants from more than 160 countries.

### When Is It?

Jamboree-on-the-Air is held the third weekend in October (October 14<sup>th</sup> – 16<sup>th</sup> 2022). There are no official hours, so you have the whole weekend to make JOTA contacts. The event officially starts Friday evening during the JOTA Jump Start and runs through Sunday evening.

### How Can I Participate as a Scout?

Contact your local Scout council and see what may already be planned in your area. You can also contact a local ham radio operator or a local amateur radio club. You can find a searchable database of clubs at [www.arrl.org/find-a-club](http://www.arrl.org/find-a-club). This website is operated by the American Radio Relay League, the national association for amateur radio, which is cooperating closely with the BSA on JOTA and many other activities.

Your local club may be able to direct you to its planned JOTA activities. These can include ham stations set up at camporees or other events. Or, if there are no planned activities, you can either work with them to get something set up or arrange to visit a local radio operator's ham shack at a scheduled time to participate in JOTA.

### How Can I Participate as an Amateur Radio Operator?

Contact your local Scout council and see what may already be planned in your area and how you can help. You can find your council using [the Council locator](#).

If nothing is currently planned, or if current plans aren't reaching your area, you can work with the council or a local unit (pack, troop, crew) to set up a JOTA station or arrange for visits to your ham shack. You can also participate just by making QSOs with the many JOTA stations that will be on the air.



## Breezeshooters 2022-23 Officers

Congratulations to the 2022-23 Officers and Directors of the Breezeshooters, elected at the July 2022 Annual Picnic:

President:	Marty AG3I
Vice President:	Bill N3WMC
Secretary:	Jack K3JAS
Treasurer:	Andrew KC3SDJ
Checker:	Nate KC3GMM
Directors:	Dan KA3UTS
	Tom W3TLN
	Sam KE3PO
	Bob WC3O
	Rich K3SOM
	Bud N3TIR



Courtesy of the Skyview Radio Society Q5er

As of Newsletter Deadline, we have still not received any word as to whether or not there will be a WACOM Hamfest in 2022. (All we know is that the event will NOT be held at the Washington County Fairgrounds, if it is held at all).

We hope to have good news on this front by the November newsletter.



# ***"Seen" at the September Meeting***

Photos courtesy of and © Copyright  
2022 Ron Notarius W3WN







# After 66 Years as a Ham... I'm In the Gutter

Bill Hill W3WH  
Photos courtesy of and (c)Copyright  
2022 Bill Hill W3WH

Canonsburg, PA, September 30<sup>th</sup>, 2022 – Actually that means that my gutter is an HF Antenna. As many of you know I now live on the fourth floor of a large apartment building on Canonsburg Lake. I have a dipole in the attic which really works pretty well but as usual I'm not really satisfied when it comes to hearing signals.

Especially during the week oftentimes the bands are devoid of cw signals and it's not unusual for a desirable DX station who's posted on one of the DX reflectors to be impossible for me to hear I have an outside receiving loop but that doesn't work well enough either.

One recent day I got the idea to use the gutter and downspout s for an antenna. My thinking is that they are outside the confines of the attic and the available capture area is much greater than my rx loop. So I secured the necessary permission to connect a wire to the gutter that runs above my balcony and fed it thru an Icom AH-4 tuner that I recently acquired. When I bought the tuner from Curtis KB3CMT I thought I would use it with my IC-706 MK11G on POTA type outings. but it filled the bill quite nicely for this purpose.

I also had to devise a counterpoise for the gutter to work against. I combined an MFJ artificial ground with about 30 feet of wire running around my balcony railing to meet this need.

I have been very happy with the results so far. It's not like having a three element Yagi but so far the gutter antenna hears about 1 "S unit" better on average than my attic dipole. Not too shabby. I also acquired an interface allowing me to use the Icom tuner with my Yaesu gear.

This has been a fun experiment . The other day I ran a reverse Beacon network test on 15 meters and got numerous reports from all over the US as well as Europe and Africa. The jury is still out as to whether this arrangement will merit a permanent installation but the early indications are that it will be part of my apartment station for a long time.



## September 24<sup>th</sup> Field Day Test

Bill Hill W3WH  
Photos courtesy of and (c)Copyright  
2022 Bill Hill W3WH

Canonsburg, PA, September 30<sup>th</sup>, 2022 – Success!

This past weekend we held our FD Testing session at South Park. We hoped to solve the mutual interference problem we had at Sunset ills on this past FD and I think we did. Also the digital team got their act together and had successful QSO's both here in the US as well as in Europe. Yay!!

I drove back and forth to Babcock Grove so many times this past weekend it started to feel like I was commuting again; it was worth it. On Friday we put ropes in the trees above the Babcock shelter for the SSB 80/40 antennas and on Saturday morning N3FB brought the tower trailer and we installed the 20-10 rotatable dipole and 80/40 CW antennas on it. All the antennas worked very well for all modes.

Our FD IT Team was there and mapped out plans for next year's FD. Our newly refurbished patch panel worked as intended. Mega thanks to

Jim, WB4GCS and Frank, N3FB for a fabulous job. Larry, K3VX and I had a discussion with Frank and Jim about our next FD effort and we agreed to evaluate using N1MM logging software before next June and we agreed to encourage and train new operators in an effort to keep our phone stations on the air longer.

Before next June we'll probably add a three element TA-33Jr to the antenna arsenal giving us two sets of radiators for 20-10 meters.

All this effort is to make our WASH FD more fun for all and compete more effectively even though technically FD is not a contest.

Stay tuned for more FD news.



# Modeling End Fed Wire Antennas

Larry Comden K3VX

Pittsburgh, PA, October 3<sup>rd</sup>, 2022 – The popularity of end fed antennas is unmistakable. Because only one support is required, it's a natural for portable operation. I wondered if the way the wire is deployed makes a difference.

I chose two different configurations to model using EZ-NEC V5. In the future, I hope to compare the model results with actual measurements using a Rig Expert AA-230.

Both configurations used a 71 foot wire connected to the coax center conductor and a 40 foot counterpoise connected to the shield. To me, the arrangement looks like an off center fed NVIS antenna.

**Case 1:** Using a tree. The 71 foot wire starts 2 feet above ground and extends to 52 feet above ground – this puts the far end 50 feet away horizontally. After connection, the counterpoise is 1 foot above ground.

**Case 2:** Using a pole. The 71 foot wire starts 4 feet above ground and extends to 24 feet above ground. This puts the far end about 68 feet away horizontally. The counterpoise is also 4 feet above ground.

The results are summarized in the tables below. The inductance L are values you could use to achieve a resonant condition. UNUN ratios of 4 and 9 to 1 are common. A home brewed 49 to 1 requires a 7 to 1 turns ratio.



Case 1

Band	R radiation	X reactance	Z impedance	UNUN Ratio	L uH
3.5	22	-300	301	4 to 1 = 75	13.6
7.0	115.5	-1534	1897	49 to 1 = 39	35
14.0	690	-1770	1900	49 to 1 = 39	20

Case 2

Band	R radiation	X reactance	Z impedance	UNUN Ratio	L uH
3.5	4.7	-357	357	9 to 1 = 40	16.2
7.0	706	-2217	2326	49 to 1 = 48	50.4
14.0	606	-1828	1900	49 to 1 = 40	20.8

**Observations:** Case 1 looks surprisingly good for 80M operation, Case 2 does not.

The UNUNs may bring the impedances into the range of internal tuners. Be careful about running high power, especially with the 49 to 1s. The transformed voltages will be high. Some external tuners will have the components necessary. It looks like a decent size coil (MiniDuctor type) could be set up with taps to bring these cases to a resonant condition. In that case, an absurd 49 to 1 UNUN would not be needed.



## More September 24<sup>th</sup> Field Day Test

Photos courtesy of and (c)Copyright 2022 Bill Hill W3WH





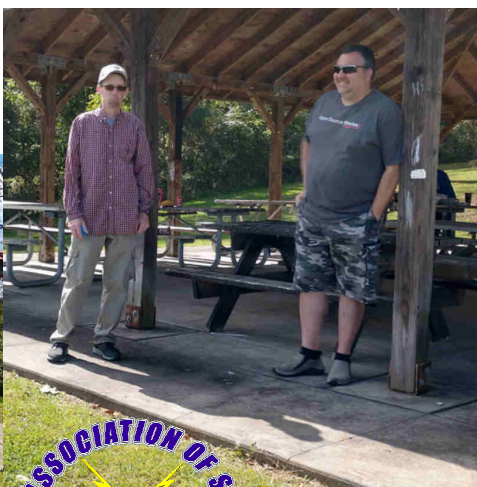
# ***"Seen" at the Butler Co ARA Swapfest***

Photos courtesy of and  
(c)Copyright 2022  
Chuck Bihun KC3ELA



## ***September 25<sup>th</sup> WASH Club Picnic***

Photos courtesy of and (c)Copyright 2022 Nathan  
Suehr KC3GMM





# A 10 Meter Vertical Dipole

Jim Sanford WB4GCS

Eighty Four, PA, September 28<sup>th</sup>, 2022 – For several years, I have used a KW-rated Hustler mobile whip at the top of a 20-foot pole on 10 meters. It has been good enough, including as Net Control on the BreezeShooters. Two months ago it started acting “funny”. A vertical on top of a pole, without radials was always temporary, anyway. SO, time to replace.

**Actions:** Design a dipole antenna which can be oriented vertical, in order to have omni-directional propagation. (A halo is almost \$300.00. NUTS to that!)

The 10-Meter band spans 28.0 – 29.7 MHz. Most of my activity is at the low end of the band, so I wasn't sure about tuning for the center of the band, 28.95 MHz. I considered the geometric mean, 28.395 MHz. I also remembered that buried in the antenna texts is the little gem that fatter elements lead to broader bandwidth. (This is why if you look at photos of ships in the early days of radio, you see multiple parallel wires or a cage with several wires. Years ago I built a 50-foot cage vertical for 80 meters and hung it from a pine tree; was **very** pleased with its performance.)

SO, I decided to use 1/2-inch aluminum tubing. Now, shipping greater than 6-foot lengths gets expensive, so I bought two 6-foot lengths of 1/2-inch and two 6-foot lengths of 3/8-inch tubing, which fits nicely inside the 1/2-inch tubing.

I cut off two-foot lengths of the 3/8-inch tubing and put them inside the 1/2-inch at the center of the dipole for strength. I slotted the outside ends of the 1/2-inch tubing and slid the 3/8-inch tubing inside and fastened each with a stainless steel hose clamp. Going with the geometric mean of the band frequencies, I calculated that at 28.395 MHz, the dipole length should be 16' 5.9", or 8' 3" on each side. My usual source, Metals Supermarket, near Pittsburgh, was out of the 3/8-inch, so I paid DXEngineering's price for the aluminum. I also bought one of their KW-rated choke/baluns.

For a center insulator and support, I went with delryn, purchased on ebay. K1FO used delryn insulators on his excellent VHF/UHF long yagi designs, and it looks like M-Squared uses the same material, so I figured it is good enough for 10-meters. I bought a block one inch thick for strength (probably overkill) and cut it in half in case I decide to make a second dipole.

I mounted the dipole elements and a support strut using U-bolts. See Photo 1 above for the finished antenna, Photo 2 for a closeup of the feed assembly.

The wires from the balun to the elements are a little longer than I'd have liked, but that allowed me to make them identical lengths and route away from the mounting hardware. It made resonance a bit lower than I intended, but two rounds of adjustment put resonance where I wanted it.

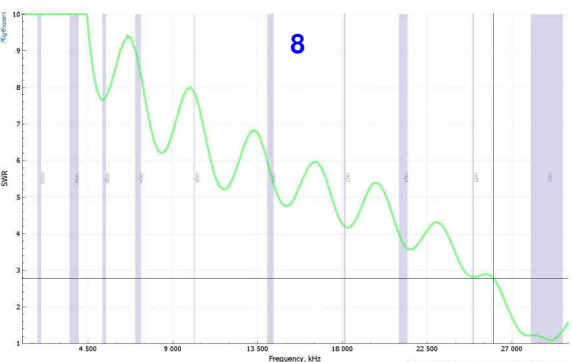
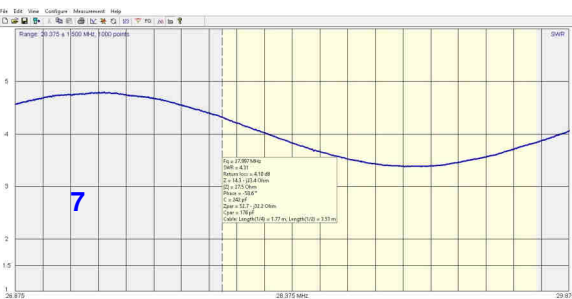
Measuring and tuning (Photo 3) – that's Chris AC4KU, working his phone while supporting the antenna (Photo 4).

**Tuning Results** (Graph 5): I was pleased with this

- Resonance where I wanted it.
- SWR around 1.2:1 — can't complain
- Bandwidth: SWR << 1.5:1 across 99% of the band.

**Installed results** – I put the antenna on a support to get it away from the steel pole, and away from the “trees” and vines from next door (Photo 6)

**Testing:** With an SWR this low, the (different) length of the feedline should not matter: SWR will be substantially the same, even given that R and X impedances are modified by the different cable length. So, measure in the house (Graph 7)



This is not at all good! SWR of 3.5 is UNSAT. Interestingly, the shape of the response is substantially the same as when the antenna was tuned. This is a real surprise, since the feedline had been previously measured with a 50-ohm termination and looked quite good. SO, what is going on?

Measure over a wider range (Graph 8):

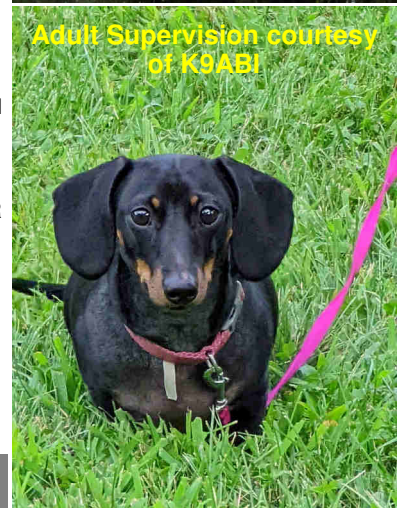
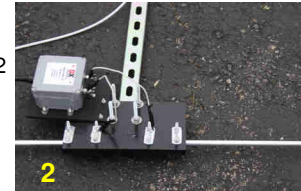
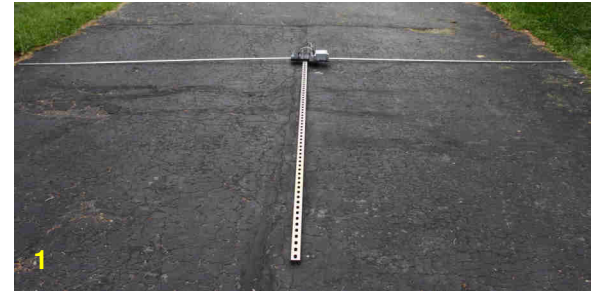
Note: Measurement format is different because this was captured on the desktop PC with a newer version of the AntScope software than on the laptop. This version has very different displays and controls, taking some time to get used to, but I think an improvement on an already good program.)

This is very interesting. I would expect the 10-meter vertical to look like an open at the other bands, as impedance is transformed by the length of coax. The SWR peaks are approximately 3.5 MHz apart, which suggests that the open at the antenna is being transformed by a 1/4 – wavelength coax cable. Or a shorted cable. This suggests that the feed line is around 120' long. I haven't measured this segment, but that sounds eminently reasonable. It also suggests that the feed line is good.

More interesting is the very acceptable performance in the 10-meter band.

SO, why did I get such an unacceptable SWR a few days ago? NO idea. So,

**Continued on Page 11**



Adult Supervision courtesy of K9AB!



# September 24<sup>th</sup> WASH VE Test Session

Grant Olson KC3MLC

Photos courtesy of and (c)Copyright  
2022 Jim Sanford WB4GCS

We had a successful test session at Babcock Grove with all participants passing their tests!

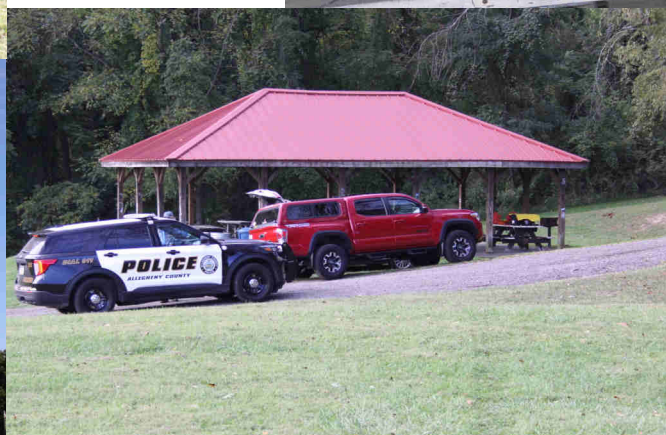
There were a total of four candidates, three unlicensed and one existing Technician. By the end of the day we had two Technicians and two Generals.

At least one candidate took advantage of the onsite setup to spend sometime with Glen KE7FD.

Thanks to Frank N3FB, Richie N3SBF, and Bill WA3VSS, for grading tests while I was busy dealing with the paperwork.



Also a few extra pictures  
tossed in from the Field  
Day Test, courtesy & (c)  
Copyright 2022 Jim  
Sanford WB4GCS



## A 10 Meter Vertical Dipole

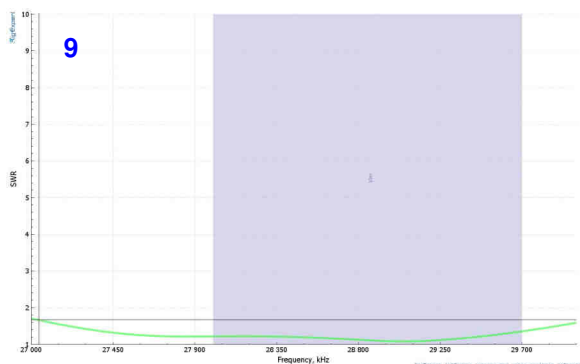
Continued from Page 10

let's do a narrow band measurement over the 10-meter band. (Graph 9)

SO, why is formerly unacceptable performance OK now? No idea. Will have to check cable connectors tightness, etc. Will also look for animal damage – we've had a LOT of rabbits around here lately.

Why is the SWR lower than the tuning measurements? Probably due to loss in the longer cable, which is not high, but is not ZERO. Same reason bandwidth seems better – lower reflected power at each point due to cable loss both ways.

Even my antenna tuner didn't like this antenna the other day, so need to look into that as well.



SO, Chris and I took it down, and found that the upper element "strength" inner element had fallen out and was shorting to the lower element. No wonder the periodic response in SWR – effectively a shorted feedline.

I reinstalled the strength element, and staked it, as well as its lower cousin, so they won't move. Then I made sure the element support u-bolts were really tight. We put it back up, and it measured as when first built. Put it on the air, and all was good, measured in the shack, and on the air.

I'm calling it done.

When I get radios in a building out at the tower, I will put another one up on the tower, and maybe a second stacked, since 10Meters often acts like a VHF band where height is everything. We'll see how this goes.

**Conclusion:** Works!

**PostScript:** Replaced the RG-8X with LMR-400 due to "ambiguous" specs on the power-handling capability of the RG-8X. SWR is *slightly* higher, but still very acceptable in the parts of the band I care about.

# 2 Second Pause: A Real Life Lesson

Dirk Bruno AJ6XW

*Herald, CA, October 1<sup>st</sup>, 2022* – Yesterday, after teaching at school for most of the day, I drove home, super excited to go work on our honeybees. I loaded my truck with the necessary tools and off I was driving to one of our honeybee yards.

As I was driving 55 mph on the highway, there was a slowdown...no problem, I gently braked, coming to a near standstill in the traffic. The only thing I remember was the loud screech of someone braking their vehicle and then I super loud smashing sound.

When I came to, I couldn't figure out how my beautiful truck was now in the oncoming lanes of traffic. I felt dazed, hurt, confused, angry and disoriented. It did not take too long to realize I had just been rear-ended by someone driving 55-65 mph.

No, problem, I will find my phone and call 911. Whoops, in my hurry to get all my honeybee equipment loaded, I forgot to load my phone! And then I remembered I had recently installed a Yaesu FT-60 with a magnetic mounted roof antenna! I hit the scan button and found two people talking. The only problem was they left just a milli-second in between key ups. I repeatedly attempted to call for help... but nope, the motor mouths kept yapping it up, no pauses in between key ups.

Finally, after about 5 minutes, I was able to break in. The amateur radio operator immediately called for emergency personnel. Unfortunately it took the EMT's 35 minutes to reach us. The CHP arrived exactly 65 minutes after the accident took place. The 5-minute radio delay was not that important in my given situation. But in other situations, that could be a matter of life and death.

As I waited for the emergency personnel to arrive, I made myself a promise: I will strive to keep my conversations shorter and I will strive to always leave a 2 second pause between key ups. I never realized the importance of the 2-second pause until I was in a situation that highlighted how important it really is.

I am a totally new amateur radio operator...totally green and wet behind the ears. But I am asking every one of you [young and old], please keep conversations shorter and please, do your best to always leave a 2 second pause between key ups.

PS The doctors in the ER room ordered x-rays of my neck, rib cage, shoulders, etc. They also ordered a CAT scan for my amateur radio pea-sized brain [my brain shrunk after having to memorize all those answers for my Extra license]. My truck is ruined and I still feel kind of upset. I am in a lot of pain today [the day after the accident]. My head hurts, my neck hurts, my shoulders hurt and I have begun to see weird green spots. I am thankful to be alive.

One thing is for sure: I plan on coming out of this a better amateur radio operator.



*Bucharest, Romania, 29 September 2022* -- Member States of the International Telecommunication Union (ITU) have elected Doreen Bogdan-Martin KD2JTX of the United States of America as the organization's next Secretary-General.

Bogdan-Martin will be the first woman to lead ITU, which was established in 1865 and became a United Nations specialized agency in 1947.

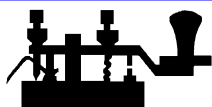
The election took place during ITU's Plenipotentiary Conference (PP-22) in Bucharest, Romania, on Thursday, 29 September, with representatives of Member States voting during the meeting's morning session. Bogdan-Martin won the position with 139 votes, out of 172 votes cast.

Bogdan-Martin will begin her four-year term as ITU Secretary-General on 1 January 2023

— ITU Press Release



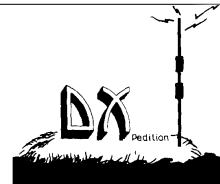
## Silent Keys



John Rogers N3MSE 73, Butler Pa, Past ARRL WPA Section Manager, September 2<sup>nd</sup>

Bob McCloskey AD3Q, 69, Bethel Park, Past President of the (original) South Hills ARC, September 13<sup>th</sup>

## DX News Briefs



The leaders of the upcoming **3Y0J** Bouvet Island DXpedition announced on 14 September that they had completed packing the shipping container. More information on their Facebook page, <https://www.facebook.com/groups/3093983840726129>

The Rebel DX Group is looking for two more operators for the **T33T** Banaba DXpeditions. If interested, PM 3Z9DX at k38dom@gmail.com

TA2OM is now QRV as **3C3CA** through approximately the end of October, possibly into November, primarily on FT8. QSL via TA2OM

**VQ9SC** is QRV during his off hours, SSB and FT8, through 16 November. QSL via WB2REM

**JG8NQG/JD1** is QRV from Minami Torishima for the next three months, in his spare time. Look for him primarily on 17, but will be on other bands as time and other conditions permit. QSL via JA8CJY

**5H8HZ** is QRV in his spare time. QSL via TA1HZ, but cards will not be ready until sometime in 2023. QSL Direct Only – Bureau cards will not be answered.

**8Q7TD** is QRV through 17 October, primarily on 20 meters. QSL via IK1TTD

**V47JA** is QRV through 12 October. QSL via W5JON

**5R8FG** will be QRV 8 – 17 October, holiday style. QSL via IZ6BRJ

**TYØRU** will be QRV 14 – 27 October QSL via RA1ZZ.

**7Q6M** will be QRV 19 October – 29 November, 160 – 6 including the CQ WW DX Contests (both SSB and CW). QSL via K6ZO

**V3E** will be QRV from Mauger Caye NA-123 19 – 23 October. QSL via IZ8CCW

**V47T** will be QRV 23 October – 1 November, 160 – 6, CW and SSB. QSL via K5ZD or LotW

**RI1ANU** is expected to be QRV on or about 24 October from Novolazarevskaya Station, AN. WSL via ZS1OIN

**CT9/DF7EE** and **CT9/DD8ZX** will be QRV starting 25 October. They may be active in the CQWW SSB as CQ3W or CR3W. QSL via QRZ.COM

**V48DM** will be QRV 25 October – 1 November, 160 – 6, CW and SSB. QSL via N4GNR

**K6VHF/HR9** will be QRV 27 – 31 October, 40 – 10 (possibly 6), CW SSB and Digital. QSL via K6VHF

**PJ4K** will be QRV 29 – 30 October during the CQWW SSB. QSL via KU9C

**TC7G** will be QRV 29 – 30 October. QSL via YM7KK

**VP2MDM** will be QRV 29 – 30 October during the CQ WW SSB, as well as FT8/4 before and after the contest. QSL via K2DM.

## QSL Routes

4L5P via UT7QF	IF9A via IT9ATF	SP7DQR
5R8AL via G3SWH	J2ØEE via F4DXW	TM2LD via F4GQP
7A1B via EA7FTR	JY5MM via IK2DUW	TM3Z via F4DSK
7Z1AL via EC6DX	K4C/75 via N4JR	TT8SN via DL9USA
A65DR via N4GNR	L3ØRCP via	TY5AB via EC6DX
C37N via C37URA	LU3RCP	VJ2J via VK2CZ
C7A via UA3DX	LG5LG via LA7TIA	VJ4K via N3SL
CT9ABY via OM2FY	LZ1Ø5IN via	VK9XX via EB7DX
CX1RL via EA5KB	LZ1ZF	YJØDA via VK4MAP
D44PM via IZ4DPV	M2J via G4NBS	
DPØGVN via DL5EBE	NL8F via N7RO	
DP7D via DF1QR	OD5KU via EB7DX	
EG5NDO via EA5URV	OD5TX via IZ8CLM	
EH2JDZ via EA2URV	OD5ZF via IZ8CLM	
EL2DT via N2OO	P3X via 5B4AMM	
EP2HAM via MØOXO	PJ2ND via K8ND	
FG8OJ via MØOXO	PJ4MM via MØURX	
FY4JI via	OL1T via OK6DJ	
EA5GL	OS5Z via ON5CAZ	
HC3RJ via EC5R	R5ØRCR via RV3VR	
HC7AE/1 via EA5GL	SI3A via SM3LIV	
HP3SS via AC2OV	SPØDXC via	

Thanks to the NJDXA DX News Reflector, the DX-QSL Reflector, 425 DX News, OPDX News, DX Coffee, DX World.Net, ICPO Bulletin, & ARRL DX Bulletin for our DX News information. Thanks also to the 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.**

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

Lazaroff & Suhr, Attorneys at Law

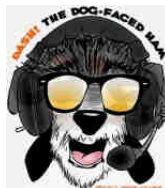
277 West Main Street, Saxonburg, PA 16056

Phone: 724-352-4905

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 <https://www.jeffk1nss.com> !

Shop for Dash items at his online store on Café Press, [www.cafepress.com/shopdash](http://www.cafepress.com/shopdash)



### US Amateurs by Class as of October 1<sup>st</sup>, 2022

Novice	7,460
Technician	429,810
General	197,752
Advanced	37,283
Extra	161,650
Club	12,506
<b>Total</b>	<b>846,501</b>

All-Time High 10/01/2022 846,501

Last 90 Days:	New Amateurs	5,386
	Callsign Changes	1,638
	Class Changes	2,747
	No Longer Licensed	4,258
	All Updates (*)	22,745

(\*) Includes renewals, address changes, etc.

Information gathered from FCC Daily Updates, courtesy of [Hamdata.com](http://Hamdata.com)

### Latest Region 3 Sequential Calls, Issued as of August 31<sup>st</sup>, 2022:

Group A	AC3JK
Group B	KF3EU
Group C	(none available / all issued)
Group D	KC3UWQ

Information gathered from FCC Daily Updates, courtesy of [Hamdata.com](http://Hamdata.com)

If you've downloaded the **WASHRag** from the N3SH web site, or picked up a copy from a friend... you can sign up to have the PDF copy sent directly to your email. You **do NOT** have to be a member of **WASH**!

Just send an email to [w3wn73@gmail.com](mailto:w3wn73@gmail.com) and we will take care of the rest!

**Has Roadway found the tower yet?**



## FCC News

Courtesy of the American Radio Relay League

Newington, CT, September 28<sup>th</sup>, 2022 – The Federal Communications Commission (FCC) has granted an ARRL emergency request for a 60-day temporary waiver intended to facilitate amateur radio emergency communications for hurricane relief. The waiver was adopted on Tuesday, September 27, 2022, and immediately permitted amateur radio operators supporting amateur data transmission for Hurricane Ian traffic to employ a higher symbol rate for data transmissions than the current limit of 300 baud.

In its Order (DA 22-1011), the FCC concluded "that granting the requested waiver is in the public interest. Puerto Rico was recently hit by Hurricane Fiona and Hurricane Ian is predicted to cause significant damage, including disruption to electricity and communications services. Thus, to accommodate amateur radio operators assisting in the recovery efforts, we grant the ARRL's waiver request for the period of 60 days from the date of this Order to operate in any parts of the United States and its territories impacted by hurricanes. The waiver is limited to amateur radio operators in the United States and its territories using publicly documented data protocols that are compatible with FCC rules, with the exception of the data rate limit waived here, for those directly involved with HF hurricane relief communications."

ARRL's request stated that trained amateur radio operators are working with emergency management officials and relief organizations to assist with disaster relief communications in anticipation of the arrival on the Gulf Coast of Hurricane Ian. ARRL sought the waiver for **Amateur Radio Emergency Service® (ARES®)** volunteers, and other amateur radio support groups working with federal, state, and local emergency management officials to assist with disaster relief.

Pursuant to ARRL's request and similar to written waivers granted by the FCC in earlier years, to qualify, a protocol or mode exceeding the 300 baud symbol rate limit must (1) be publicly documented, (2) use no more bandwidth than the currently permissible slower protocols (generally accepted to be the bandwidth of an SSB signal, or 2.8 kHz), and (3) be used *solely* for communications related to hurricane relief.

Section 97.307(f) of the FCC's rules prevents the use of certain protocols capable of higher data rate emissions in the High Frequency (HF) bands that many amateur stations active in emergency communications preparedness are capable of using. ARRL described that equipment they plan to use exceeds the 300 baud symbol limit and that the higher data rates are critical in sending relief communications. Many use radio modems and personal computers capable of using digital protocols and modes that would permit faster messaging rates than normally permitted under the FCC's rules. ARRL pointed out that higher data rates can be critical to timely transmission of relief communications, such as lists of needed and distributed supplies.

ARRL also explained that radio amateurs using higher-speed emissions for hurricane-related messages in the US and its territories must be able to communicate with similar stations in the US. They may also need the ability to communicate with Caribbean-based stations that are directly involved with hurricane relief efforts. Additionally, amateurs must be able to communicate with federal stations on the five channels in the 5 MHz band involved with the SHARES network and other interoperability partners on those frequencies.

ARRL also pointed out that the past FCC temporary waivers have allowed such protocols in similar events, including Hurricanes Maria, Dorian, Laura, and Ida, typhoon relief communications in Hawaii, and wildfires in the western areas of the US.

**New Amateur Radio License Fees Took Effect April 19<sup>th</sup>.**

## N3UE Woodworking

Ed Wolf N3UE has recently taken up a new endeavor... laser engraving. (See sample)

He's currently available for plaques and signs of varying shapes and designs.



Prices vary, but are very reasonable!

Interested? Contact Ed directly at [n3ue11@gmail.com](mailto:n3ue11@gmail.com)



# WASHfest 2023

The South Hills Hamfest — Now in our **TWENTY SEVENTH** big year!  
Sponsored by the WIRELESS ASSOCIATION OF SOUTH HILLS AMATEUR RADIO CLUB, INC.

Sunday, February 26<sup>th</sup>, 2023

8:00 AM until 3:00 PM Rain or Shine (or Snow!)

**Home Economics Building, South Park**

3735 Buffalo Drive, South Park Township, PA 15129

Behind the Allegheny County Police Station on Brownsville Road

Talk-In on 146.955(-) and 443.650(+) 131.8 PL

Donation \$5



**(800) 545-8881**

Breakfast & Lunch will be available!



*FREE Coffee* for the entire Hamfest  
courtesy of HAM RADIO INSURANCE ASSOCIATES  
of Canonsburg, PA

## MAIN PRIZES — You've Got to Play to WIN!



First Prize: Yaesu FTDX-10 Compact HF+6M 100W SDR Transceiver

Second Prize: To Be Announced

Third Prize: To Be Announced

**Additional Hourly Door Prizes! 2 Special Black Box Prizes (Separate Drawing)!**

**Main Prize tickets are \$2.00 each, 3 for \$5.00, 7 for \$10, 15 for \$20, 40 for \$50, 90 for \$100**

**All Prizes Subject to last-minute changes**

For Table Reservations, or More Information, Please Contact:

Carol Danko KB3GMN at (412) 884-1466 [n3sbf@comcast.net](mailto:n3sbf@comcast.net)

E-mail us directly at [washarc@yahoo.com](mailto:washarc@yahoo.com) Check out our website too! [www.n3sh.org](http://www.n3sh.org)

**Please Note:** Early Table Reservations must be paid in full on or before January 31<sup>st</sup>, 2023.

Reservations received after February 1<sup>st</sup>, 2023 must include payment in full.

Reserve now... we have sold out in advance twelve years running!

Hamfest Table Reservation Form—Please PRINT LEGIBLY ALL INFORMATION

Name: \_\_\_\_\_ Email: \_\_\_\_\_

Address: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_ - \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Call Sign: \_\_\_\_\_

Tables WITH Electricity: \_\_\_\_\_ X \$15.00 = \_\_\_\_\_

Tables WITHOUT Electricity: \_\_\_\_\_ X \$12.00 = \_\_\_\_\_

**5 Or More** Tables w/o: \_\_\_\_\_ X \$10.00 = \_\_\_\_\_

Please make all checks payable to:  
WIRELESS ASSOCIATION OF SOUTH HILLS  
PLEASE MAIL RESERVATION TO:  
**WASHFEST 2023**  
c/o CAROL DANKO KB3GMN  
4246 Seton Drive  
Pittsburgh, PA 15227-1244

We reserve the right to resell any tables not occupied by 8 AM, unless prior arrangements have been made!





# WIRELESS ASSOCIATION OF SOUTH HILLS, INC.

## Membership Application, New or Renewal



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 all 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  
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Bethel Park, PA 15102-2456



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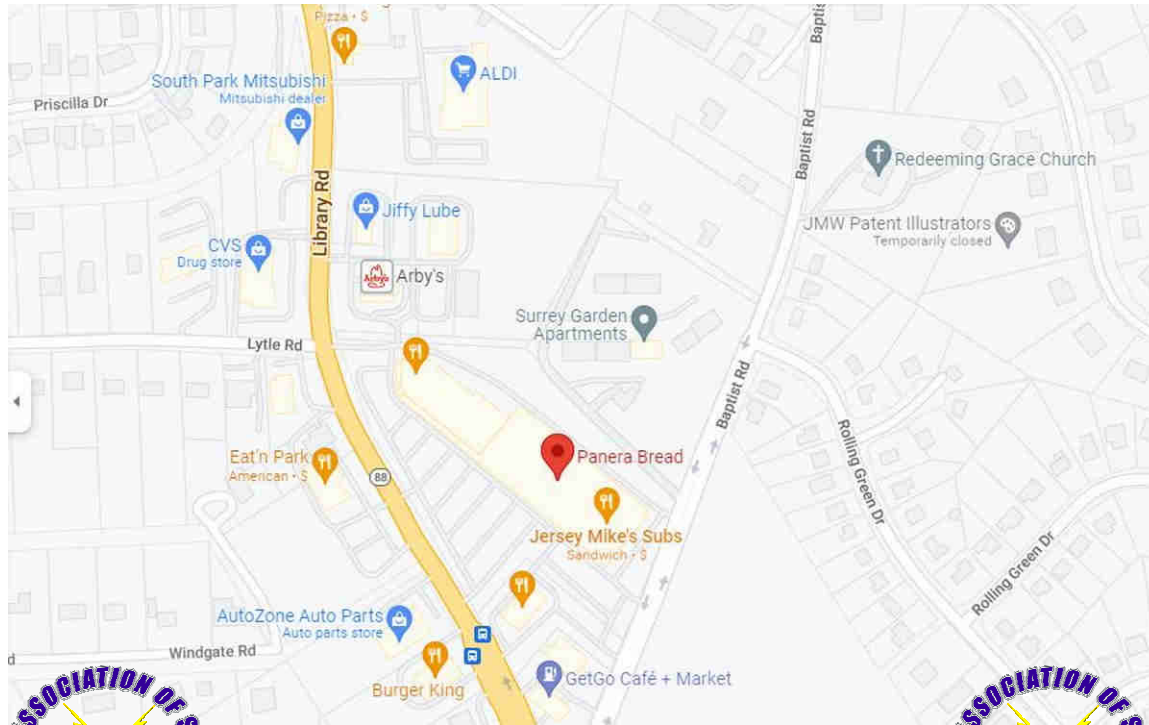
The Daily DX, 3025 Hobbs Road,  
Glenwood, MD 21738 Phone: 301-854-5650



**Arghh!**  
What Mightst We Draw For Ye, Matey?



# Directions to the October Meeting Site



The October meeting will be held at

**PANERA BREAD**

South Park Shops,  
5243 Library Road,  
Bethel Park 15102.

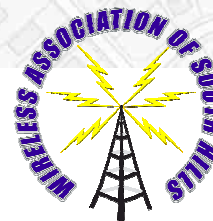
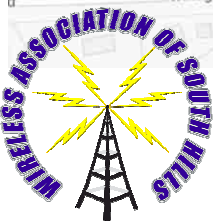
( This is the shopping center  
across Library Road from the  
South Park Eat 'n' Park )

We have the room  
booked starting at  
6:30 PM.

As always, you are  
under no obligation to  
buy anything, but we  
do encourage  
everyone who wishes  
to do so, to show our  
appreciation for their  
hospitality.

Meeting starts at  
07:00 PM EDT.

See you there!



## The WASHRag

Wireless Association of South Hills, Inc.

Ron Notarius W3WN, Editor

3395 Rosewood Drive

Castle Shannon, PA 15234-2546



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