



*Students of Vault 6939, the Beavercreek robotics team that XWARN supports, work on their robot at the Miami Valley Regional of FIRST Robotics. Vault 6936 won two Rookie Awards, highest rookie ranking and Rookie All-Stars. The Rookie All-Star award allows earns Vault 6936 a spot at the "World" competition at Detroit in April. In the mean time, the team is preparing for another regional competition in Cleveland at the end of March. (continued on page 9)*

# Wavelengths

Mar 2018

## President's Message

As Spring approaches, activity is picking up. It is a time when we focus on being prepared for severe weather. Many of you attended the recent National Weather Service spotter's training. On Wednesday, March 21, at 9:50 AM, there will be a state-wide tornado drill. I encourage all who are able to check in to the Greene County Weather Net. Nigel W8IFF will call up the net on the 147.165 (+123.0) repeater.

Please note that when severe weather threatens, there is no designated Net Control Station that initiates the Greene County Weather Net. If no net is active and it seems like one is appropriate, feel free to call the net into session. Ask for a liaison to Dayton Skywarn from the check-ins. If you call up a net and feel uncomfortable, just ask if someone would be willing to take over. We will post a suggested net

*(Continued on page 2)*

## Xenia Weather Amateur Radio Net XWARN (W8XRN)

147.1650+ (123.0) (Analog Only)

443.1000+ (123.0) (Analog + System Fusion)

**Meetings:** 2nd Monday, 7:30PM, Greene Memorial Hospital  
([1141 N Monroe Dr, Xenia, OH](#)) Herman Menapace Auditorium

## N8RMA's 2018 State of Hobby

If you would like to participate in an informal survey of amateur radio, N8RMA is running his survey again this year. If interested, please go to <https://goo.gl/8EQNKK>. There is a link to the 2017 survey results at the start of the survey.

## Club Contacts

- President, Bob Baker, N8ADO  
[President@xwarn.net](mailto:President@xwarn.net)
- Vice President, Brett Boggs, NV8I  
[Vicepresident@xwarn.net](mailto:Vicepresident@xwarn.net)
- Secretary, Jason Bowman  
[secretary@xwarn.net](mailto:secretary@xwarn.net)
- Treasurer, Steve Mackey, N8ILR  
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[trailer@xwarn.net](mailto:trailer@xwarn.net) or  
[publicservice@xwarn.net](mailto:publicservice@xwarn.net)
- Newsletter, Jason Bowman, WG8B  
[newsletter@xwarn.net](mailto:newsletter@xwarn.net)

## Calendar of Events

- Saturday, March 31 8:00 Am until 11:00 AM "No Buts About It" 5k. Contact Bob Baker, N8ADO.
- Sunday, April 8. 8:00 AM until 3:00 PM (or part of the day). Ohio River Road Runners Club Full and Half Marathons Xenia YMCA (Need lots of help). Contact Mike Crawford KC8GLE@earthlink.net
- Saturday, April 14. 8:00 AM until 11:00 AM. "Spring Has Sprung" 5k Xenia YMCA. Contact Mike Crawford KC8GLE@earthlink.net
- Saturday, May 13. 8:00 AM until 11:00 AM . "Founders' Run" 5k and 10k. Trebein Elementary on Dayton-Xenia Rd East of Beavercreek near Ankeny Rd. Contact Bob Baker n8ado@arrl.net
- May 18-20. Hamvention

## President's Message

*(Continued from page 1)*

script on the XWARN web site([www.xwarn.net](http://www.xwarn.net)). The weather tab currently includes a link to a brief spotter's guide, i.e. "What to Report".

*Secretary's Note: As a corporation, XWARN needs to keep official records of its activities. We will need a copy of the net log if one was produced. The bare minimum is a list of stations who checked in.*

Public Service Events start up again at the end of the month. If you are interested in participating in them, contact myself (n8ado@arrl.net) or Mike Crawford (kc8gle@earthlink.net).

Hamvention is approaching (May 18—20) and XWARN will again sell t-shirts. We need your help to staff the operation. Also, if you are not already signed up as a volunteer to help put on the show, I can help you get in on the action.

73, Bob Baker N8ADO

## Hamvention Awards

From Jill Wolf and the [Dayton Hamvention Facebook Group](https://goo.gl/mifJdx) (<https://goo.gl/mifJdx>).

The Hamvention Awards committee is very excited and pleased to announce the winners of the four Hamvention 2018 awards. Co-chairs Michael Kalter, W8CI, and Frank Beafore, WS8B, said, "We would like to thank everyone who nominated a candidate. The process is always difficult and the Awards Committee reached agreement on the following winners. Please join us in congratulating these outstanding 2018 winners."

### Club of the Year

#### Portage County Amateur Radio Service

The Portage County Amateur Radio Service (PCARS) was established in November of 2005. It is an ARRL Affiliated Club and an ARRL Special Service Club.

PCARS has an average of 43 hours of club activities per month including special interest groups, license training, contests run from our club site, and club social events. Our members cover a wide range of interests that allow us to support public safety organizations, student outreach programs and activities focused on growing our hobby. We love to share our experiences and have a requirement that our events be filled with a lot of fun. Members have joined PCARS because of all the activities and fun we have.

We have created our own contests and events including our annual Freeze Your Acorns Off in February and Ohio State Parks on the Air that was used as a model for the ARRL's™ NPOTA contest. We have also donated time and money to our community including over \$6,000 in 2017.

We have several "Build Days" each year where we have projects covering home built transceivers, antennas, and digital equipment to allow members to inexpensively grow into new areas of the hobby. Each month we have at least one GOTA (Get On the Air Day) where members and non-members can use club site equipment to learn about HF and new modes of operation. It is all about building our hobby, helping our community, building our skills and most of all having fun.

*(Continued on page 6)*

## XWARN Mission

The mission of the Xenia Weather Amateur Radio Net (XWARN) amateur radio club is to conduct weather spotting nets during severe weather and other communication services for the City Of Xenia and all other Greene County communities.

In this capacity, we are set up to provide communication services as required to the Greene County Ohio Public Service Agencies and other local government entities. The communications services provided to the supported agencies may be for emergency purposes or to simply enhance their communications abilities. On an as needed basis XWARN provides similar services to various government entities of our surrounding counties.

Additionally, XWARN provides communications support to various community organizations in support of marathons, 5K runs, 10K runs, bicycle events, etc. to provide health and safety assistance to the participants and sponsors of said events.

In support of these goals, XWARN operates and maintains amateur radio repeaters and other equipment in Greene County.

## Minutes: February 12, 2018

Meeting was called to order by Bob Baker, followed by Pledge of Allegiance and Introductions

A motion to accept the minutes from the January meeting as published in the newsletter was made by Janese Brooks and seconded by Ed Collins. Passed.

Bob Baker read the Treasurer's Report in Steve's absence. A motion to accept was made by Jim Beller and seconded by Ed Collins. Passed.

Mike Crawford reported that the only planned event for February was TechFest to be held the upcoming weekend. There was nothing to report on the trailer.

Phil Verret reported no changes to the membership roster.

No other committee chairs were present.

There was no old business to discuss.

Bob Baker asked for a consensus vote as to whether we wish to again invite DARA to join us for Field Day. We will ask them to join us.

Bob Baker stated that the Miami Valley Mesh Alliance plans to support AREDN at Hamvention and would like to repair and/or improve some of the Mesh Network in the Xenia area. There has been a Mesh Node located on Jim Simpson's tower, but it has been non-functional for some time. MVMA would like to see it brought back to service and possibly upgraded to add a 5.8 GHz link to Beaver Creek. MVMA would like XWARN to fund this, but they are willing to install equipment. Cost expected to run between \$230 and \$440. After some discussion, we decided to table any action until March.

The meeting was adjourned. Next Meeting is March 12.

Respectfully submitted, Bob Baker.





Pictures from Orlando Hamcation (Courtesy Bret Boggs, N8VI)



## Hamvention Awards (continued)

*(Continued from page 3)*

### **Amateur of The Year**

Valerie Hotzfeld, NV9L

Valerie Hotzfeld NV9L, was first licensed in 2006. After being very active in her local amateur radio clubs and ARES, she discovered HF. This is when she became obsessed with DXing and contesting. In the past few years, she has enjoyed inviting new hams to her station to DX or contest.

She is a co-host on the show “Ham Nation” and has created several “how to” videos on YouTube for the ham radio community. She also enjoys delivering various presentations via Skype to amateur radio clubs across the U.S. She’s been the pilot or lead pilot for four major Dxpeditions.

She is currently the treasurer for her contest club and the prize chairman for W9DXCC and SMC-fest. In 2017, she became very active in public service; going to Texas after hurricane Harvey to help rescue small animals as well as being deployed to Puerto Rico with the American Red Cross for 3 weeks as part of the “Force of 50” providing critical amateur radio communications after hurricane Maria. Amateur radio has enriched her life, because of the challenges and great friends this hobby brings.

### **Technical Achievement Award**

Chip Cohen, W1YW

Chip Cohen, W1YW has been a radio amateur for 52 years. Bitten by the antenna bug, he became a professional radio astronomer and astrophysicist, using the world’s biggest antennas at Arecibo, VLA, Haystack, NRAO, and many others. While a professor at Boston University, he connected fractal geometry with antennas, pioneering a paradigm shift on how antennas are designed, what they make possible, and has seen fractal antennas enable millions, save lives, and make life easier.

Starting with simple flea market treasures 30 years ago, W1YW bootstrapped fractal antennas with modest gear and employed ham radio exclusively to prove out and report this new technology. Fractal antennas are ham-grown. He started Fractal Antenna Systems, Inc. with

WA1ZWT (SK) in 1995, and is presently CEO. An inventor with 41 US patent, W1YW is also known for inventing the invisibility cloak, using fractal antenna techniques to make it possible.

Chip is an avid DXer with 355 countries, DXCC Top of the Honor Roll, and is a strong cheerleader for technical ‘innovation culture’ through ham radio. He is a Life Member of the ARRL, and Fellow of the Radio Club of America, where he served as Vice President and presently as Director.

### **Special Achievement Award**

Heriberto Perez, KK4DCX; Victor Torres, WP4SD and Emilio Ortiz JR, WP4KEY.

Puerto Rico was devastated by hurricane Maria, a powerful category 4 storm, the strongest to make landfall in PR in 85 years. It came ashore on September 20th 2017 with 155 mph winds. All the communication services and utilities collapsed.

On September 21st 2017, Ham Radio operator Herb Perez KK4DCX mobilized his radio equipment to the local public broadcasting station Radio Sol in San German, along with Ham Radio Operators Victor Torres WP4SD and Emilio Ortiz JR. WP4KEY. The team immediately set up the gear and began the extraordinary mission of health and welfare traffic to thousands of family members across the continental USA.

Thanks to the support and help of more than 45 Ham Operators across the USA more than 4000 messages were effectively delivered via phone calls to family members in the United States, bringing tearful joy between family love ones.

## Ham Radio Conspiracy Theory

George Parry on [TheFederalist.com](https://goo.gl/278i5P) (<https://goo.gl/278i5P>) asks, “Did Fusion GPS’s Anti-Trump Research Avoid Surveillance with Ham Radio? It seems Nellie Ohr was well aware the National Security Agency can intercept and store every communication on the Internet. Did that affect her decision to become a ham radio operator?”

*Excerpts below are from the article linked to above. Note that I provide this as a lighthearted tidbit involving amateur radio. I am not presenting it for its political content.*

Nellie Ohr, holder of amateur radio call sign KM4UDZ, graduated from Harvard University in 1983 with a degree in history and Russian literature. She studied in the Soviet Union in 1989 and obtained a PhD in Russian history in 1990.

According to a sworn court filing by Fusion GPS co-founder Glenn Simpson, she was hired by that firm to conduct opposition research on behalf of the Clinton campaign against candidate Donald Trump.

Ohr is a member of Women in International Security, which describes itself as supporting “research projects and policy engagement initiatives on critical international security issues, including the nexus between gender and security.” She has done cybersecurity consulting for Accenture, a politically connected firm, for which she gave a presentation on “Ties Between Government Intelligence Services and Cyber Criminals – Closer Than You Think?”

It is apparent that, between her own professional experience and her marriage to a top DOJ official, she was well aware of the ability of the National Security Agency to intercept and store every communication on the Internet. Did this knowledge have anything to do with her mid-life decision to become a ham radio operator and communicate outside cyberspace?

I got into amateur radio because I was a horny, zit-infested teenager with no hope of ever successfully interacting with members of the opposite sex. Faced with that reality, I sublimated my priapic energies into learning electronics and building radios. My sublimated adolescent urges were so strong that, on several occasions, I almost

invented the Internet 20 years before the Pentagon and Al Gore got around to it.

That’s why I became a ham. So what’s Nellie’s excuse? Did she develop an overwhelming middle-aged desire to talk to geeks over the radio? Was this a case of Sudden Onset Geek Syndrome? Or is there some other less benign explanation?

On May 23, 2016, she received a technician-level amateur radio license. The timing is significant. The presidential campaign was underway and she and her employer, Fusion GPS, were digging for dirt in Russia to use against Trump. Given her cybersecurity knowledge, was Nellie Ohr hoping to use non-cyber short wave communications to hide her participation in that nefarious effort from the NSA?

So, was Nellie Ohr’s late-in-life foray into ham radio an effort to evade the Rogers-led NSA detecting her participation in compiling the Russian-sourced Steele dossier? Just as her husband’s omissions on his DOJ ethics forms raise an inference of improper motive, any competent prosecutor could use the circumstantial evidence of her taking up ham radio while digging for dirt on Trump to prove her consciousness of guilt and intention to conceal illegal activities.

Undoubtedly further information on this topic will be forthcoming. But, in the meantime, it is fair to ask in the ham vernacular of yesteryear, “Dit-dah-dah; dah; dit-dit-dah-dit?” That’s Morse code for “WTF?”



## Sailors, Civilians Receive Amateur Radio Licenses on USNS Mercy

Excerpts from [DVIDS](https://goo.gl/1jwuhA) (<https://goo.gl/1jwuhA> )

More than 18 Sailors and civilians assigned to Military Sealift Command hospital ship USNS Mercy (T-AH 19) received FCC amateur radio licenses March 3 after passing a final written examination aboard the ship.

With the permission of U.S. Pacific Fleet Command, Bretz invited two civilian instructors, from Army Network Enterprise Technology Command (NETCOM)

current HA/DR missions, such as PP18.”

“Throughout PP18, the licensed Sailors and civilians will be broadcasting the location of the ship using the WSPR mode of amateur radio. The purpose of this is to show that without the use of modern technology a person’s location during an emergency or natural disaster can be found by using amateur radio and be heard by people all around the world.



on Fort Huachuca Army Base, to teach the Fundamental Amateur Radio Technician Class and the General Amateur Radio Class licensure courses.

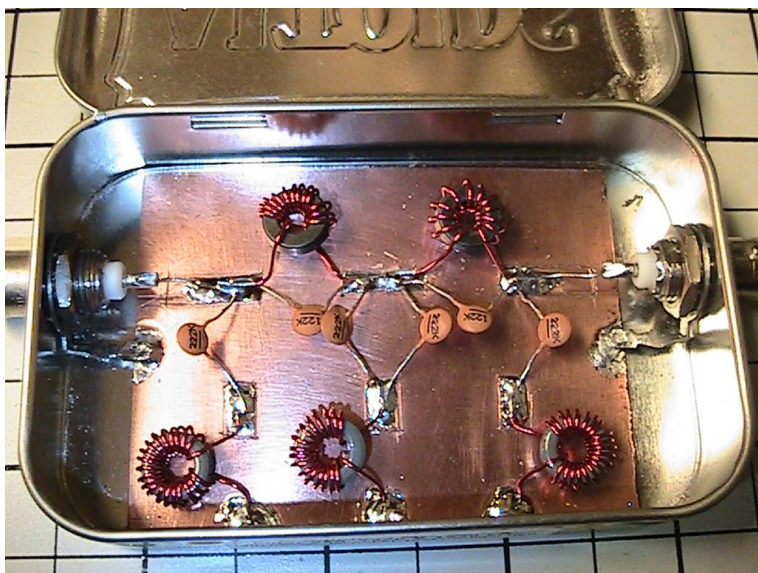
“I am very excited to host the trainers on Mercy,” said Pacific Partnership 2018’s (PP18) mission commander, Capt. David Bretz. “We will be researching the effectiveness of using amateur radio aboard the Mercy for the duration of PP18. Amateur radio operators have played a huge role throughout history assisting in humanitarian and disaster relief (HA/DR) efforts.” “I am looking forward to gathering research on how this older technology can still be relevant in

“Not only will it help gather further research on this older technology blending with the new age technology, but using WSPR mode will allow our PP18 host nations the ability to track our location in real time and know when we are nearing their country, said Bretz.”

The Mercy will be sending out a WSPR signal during PP18. Go to the website [www.wspr.net.org](http://www.wspr.net.org) and type in the Mercy’s call sign K6MRC to see where the Mercy is located in real time and who also see who has been able to receive our signal all around the world.



## Medium Wave Bandstop Filter



Reproduced with permission of [Carol Millazzo](https://goo.gl/EixKnh) (<https://goo.gl/EixKnh>)

Construction of a low cost elliptical bandstop filter in an Altoids can designed to reduce intermodulation interference to LF and MF reception from nearby strong AM broadcast stations. It is suitable for use with communications receivers and some low power transmitters. This construction technique may be adapted for filters on other frequency ranges. I tweaked the inductor values of a filter design by Kratoska to provide peak attenuation on 650, 1320 and 1530 kHz which are my most troublesome strong nearby AM broadcasters. More information available [here](https://goo.gl/wUTiLC) (<https://goo.gl/wUTiLC>).

## FIRST Robotics — Team Vault 6936



FIRST stands for "For Inspiration and Recognition of Science and Technology" and empowers students of all ages to get involved in STEM related fields. The First Robotics Competition combines the excitement of sport with the rigors of science and technology. Every year the student based teams are presented with a game where they have 6 weeks to design, build, program, drive a robot and compete. Regional and Championship competitions are held every year and are the ultimate Sport for the Mind. High-school student participants call it "the hardest fun you'll ever have." FIRST Robotics Team, Vault6936 is a Beaver Creek, OH High School

team. The team was formed in Oct 2017.

Aiming for the Rookie All-Star award was our goal & we accomplished that with joint effort from students, sponsors, parents and mentors! This now qualifies us to compete in the FIRST Championship in Detroit, MI, April 25-28 where the winners from regional competitions as well as wild card teams will compete - so Best of the Best teams will be there! What an honor for this rookie team! We have one more regional competition at the end of March in Cleveland before we go to Detroit in April.

Due to their success, the team is soliciting additional donations to support the Detroit event. Donations cover the registration fee (\$5000) as well as food, lodging, and transportation. If interested in contributing, please visit their GoFundMe [campaign](https://goo.gl/92o37o) (<https://goo.gl/92o37o>).

Club Call: W8XRN

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## **Wavelengths**

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Wavelengths is published monthly by the Xenia Weather Amateur Radio Net. Our meetings are currently held on the 2nd Monday of each month at **7:30 pm** at the Greene Memorial Hospital Auditorium. You can find additional information about our organization at [www.xwarn.net](http://www.xwarn.net). We welcome new and experienced Amateur operators and those interest in becoming an Amateur operator to attend our meetings.