



Abi Khan Horse Challenge Camp. XWARN and other Dayton-area amateur radio operators supported the weekend-long event.

Wavelengths

Xenia Weather Amateur Radio Net XWARN (W8XRN)

Sep 2018

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

President's Message

We are entering a busy period of supporting events by providing communications over ham radio. One of the main motivations to do so is to prepare for a disaster situation. It is not practical, nor desirable, to schedule a disaster. So if we are to practice our communications skills, these events can provide situations that require some of the same techniques as a "real" disaster. Incidental, but significant, is that these opportunities provide visibility that can result in better public attitudes regarding amateur radio. It is also a way that we can give to the community via our support and provide for enhanced safety of the participants of the event.

When was the last time that you participated in a meaningful communications exercise? Can you be sure that the batteries in your handheld can hold up over several hours? Consider taking a refresher course by participating in some of the support events.

Here are a few events coming up in the next few weeks:



Don't want risk ruining your paint by drilling for a mount or have an aluminum body truck and nothing magnetic will stick

to it? Then check out these [plates](http://bit.ly/2C8p8AV) (<http://bit.ly/2C8p8AV>) from Larsen Electronics that use the light assembly on the back of the cab for mounting and allow you to mount your usual magnetic accessories.

XWARN Tax-Exempt Status

The tax-exempt application was delivered to the IRS on Aug 30. I suspect it will be a while before we receive a determination letter. They will likely ask additional questions, and shrinking IRS budgets have slowed everything down.

The next step is to make sure we're Ok with the State of Ohio. Once we receive the determination letter, we'll need to submit our governing documents for public review. Every year, we'll need to submit an annual report to the State of Ohio, and we have 4 months after the end of our tax year (Nov 30) to submit a 990 or 990EZ to the IRS.

Finally, recording keeping will likely need to become more precise, especially minutes and anything involved with writing a check for a donation. To help the Secretary with the minutes, I'm looking into a set of microphones. And, if we do that, then maybe a webcam, too. It is fairly easy to stream to a live YouTube channel. Think of members who can't make it.

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Club Contacts

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If we don't have a program lined up, then I will have a presentation on solar power ready with toys present. Some things from this newsletter may make it in as well, especially the battery stuff.

Jason Bowman, WG8B

Minutes: Aug 13, 2018

Bob opened the meeting at 1930 with the Pledge of Allegiance.

13 members present

Cracker Barrel: None.

June and July Minutes approved by unanimous vote. *Editor's Note: Due to email reflector issues in getting the newsletter out, we delayed voting on the June minutes.*

Committee Reports

Membership. 46 members.

Treasurer's Report. Details of the Treasurer's Report are available upon request. The Treasurer's Report was approved by unanimous vote. The Treasurer also noted the increased net t-shirt revenue from Hamvention over 2017 due to the increased numbers of t-shirts sold.

Public Service. Phil Verrett. USAF Marathon. 46 volunteers, need another 19. Abi Kahn this weekend. Jason will coordinate for Saturday. Holiday @ Home Labor Day. See Shawna's spreadsheet to sign up. MS Bike same weekend as Beavercreek popcorn festival. Parade in St. Paris, OH, Thursday night before Marathon.

Trailer. New compressor came in. Apparently, it's very quiet.

Repeater. Antenna on Clifton Rd not up yet as far as we know.

Website. New email reflector active. Josh was able to import old list.

Facebook. Bret likes the posts.

Mesh. Still waiting to hear status of new equipment installation that XWARN help to support.

Newsletter. Backlog of stuff. Need your ideas.

Old Business

Tax exempt status. We received a letter from the Attorney General saying we're delinquent in filing our IRS status as well as the required annual documents. We will likely owe something like \$200.

Notified by web hosting that site got infected. Going to pay for an hour or two to fix it.

Next meeting Sep 10. Meeting ended 2025.

Jason Bowman, WG8B

Secretary, XWARN

President's Message

(Continued from page 1)

- Sunday, September 9, Bike MS Dayton. (All spots have been filled, but we can find fill-in spots if you'd like to join) Bob n8ado@arrl.net
- Saturday, September 15, Air Force Marathon. Phil ka8zkr@arrl.net
- Saturday, September 29, Zero Prostate Cancer Run/Walk, Bob n8ado@arrl.net
- Sunday, October 7, Little Miami Triathlon, Bob n8ado@arrl.net
- Sunday, October 14, Dayton River Corridor Classic Half Marathon, Bob n8ado@arrl.net
- Saturday, late October—probably 20th, Dayton District Cross Country Meet, Bob n8ado@arrl.net

Also, Saturday, October 6, is the Ohio Simulated Emergency Test. The SET is conducted by the Greene County Amateur Radio Emergency Service. You do not need to be a member of ARRL or GCARES to participate. If you are not aware of any of the details of this exercise, do not fret — tune into the XWARN 147.165 (+123.0) repeater Saturday morning and see what happens. I encourage all to join in.

73, Bob N8ADO

Emergency Preparedness



Sacramento Valley ARES member Michael Joseph, KK6ZGB, at the Red Cross Gold County Region Disaster Operations Center.

Following up on Bob's question, "Are your batteries good enough to last a few hours?", I came across some relevant information in the news. I also have some personal thoughts and pictures to share about some practical measures I take.

Unless you've been living on another planet, I'm sure you are aware of the wildfires out in California. Amateur Radio's involvement seems to be in supporting communications at shelters. However, ARRL Sacramento Valley Section Emergency Coordinator (SEC) Greg Kruckewitt, KG6SJT, [stated](http://bit.ly/2MLKFnQ) (<http://bit.ly/2MLKFnQ>) that Winlink became the go-to mode of operation. That isn't surprising. But the reason is. Wildfires in recent years have decimated key repeater systems in California, and the utilities have only just gotten power back to some of the locations. It was also stated that phones were extensively used for communications.

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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.

Curacao 2018 Dave Kalter Youth DX Adventure of PJ2Y

Editor's Note. XWARN supports this event and doubled our donation this year to help overcome a funding deficiency.

The Curacao 2018 Dave Kalter Youth DX Adventure of PJ2Y went QRT at 5:45 pm EDT on Monday, July 23. The youths made 6,261 QSO's starting Thursday evening at 7:30 pm EDT and ran until QRT time. There was a concentrated effort to have a FT8 station on the air as much as possible. Also, there were 2 additional radios on the air almost constantly. One was on SSB, and the other alternated between SSB and CW. All CW QSO's were made by the youth. The adults only made a few SSB and FT8 contacts as the youth were quite active on the radios.

We had a few challenges. During prime band opening time on two of the days we had power losses resulting in lost time. This amounted to about 8 hours. The youth chose to do their sightseeing on Monday to permit contacts on Sunday while people were off for the weekend. Each operating day we didn't see bands open until about 10 and they usually operated until midnight when most bands closed for us.

The team was very compatible and work extremely well together. We thank all of our sponsors and especially all those who contacted us. The multiple contacts on a band were great as usually it was a different one of the youth. I know several people tried to work all kids (WAK) on not only one but more than one band.

The QSO card will be designed and printed soon. See our PJ2Y QRZ page for more information. The entire log has been loaded to LoTW and ClubLog. At this time, we do not plan to do OQRS.

Thanks to the Curacao Bureau of Telecommunications for speeding the process of getting the PJ2Y call.

All CW but 1 was made by David Samu. All Dig were FT8.

Once again a big thanks to the XWARN Club for supporting our 2018 team.

Jim Storms, AB8YK
2018 Team Leader

Band	CW	Phone	Dig	Total	%
80	21	31	0	52	1
40	451	848	15	1314	21
30	0	0	145	145	2
20	1061	2372	0	3433	55
17	0	265	265	530	8
15	67	494	184	745	12
12	0	8	0	8	0
10	0	34	0	34	1
Total	1600	4052	609	6291	100

Operator	Contacts	%
Mason Matrazzo, KM4SII	1895	30
David Samu, VE7DZO	1581	25
Violette Latham, KM4ATT	1237	20
Dhruv Rebba, KC9ZJX	1213	19

Continent	Total	%
North America	4072	65
Europe	1803	29
South America	236	4
Asia	77	1
Africa	42	1
Oceania (Aus + Pac Islands)	27	0

Abi Khan Horse Challenge

This year's Abi Khan Horse Challenge occurred on Aug 18-19, 2018. XWARN and other local amateur radio operators primarily provide radio support and track the rider and horse teams, but we also shuttle water to two checkpoints for the riders. Unlike most other events that amateur radio operators support, we track all of the teams rather than just the lead and tail.

This can be challenging with a well-staffed event with no other issues. But this year we were short on operators, many of the operators were new, there was fog, the maps weren't adequate, we had one equipment failure, and the topography proved challenging for HTs (but we knew this ahead of time).

Here's an abbreviated discussion of the lesson learned. A more detailed [debriefing](http://bit.ly/2wtMYC4) (<http://bit.ly/2wtMYC4>) is available.

- The event organizers need to setup the course later in the week or check it the night before for vandalism. Damage to the course markers increased the amount of communications for net control both over the radio as well as over cell phones. It also caused confusion for new teams as well as new radio operators.
- We need better maps, especially with the course vandalism, new operators, and fog in the early morning hours.
- A more structured way to communicate when passing numbers would be beneficial under any circumstance. With only one person at Net Control, it is critical in reducing workload in order to be able to work the radio, keep the log, and coordinate with the race coordinators.
- It would be beneficial to set up Net Control as close as possible to or co-locate with the timing tent. It would also be beneficial for Net Control to have an FRS/GMRS radio to be able to coordinate with the race coordinators at and around the Horse Camp.
- Bring a spare radio and battery for when your equipment fails. Make sure everyone has everyone's else phone numbers. We had to setup an *ad hoc* cell phone net to pass traffic between Net Control and one operator.

- Operators at the Boat Ramp cannot reliably use an HT with the XWARN repeater without an external antenna or cross-band repeating with a mobile radio due to very localized topography just to the northwest of the Boat Ramp directly in line with the repeater.
- Since teams don't want to carry APRS trackers and we simply don't have enough trackers for the number of teams, another approach is for the teams to install a tracker app on their phones to help reduce radio traffic and better track the teams.



Net Control at Abi Khan Horse Challenge. 5W Kenwood HT on a roll-up J-Pole antenna on a bike flag. Solar power to keep the backup mobile radio battery charged.

Emergency Preparedness

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Do you know how to set up a temporary repeater using two cross-band capable radios if you need to? We did this a few years ago helping with a honeysuckle cleanup at John Bryan State Park.

- At VHF, they need to be about 1000ft apart horizontally or 40ft vertically for 60dB of separation
- Setup one radio to receive on the repeater input frequency and transmit on a UHF simplex or repeater link frequency. The UHF side should be set to transmit on low power to further help reduce interference levels at the other radio.
- Setup the other radio to receive on the same UHF frequency and transmit on the repeater output frequency.
- Make sure you have a decent size battery and a solar charger if operations will have a high duty cycle or will be extensive.

Are you prepared to use any communication mode at your disposal including amateur radio, phone (see Abi Khan), go-Tenna, FRS/GMRS (see Abi Khan), and whatever else may be at hand? At the end of the day, no one cares if you're an amateur radio operator or not. They only care if you can get the job done.

The next comment I have is about power, which is more than about batteries. Do you have the capability to operate your equipment for extended periods of time?

Maybe you have AC power and maybe you don't. I specifically look for electronics that will run off of 12VDC. All that wall wart is doing is converting wall plug AC voltage to DC. A common DC voltage is 12V (Kenwood radios, some network equipment), but some devices also operate on 9VDC (some network equipment and older radios using NiCD and NiMH), 5VDC (anything USB and some network equipment), and 18-20VDC (many laptops).

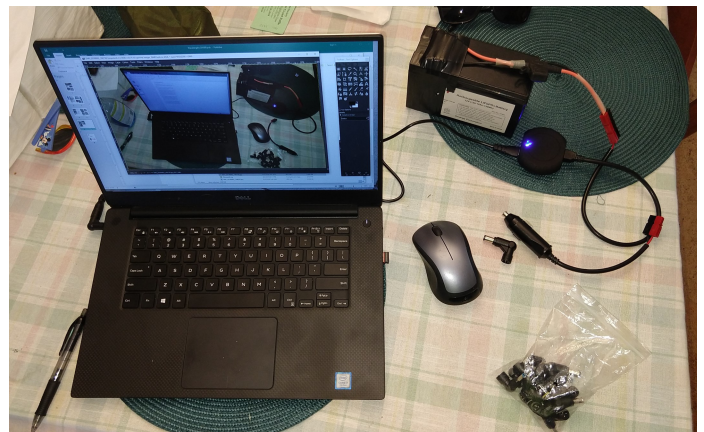
One of the first things I do is snip the power cord of the wall wart and install Anderson Powerpoles. What this allows me to do is run the equipment off of AC wall power or an inverter if available but then switch to DC battery power if I need to. I make the cut near the wall wart end so that I end up with a relatively long power cord that I can use with any 12VDC



Netgear routers typically take 12VDC. Other routers vary even within the same manufacturer. If you can't find something that will take 12VDC, then find a router that takes 5VDC. There are plenty of 12VDC-5VDC converters. By the way, do you know how to set a router up in the field and turn it into a wireless bridge? They make dedicated bridges now, too.

equipment.

For my laptop, I recently bought a nice [car charger](https://amzn.to/2CaA5Iv) (<https://amzn.to/2CaA5Iv>) off of Amazon. It's basically a DC-DC converter, which is more efficient than say using a battery to power an inverter (Please use a pure sine wave inverter if you can. Your electronics will thank you for it) then using the AC power supply of the laptop. The converter I bought comes with about 20 different tips for just about any laptop imaginable. And the tip that you plug in sets the output voltage. I didn't



Writing this newsletter while charging my laptop from a LFP battery and my new car charger modified with powerpoles

Emergency Preparedness



All of my Kenwood wall warts have received this treatment



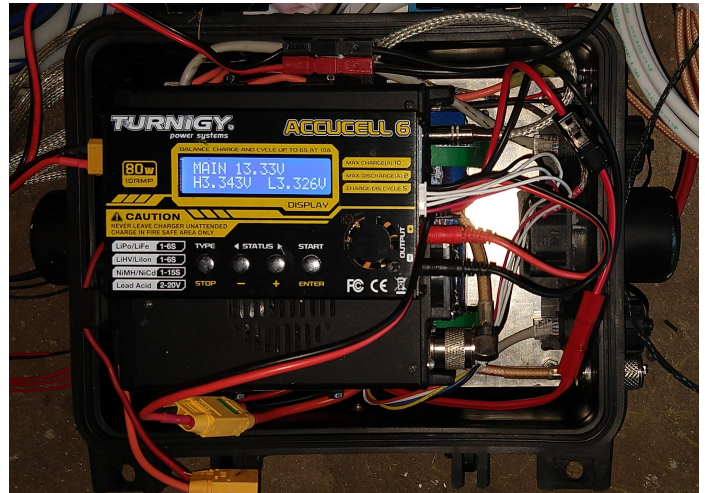
have it out of the box for 5 minutes before I was snipping the 12V DC-in cord to install powerpoles. Now I can run it from a 12VDC socket or any powerpole source (Yes, powerpole-to-12V-socket adapters exist, but I like direct connections where possible because it minimizes the things that can go wrong.).

If you're running off of batteries for an extended period of time, you need some way of charging those batteries. If you have AC power available, that's the easy solution. But what about DC power? In the [July 2018 Wave-lengths](http://bit.ly/2KzZ6Gy) (<http://bit.ly/2KzZ6Gy>), I had an extensive discussion about solar power. So I won't go

over that here. Your vehicle is another option as is another (hopefully larger) battery.

Another option is a 12VDC power pack. QST recently reviewed the [Bioenno Power BPP-M400](http://bit.ly/2NbQZVb) (<http://bit.ly/2NbQZVb>). I don't have any experience with it, but I find it intriguing that it has 12VDC outputs, 5VDC USB-A outputs, 3VDC outputs, a 300W pure sine wave inverter, vehicle starter capability, and all of that for under \$400 (on sale).

Once you have the DC source, if your equipment doesn't have its own charger, then any RC supply store or website will have a bunch of DC-DC chargers available. Even the cheap ones will support all of the common battery chemistries including lead acid, lithium ion/polymer, lithium iron phosphate, NiCD, and MiMH.



RC DC-DC chargers will handle many different battery chemistries and amps. This one will do up to 10A. It's charging a 4000 mAh LFP battery under one of my Kenwood D710GA radios.

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Wavelengths

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. We welcome new and experienced Amateur operators and those interest in becoming an Amateur operator to attend our meetings.

