



Hamgram

December 2018

Winona Amateur Radio Club
Winona, Minnesota



Foerster



Goltz



Tagliapietra

Club officers set for '19

Club members re-elected three executive board members during the club's annual meeting Nov. 15. Members Mike Foerster, WØIH; Dan Goltz, WKØW; and Lance Tagliapietra, ADØUT; were re-elected to two year terms.

Current club board members include Harro Hohenner, KG6RLM; Clare Jarvis, KØNY; Paul Schumacher, KØZYV; Foerster, Goltz and Tagliapietra. The club's custodian is Erik Brom, WBØNIU. The custodian automatically is a member of the board.



Holiday party Jan. 18

Winona's lodging treasure is again the site for the annual Winona Amateur Radio Club Holiday Party potluck. Join hosts Erik, WBØNIU, and Jodie, NØNUO, Brom at the beautiful Goodview Haven, 3655 W. 6th St.

Watch the January Hamgram for details

MNQP set for Feb. 2

Plans are underway for the club to compete again in the Minnesota QSO Party, Sat. Feb.



WARC part of train wreck

A train derailment right in the middle of Winona spilled dangerous flammable liquid, a situation requiring the best efforts of first responders and others to make sure the city would be safe. Amateur radio operators from the Winona Amateur Radio Club got good marks for their efforts for their participation in a November Winona County Tabletop Exercise. "The HAM/ARES communication plan was impressive and facilitated coordination amongst the response," according to the after-action report.

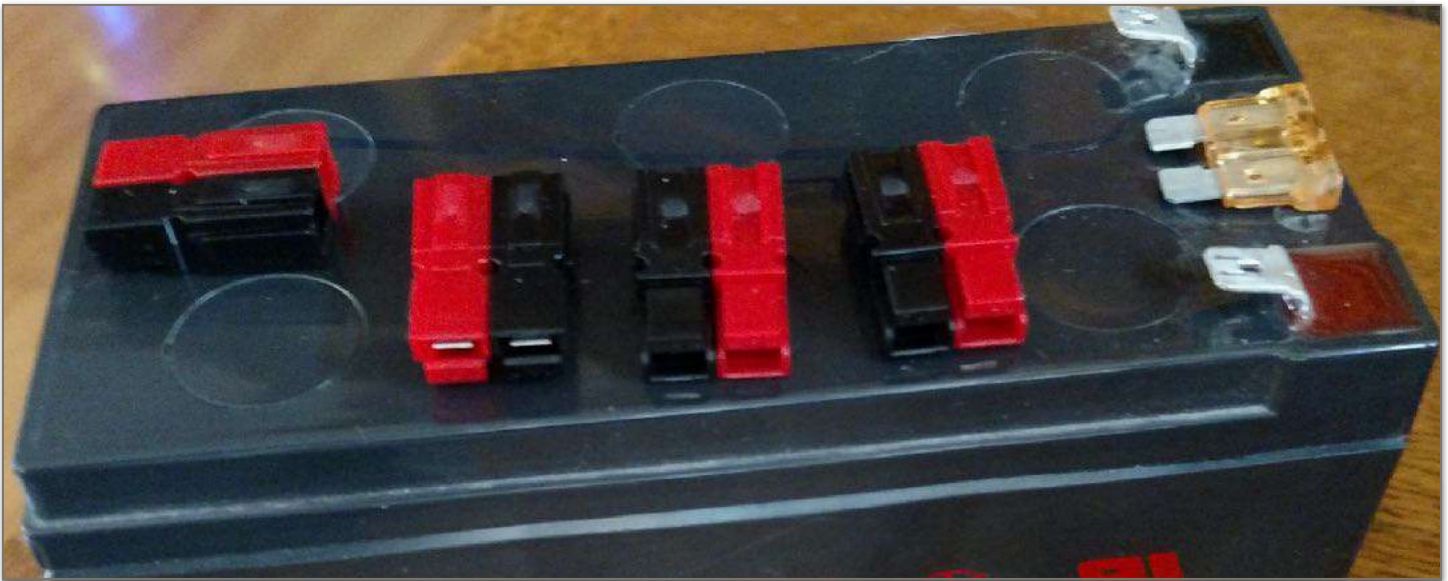
Club members Dan Goltz, WKØW, and Walt Kelly, KEØXI, participated in the scenario.

"Thanks for being prepared to help in an emergency," said County Emergency Management Coordinator Ben Klinger, KEØTNM.

Repeater update project

Troubles with one of the club's Yaesu Fusion repeaters turned into a project to replace both of them with the latest, most flexible machines. At a board meeting someone asked how the club would pay for the new repeaters and a couple members offered to donate to the project. Their generosity led to others surpassing the \$1,000 goal with donations to date totaling \$1270.42

Members contributing to this project are: Eric Brom; Bill Davis; Dan Goltz; Les Hittner; Harro Hohenner; Clare Jarvis; James Jarvis (A.K.A APRS World); Ben Kuhn; Keith Laken; Richard Lindner; Marvin Rodvold; Bob Seaquist; Paul Schumacher; Tom Wilmot.



A Neat and robust way to use a small AGM battery

By Erik Brom, WBØNIU

Every once in a while a couple ideas come together to solve a problem!

First train of thought

During Ride the Ridges in September, we struggled a little bit with the sag wagon setups. One of the batteries we used had a loose terminal that came off a time or two during the event. The terminals are exposed too, so they have to be covered somehow, usually with black tape. I always put a fuse right off the positive terminal, so it all ends up with a messy, fragile setup. Lately I've also been putting a diode in series with the power outlet on the car (more on that later), one more moving piece. Since then, I've been trying to think of a more compact and robust setup. There are some nice battery boxes with terminals on them for larger batteries, but I was looking for something that would perhaps slide under a car seat.

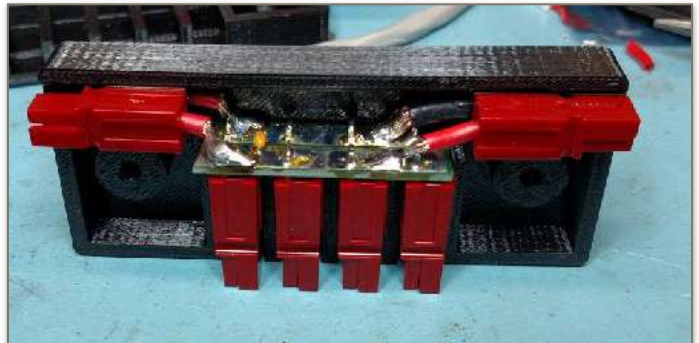
Second train of thought

Mike, WØIH, mentioned that we are running out of connections on the Rig-Runner 12V power distribution center at Witoka, so I was thinking of solutions for that, and just before Thanksgiving I wanted to re-organize the mess of wires on my desk, and I needed a power distribution center for that so, I started looking around. On eBay I came across a 3D printed box for just \$5 that holds the power poles which you add yourself to make the distribution center. It comes in two variations and so I ordered two of each. It turns out they are made by Scott, KBØNLY, in Tyler, just west of Mankato. He has a bunch of other interesting ham related items in his eBay store "thecrazyham"

Collision!

Even before my order arrived from Scott, the light (LED nowadays!) came on in my head: could we make a variation of his distribution block which would be a low profile cover on top of the battery? His store mentions that he does custom items, so I contacted him. He was willing, so we worked together to finalize the concept, and then he designed and printed some. They are now available on his eBay store

<https://www.ebay.com/itm/Anderson-PowerPole-AGM-Battery-Distribution-Block-PP15-PP45-4-Output/183559249203?hash=item2abcfbdd33:g:eR0AAOSwyUFb~0SC:rk:1:pf:0> and I have two on hand. The box will sit on top of the battery, fastened by some tape, Velcro, etc. The battery terminals are enclosed in the box, and it includes a plug in ATO type fuse holder, and four power pole connectors. I'll wire mine so that one of the PowerPoles has the diode in series, so it will be the charging port.



Scott also told me about a PC board vendor that I wasn't familiar with, so I designed a little board for the original distribution blocks. That worked out well so I've ordered one for the battery cover. The lowest cost option from this vendor, JLCPCB.com, gets you 10 boards, up to 100mm x 100mm, with full features including solder masks and silk screen, for \$2 + \$18 shipping. I paid \$16 extra for 2oz copper. They have a free design program, but they accept Gerber files from any source.

See "Battery," continued on page 3

Battery, continued from page 2

This is going to be a great addition to my collection of "go items," and I highly recommend that everyone use these on their batteries or go out and buy a battery just for this project!

The block is \$8 plus a little over \$3 in shipping. The remaining parts cost about \$15. If you wish to build one, I can help you locate the parts, I usually have everything on-hand.

More about the diode and using it in a vehicle

We've been doing SAG wagons for many years, but I got a bit more involved recently, and contemplated the best way to configure the station. We are usually using voice and APRS, and we need the station to run for 12 hours or so, regardless of whether the vehicle is on or not. The amount of transmission is unknown, but in our hilly territory here in southeast Minnesota, we typically use full power on both the voice and APRS channels. In normal mobile usage, it's not uncommon for someone making a long transmission to blow a vehicle fuse or melt a power outlet plug. We haven't had that happen during an event, but we want to proactively avoid it!

We could use a large battery, but we don't always have enough on hand and they would take up a lot of space. Even with a battery that *should* last all day, for robustness, I would also like to be able to tap into the vehicle's power. Since we don't have a chance to investigate the vehicle beforehand, there are a lot of unknowns: what is the current capacity of the power outlet circuit. Is it switched with ignition? If we put a battery in parallel, what happens when ignition is off? In the 2006 Scion XB I used to have, if I put a battery on the power outlet and turned the car off, it kept the vehicle's radio and whatever else was on that circuit powered up.

What I've previously done is built a "PowerPole diode": just an axial diode with a pair of PowerPoles on each end. We plug together cables to run from the vehicle's power outlet, through the diode and then connect a smaller (8Ah size) AGM and all the radios together.

I haven't actually taken any measurements, but the idea is that the vehicle will keep the battery charged when it is running, but the voltage drop in the diode will cause more current to be drawn from the battery during transmission, limiting the maximum current draw from the vehicle.

I included a place for the diode on my circuit board, so I have one "charging" port, and three load ports.

Last minute notes

The PC boards just came in and I put one together quickly so I could finish this article. It will take some thought to figure out the best way to assemble them. The boards didn't come with solder mask, I'm not sure if I didn't order them correctly or what. Anyway, the final product is great!

Year-end review**2018 year of public service for club**

Ride-The-Ridges, The Waumandee Hill Climb, Triona and Stormspotting headlined 2018 for members of the Winona Amateur Radio Club. It was a year when the club's public service efforts were quantity and quality. There was general operating too with the Minnesota QSO Party and ARRL Field Day along with friendly socializing at many breakfast and other occasions.

It took many club members to make a big impression on Winona Rotarians running the Ride-The-Ridges bicycle tour. *"Unless a person works with a radio club member as I do, I know it would be impossible to realize how very, very helpful – and almost necessary – to have the radio involved,"* noted ride chair Mike Bernatz.

Two weeks later in September club operators provided communication for the Minnesota Austin-Healey Club's Waumandee Hill Climb. It was a challenge requiring many Hams in a new location and it worked out very well according to pleased organizers.

The Minnesota QSO party was among the first events in 2018 for the Winona Amateur Radio Club setting a precedent for the rest of the year. WARC comfortably tallied Qs from the fine setting of Paul Degallier's, ADØUU, garage. Then there was the successful Field Day location, Wincrest Park, for the traditional end-of-June operation.

The WARC's adoption of Yaesu Fusion repeaters has blended challenges with opportunities, the latter an on-going transition to machines that can link with each other and with others around the world.



WARC Executive Board

Wednesday, Dec. 5, 2018, Watkins Hall
Winona State University
(Unofficial minutes)

Treasurer's Report

Balance on 10/31/2018 \$2042.62
Payments:
New Repeater (Mike Foerster) - \$500.00
Outstanding checks \$100.00
Balance reported by Merchants Bank \$1,642.62

Repeater Committee: We are in the middle of upgrades of Yaesu Fusion Repeaters. Both new repeaters have been received. Committee members are working on networking and linking them for enhanced service.

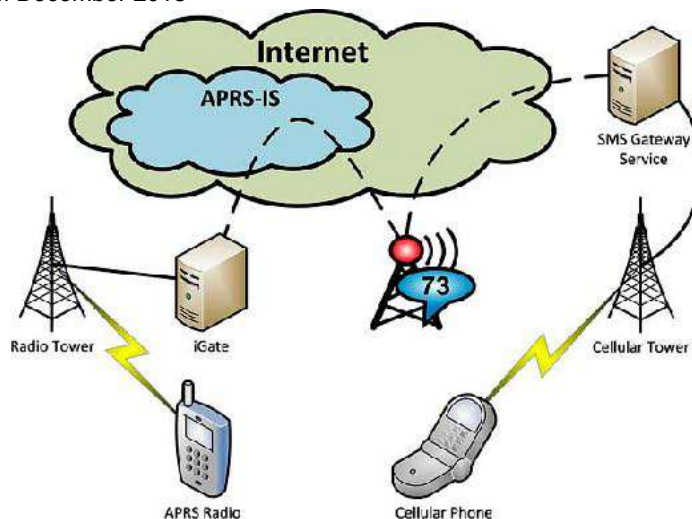
Public Service Committee: Dan is concerned that with the graying of our membership that we can still provide the support to the community that we once did. He wants to continue that conversation.

The **Holiday Party** be held at Goodview Haven Thursday, Jan. 17. A social hour begins at 5:30 p.m. with dining at 6:30 p.m. Those attending (with their spouse or guest) should bring a dish to pass. Soft drinks will be provided by the club.

2019 dues due

Your membership dues are still only \$25 per year for an individual and \$30 for a family.
Dues are payable by the end of December.
Club dues support many activities of the club including maintenance of hardware, cost of insurance, Field Day expenses, and others.

Mail to:
Winona Amateur Radio Club, Inc.
PO Box 1451
Winona, MN 55987



Thumbs-up to texts

Get your thumbs ready to one-up a teenager. With our handheld we can out message them—and message from out—because our APRS equipped radio can send and receive text messages far from any cell service. SMSGTE is an application that allows amateur radio operators to exchange text message between their APRS* radios or clients and SMS (cellular text messages).

The application removes the messaging barrier between APRS* and the SMS world. The most compelling use of this gateway is for emergency communications. Even when outside of cellular coverage, a VHF radio can usually reach an APRS* digipeater, allowing it to send and receive messages to cellular users.

ending from APRS to SMS

To send a message from an APRS station, simply address your message to SMSGTE with the following format:

@<number> <message>

Example:

To: SMSGTE

@6135551234 No cell coverage here, ping me on radio

When the message is delivered to the SMS user (usually a cell phone), the message will appear as follows:

@VE3OTB-10 No cell coverage here, ping me on radio

For more information go to: <http://smsgte.wixsite.com/smsgte>

Preventive maintenance gets ahead of trouble

A preventive maintenance program is a good idea for your ham station, allowing you to head off many potential problems around the shack. Drawn the plan on a sheet of paper, a PC or smart phone as reminders of what and when something needs to be done.

For example:

Antennas: There is nothing worse than having your antenna fail in the middle of a period of nasty weather. Periodic inspections can discover frayed ropes, deteriorating insulation, corroding connections, overhanging dead tree limbs, etc.

Batteries: If you still have a few SLA batteries around keep them near a full charge on standby; if they sit in a discharged state they can go bad in a few months.

Tools: A dull knife or drill bit, a snaggle-tooth Phillips screwdriver or a rounded-off slot screwdriver can be a real pain. Also they can damage equipment or yourself. Sharpen or replace them.

Vintage gear: Antique radios need an occasional workout to drive out moisture, keep lubricants from solidifying, and keep oxides off of contacts. Don't leave a mechanical band switch parked in one position, over the years it can weaken the contacts. Blow or wipe out dust. A good spray helps protect switches. Jiggle tubes in their sockets to break up any oxidation. Tighten loose hardware; look for rust. Check for deterioration of power cords.

Shack cleanup: It's time to tidy up a bit when you can't see the desktop. It's annoying to run out of workbench space in the middle of a project or to be unable to locate a certain book or paper. An oversize clear plastic jar is good for odds and ends and miscellaneous parts. Periodically these need to be sorted out.

Try to perform most your preventive maintenance at least every three months. A good time for such is during rainy days, cold winter nights or hot summer middays.

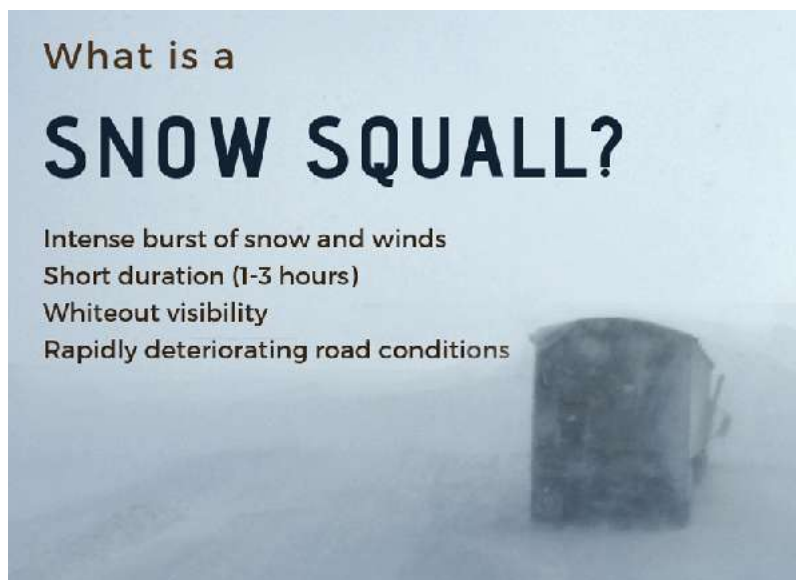
Winter safety

It's December which means meteorological winter has arrived. Join NOAA and over 8600 fellow WRN Ambassadors by helping communities prepare for the worst Old Man Winter can dish out.

Our winter seasonal safety campaign has begun! This year's theme is focused on winter driving but includes other hazards that many areas could see this winter:

Serve as a force multiplier by engaging your employees, customers, and social media network with Weather-Ready Nation content.

One new NWS warning this year nationwide is a snow squall warning, which warns against short-lived bursts of heavy snowfall resulting in a rapid onset of near zero visibilities and slick roads. Snow squalls are often accompanied by gusty winds and have an intensity similar to short-term blizzard conditions.



WØNE Repeaters

146.640 PL 100.0 Hz *

146.835 PL 131.8 Hz **

444.225 PL 100.0Hz FM Voice C4FM Digital

442.150, 100 Hz. FM Voice C4FM Digital

* SkyWarn Net when activated.

** Sunday Night Net—8:30 p.m.

Winona Amateur Radio club meetings are 7 p.m., third Thursday of the month at the Winona County Office Building, 202 West Third St., Winona. The monthly program is open to the public.

Winona Amateur Radio Club, Inc. P.O. Box 1451, Winona, MN 55987

President: Paul Schumacher, KØZYV, pschumacher@winona.edu

Vice President: Lance Tagliapietra, ADØUT, lancetag@hbc.com

Treasurer: Harro Hohenner, KG6RLM, Harro@hohenner.com

Secretary: Clare Jarvis, KØNY, cjarvis@hbc.com

Custodian: Erik Brom, WBØNIU, ewbrom@hbc.com

At Large: Dan Goltz, WKØW; Mike Foerster, WØIH

Dues: \$25 per calendar year per license holder. \$30 per calendar year for all licensed members of the same family within the same household.

Send dues to: Treasurer, P.O. Box 1451, Winona, MN 55987

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