



# FEEDBACK

February 2017

### Your Story:

Do you have a story, humorous or otherwise about amateur radio? If so, please contact the newsletter editor (ac8ps@arrl.net) and get it published in FEEDBACK.

If you would like to place a classified ad to sell or purchase amateur radio related items, please contact the editor.

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### Crossroads Hamfest Reminder!

The 57<sup>th</sup> Michigan Annual Crossroads Hamfest is almost here! You can find more information [here](#) at the W8DF website. There is a \$5 entrance fee at the door, and the flyer and registration form can be downloaded [here](#).

The location is at the Wings Stadium complex at 3600 Vanrick Dr., Kalamazoo Township, MI 49001. (However, 3705 Vanrick or 42.2544796N, 85.533357W will give you better directions from your GPS)

### What /P ops are you going to be doing in 2017?

By Dan Romanchik, KB6NU

I've written before about what hams who like to operate in the great outdoors are going to be doing instead of National Parks on the Air. Some states are going to be holding contests to encourage hams to operate from their state parks. For example, the Florida State Parks on the Air will be on the first Saturday in April, April 1, 2017 from 1400 UTC to 2200 UTC. It's being run by the Lakeland Amateur Radio Club.

The Texas State Parks on the Air contest will be held the next weekend on April 8-9, 2017. Its sponsor is the Lake Area Amateur Radio Club (K5LRK). The Ohio State Parks on the Air contest happens on September 9, 2017.

Here in Michigan, a group has started the Michigan State Parks on the Air program. This is a bit more ambitious, in that it's more like the ARRL's National Parks on the Air. That is, it's not just a contest, but rather an operating event that will take place over a period of three years.

Unfortunately, this group still hasn't published any rules, nor do they have a website yet. For information on MSPOTA, you have to go to their Facebook page and glean what you can from there. One thing that confuses me is that they have been saying that only some of the parks will be "activated" each of the three years. So, if you don't happen to live near a park that's activated when you want to operate there, you're kind of out of luck when it comes to participating in MSPOTA.

Perhaps the closest you can come to the NPOTA experience is Parks on the Air, which is the NA chapter of World-Wide Flora and Fauna. They have cataloged nearly 3,500 national and state parks that you can activate in every state, plus Puerto Rico.

Not only that, the rules for Parks on the Air couldn't be any simpler. The rules fit on a single page and there are only six bullet points!

There are nearly two dozen parks that are within an hour's drive from my home in Ann Arbor. I'm looking forward to activating as many of them as I can this spring, summer, and fall.

## SMARS Meeting Minutes 01/19/2017

Meeting called to order at 7:00 p.m.  
Pledge of Allegiance  
Introductions

**Officers present:** Gary N8QC, Stephanie W8AEZ, Jan W8JKG, Tom WR8G, Jay N8ARR. 19 members in attendance total.

Secretary's report was accepted.  
Treasurer's report was accepted.

### Committee reports:

**Hamfest 2017** – Discussion centered around the door prizes. We will purchase a pair of lower cost hand held transceivers (Baofeng) and one higher priced one (Wouxon) for the Grand Prize. There is a dual band mobile antenna in stock from last year and that will also be used. We will pick up a moderately priced multimeter from Harbor Freight. We will also look into Gift Certificates from places like HRO, DX Engineering or MTC. The Hamfest has been posted on the Wings Event Center website but not on their Facebook page. Jay called Emilie to request its inclusion and was told it would happen.

**SKYWARN** – Bret reported that Battle Creek SKYWARN training will be held March 18th (!) from 10-12 at Lakeview Middle School. Latest report is that SKYWARN meetings will resume in February rather than in March.

**VE session** – Next session will be on February, 23rd. An error appears on the SMARS website concerning dates and will be corrected.

**Field Day 2017** – Still too early to begin discussions and planning.

**MSPOTA** – Smokey reported that the applications have been submitted and we are awaiting insurance information, which is still pending. An old policy has been found but since it has expired we must make a new application to get re-instated. That process has begun. Smokey will keep Ft. Custer informed of progress. (Late

news: Smokey reports that there may be a conflict with our preferred location and the needs of the bike race promoters. He will keep us informed.)

### Old Business

**MIS Hamfest** – The board has approved a donation of \$400 toward the sponsorship of the Hamfest. Applications are available for anyone who would like to make private contributions. The Great Lakes Amateur Radio Association, as it is called, is a 501(c)(3) organization which makes your donation tax deductible.

The widow of Jerry Bailey (SK) has a lot of equipment to be sold. Interested parties should make contact. The material available might be posted on the club's FB page. (Late news: Smokey and Ivan have visited and checked out what is available; interested parties might want to contact them.)

### New Business

Information was reported about a new form of radio called DMR that several HAMS have investigated. There is new hardware available that allows connection using D-STAR using a DV Mega board. Terry N8LN is looking into it. (If it is new and promising, Terry is all over it!!)

**Winter Field Day** – Several members of the SKYWARN group will be participating in a winter Field Day at "Uncle Larry's" near Marshall. Anyone interested should contact Smokey.

Gary reported that the church has been paid and a new contract has been signed. We are good for another 6 months. Also, the church administrators have told us that the troubles they have had with "users" does not apply to our members at all. That is good news but not unexpected; we are a good and honest group.

Meeting adjourned at 8:00 pm.

Respectfully submitted,  
Jay Jarrett N8ARR, Secretary

## Board Meeting 02/07/2017

**Officers present:** Gary N8QC, Jan W8JKG, Jay, N8ARR, Tom WR8G.

**Officers absent:** Steph W8AEZ

**Others present:** Smokey N5MKY, Kyle W8KDB, Dave Glenn W8DKG representing Custer Rec Area.

Called to order at 17:30.

**MSPOTA** – Dave and Smokey gave an update on the location available to us for the MSPOTA activation. Because the pavilion area is needed for the bike racers, we will move to the equestrian area instead. This is a crowned area, good for drainage and should offer a large stable area for our trailer setup. We are still utilizing the same dates; May 5, 6, and 7. Setup will occur on Friday the 5th with operation on Saturday and teardown on Sunday.

The state is working on creation of a universal application form that will be good for the entire 3 year run of the MSPOTA operation. If one of these forms becomes available we might have to fill it out. The current application was signed at the meeting by Gary and was turned over to Dave, signifying our intent. We need to come up with a way to hang our banner but this might be as easy as providing a couple of T-bar fence posts.

We intend to utilize only one trailer and that would be the VHF/UHF trailer.

This is an ongoing project and more information will be worked out as time goes on.

**Insurance** – A quote should be forthcoming from the insurance company “soon”. Once received, if the premium is within 10% of the last premium, the board authorized Jan to cut a check immediately upon receipt. This is needed for the Hamfest as well as MSPOTA and time is short!

**Church rental** – We have received a receipt for our six months rent that was submitted at the last General meeting. We are in good stead for the next six months.

**MIS Hamfest** – Gary received an email from Larry Camp regarding the club support for the Hamfest to be held at Michigan International

Speedway in October. Jan was asked to send a check to Larry for \$400 right away. To this she agreed as soon as she confirmed the address. It was supplied.

**Crossroads Hamfest** – Agreed that Jay will acquire 2 Baofeng HTs and one Wouxon HT for Grand Prize. A multimeter has already been purchased and a dual band mag mount mobile antenna is still available from last year. Jay will also inquire into Gift Certificates from DX Engineering.

As for table sales, the mass emailing has gotten responses from a couple of vendors who have promised that their reservations will be “coming soon”. Chicago Surplus won't be coming due to health problems but another surplus company will be asked to come in.

**Custer Antenna Farm** – Smokey brought up the idea that the antenna farm on the Custer Rec Area land might be acquired from the National Guard for use by ham clubs, emergency departments, etc. A discussion about the feasibility of acquisition followed. Smokey has agreed to look into what might be involved. Many questions abound.

Meeting adjourned at 1825.

Respectfully submitted,  
Jay Jarrett, N8ARR, Secretary

## SB QST ARL ARLB002

### ARLB002 FCC Dismisses Two Petitions from Radio Amateurs

The FCC has turned down two petitions filed in 2016, each seeking similar changes in the Part 97 Amateur Service rules. James Edwin Whedbee, N0ECN, of Gladstone, Missouri, had asked the Commission to amend the rules to reduce the number of Amateur Radio operator classes to Technician, General, and Amateur Extra by merging remaining Novice class licensees into the Technician class and all Advanced class licensees into the Amateur Extra class. In a somewhat related petition, Jeffrey H. Siegell, WB2YRL, of Burke, Virginia, had requested that the FCC grant Advanced class license holders Morse code operating privileges equivalent to those enjoyed by Amateur Extra class licensees.

"Thus, Mr. Siegell's proposed rule change is subsumed within the changes Mr. Whedbee requests, so our analysis is the same for both proposals," the FCC said in dismissing the two petitions on January 5.

The FCC streamlined the Amateur Radio licensing system into three classes - Technician, General, and Amateur Extra - in 1999. While it no longer issues new Novice or Advanced class licenses, existing licenses can be renewed, and Novice and Advanced licensees retained their operating privileges.

"The Commission concluded that the three-class structure would streamline the licensing process, while still providing an incentive for licensees to advance their communication and technical skills," The FCC recounted in its dismissal letter to Whedbee and Siegell. It specifically rejected suggestions that Novice and Advanced class licensees be automatically upgraded to a higher class, concluding that it would be inappropriate for these licensees to "receive additional privileges without passing the required examination elements." The FCC cited the same reason in 2005, when it denied requests to automatically upgrade Technician licensees to General class and Advanced licensees to Amateur Extra class, as part of a wide-ranging proceeding.

The FCC said the two petitions "do not demonstrate, or even suggest, that any relevant circumstances have changed that would merit reconsideration of those decisions."

Whedbee had argued that automatically upgrading current Novice and Advanced classes would simplify

the rules and reduce the Commission's costs and administrative burden, but the FCC said Whedbee provided no evidence that an administrative problem exists. "Moreover, such benefits would not outweigh the public interest in ensuring that amateur operators have the requisite incentive to advance their skill and technical knowledge in order to contribute to the advancement of the radio art and improvement of the Amateur Radio Service," the FCC said.

"The Commission has already concluded that it will not automatically grant additional privileges to the discontinued license classes," the FCC said.

"Consequently, we conclude that the above-referenced petitions for rulemaking do not warrant further consideration at this time."

### Introduction to HSMM-Mesh

with commentary from Scott Scriber, AC8PS

High-speed multimedia radio (HSMM) is the implementation of wireless data networks over amateur radio frequencies using commercial off-the-shelf (COTS) hardware such as Wi-Fi access points and D-STAR equipment. Only licensed amateur radio operators may use amplifiers and specialized antennas to increase the power and coverage of the Wi-Fi signal. The idea behind this implementation is to use the Amateur bands, namely 420 MHz (70 cm), 900 MHz (33 cm), 1270 MHz (23 cm), 2.3 GHz (13 cm), 3.4 GHz (9 cm), and 5.8 GHz (5 cm) under the U.S. Federal Communications Commission (FCC) Part 97 rules (amateur radio service) instead of the Part 15 rules (unlicensed). This enables licensed amateur operators to legally use higher output power for wireless devices and allows for longer-range communications. Such communications can be used to assist in emergency communications and disaster relief operations and in everyday amateur radio communications.

HSMM can support most of the traffic that the Internet currently does, including video chat, voice, instant messaging, email, the Web (HTTP), file transfer (FTP), and forums. The only differences being that with HSMM, such services are community instead of commercially implemented and it is mostly wireless. HSMM can even be connected to the Internet and used for web surfing, although because of the FCC regulations on permitted content, this is done only when directly used for ham radio activities (under Part 97). Using high gain directional antennas and amplifiers, reliable long-distance wireless links over many miles are possible and only limited by propagation and the radio horizon.

Due to the nature of mesh networks, it is capable of being self-healing. If one link goes down, a connection can still be held if there is another link in range. Different links can roam from place to place and still maintain a connection if, as stated above, there is at least one link in range. This kind of network operates on the OLSR (Optimized Link State Routing) protocol which monitors the device's links and moves data to its destination by that manner. It is known for being robust and stable; perfect for an emergency situation in which digital data needs to be transferred quickly.

While not commonly implemented, mesh nodes can be set up with relative speed with guides available at the project page (<http://www.broadband-hamnet.org/>). If you are interested in this technology, you can visit the above link for more information.

### **Alaska's HAARP Facility Once Again Open for Business**

The High Frequency Active Auroral Research Program (HAARP) in Gakona, Alaska, will soon undertake its first scientific research campaigns since the facility was taken over by the University of Alaska Fairbanks (UAF) Geophysical Institute 18 months ago. Among the investigators is UAF Researcher Chris Fallen, KL3WX, who will be working under a National Science Foundation grant, "RAPID: Spatiotemporal Evolution of Radio-Induced Aurora." Fallen says the HAARP transmissions will take place within the facility's transmitter tuning range of 2.7 to 10 MHz and should be audible outside of Alaska and may even produce visible effects within the state.

"This time my experiments will largely focus on artificial radio-induced airglow that potentially can be photographed from nearly anywhere in Alaska — weather permitting," Fallen told ARRL. "I plan to start and stop each experiment block with an audio Luxembourg-style broadcast — transmitting two amplitude-modulated carrier waves at different frequencies separated by about 1 MHz, with the resulting skywave signal being a mix of both frequencies."

Fallen said that he has prior success reproducing the "Luxembourg effect" using two DTMF tones. "But this time, I have a short simple musical composition recorded by a local musician," he said. "It was composed specifically to take advantage of the Luxembourg effect."

According to UAF, Fallen, an assistant research professor in space physics, will create an "artificial aurora" that can be photographed with a sensitive camera within Alaska. The phenomenon has been created in the past above HAARP during certain types of transmissions.

Just which HF frequencies Fallen will use won't be determined until shortly before he begins his research. "The specific frequency chosen during a particular experiment depends on the experiment's objectives, FCC regulations, and ionospheric conditions at the time," Fallen explained. He will use ionosonde data to guide frequency selection.

In an explanatory blog, Fallen explains that HAARP scientists use the ionosonde to estimate two important parameters: (1) the amount of low-level ionosphere D-region HF radio absorption that frequently occurs due to natural, but not well understood, processes that prevent HAARP radio wave energy from reaching the higher ionosphere E and F regions; and, (2) the ionosphere vertical "critical frequency" [sometimes referred to as foF2], above which any radio transmissions pass through the ionosphere into space rather than being reflected or absorbed."

Fallen said experiment times and frequencies for his airglow and Luxembourg experiments will be updated on his blog and on his Twitter account linked in the blog. He encourages radio amateurs and SWLs to record the events they hear and post reports to social media or e-mail him.

Built and operated by the US Air Force until August 2015, HAARP includes a 40-acre grid of antennas and a very high-power array of HF transmitters to conduct ionospheric research. Scientists later this month will use HAARP to conduct other experiments that will include a study of atmospheric effects on satellite-to-ground communications and over-the-horizon radar experiments.

Research funding agencies also include the US Department of Energy's Los Alamos National Lab and the Naval Research Laboratory. HAARP also has a Facebook page.

#### **Note from the Editor**

*I want to call to attention Ms. Stephanie Halbert, W8AEZ, for managing the club newsletter over the past 6 months when my capacity to do so was limited. Thank you very much Stephanie!*

# SOUTHERN MICHIGAN AMATEUR RADIO SOCIETY FEEDBACK

## S.M.A.R.S. W8DF Club Repeaters

- 2M Repeater 146.66MHz, -600KHz offset, CTCSS 94.8Hz
- 2M DStar 146.79MHz, -600KHz offset
- 70cm Repeater 443.95MHz, +5MHz offset, CTCSS 94.8Hz
- 1.25M Repeater 224.24MHz, -1.6MHz offset
- APRS Digipeater/igate, 144.39MHz

70cm & 1.25 meter repeaters are linked, and also available via echolink.

## Other Repeaters

- 2M Repeater 147.12MHz, +600KHz offset, CTCSS 186.2Hz
- 70cm Repeater 442.35MHz, +5MHz offset, CTCSS 94.8Hz

<p><b>Club Meeting</b> 3rd Thursday of every month Maple United Methodist Church 342 Capital Avenue NE Battle Creek, MI 49017</p>	<p><b>SKYWARN Coffee</b> 1st Saturday of every month Immediately after Siren Test Coney Island, N.E. Capital Battle Creek, MI</p>	<p><b>BLB Luncheon</b> 1st Thursday of every month Coney Island, N.E. Capital Battle Creek, MI</p>	<p><b>SMARS Breakfast</b> 2nd Saturday of every month Coney Island, N.E. Capital Battle Creek, MI</p>
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<p><b>SMARS Nets:</b> Monday—Friday 11:30 AM, 146.66 Sunday Evening 8:00 PM, 146.66 Monday 8:00 PM, 224.24 / 443.95 Wednesday 7:00 PM, 224.24 / 443.95 Wednesday 8:00 PM, 28.365 Saturday 8:00 PM, 224.24 / 443.95 <b>Other Nets:</b> Skywarn Net: Tuesday 7:00 PM, 147.12  <i>Please see page 3 for offsets and CTCSS tones</i></p>	<p><b>Upcoming Events:</b> Club Meeting: Feb. 16<sup>th</sup> @ 7:00pm VE Session: Feb. 23<sup>rd</sup> @ 7:00pm BLB Luncheon: Mar. 2<sup>nd</sup> @ 11:30am *Board Meeting: Mar. 7<sup>th</sup> @ 5:30pm Coney Island Cafe, 962 Capital Ave. NE SMARS Breakfast: Mar. 11<sup>th</sup> @ 8:30am Crossroads Hamfest: Mar. 18, 8am-noon Wings Stadium Annex, Kalamazoo, MI <i>*Note the change in the meeting time (effective February 7, 2017)</i></p>
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