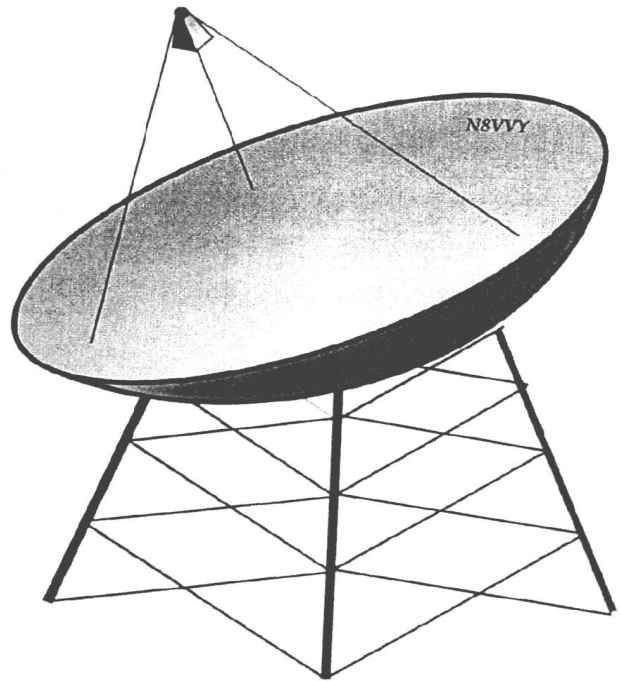


Next Meeting: Friday 6:30 PM, Sep 27 2019 at the MCL Cafeteria in Kettering

ANOMALOUS PROPAGATION

Newsletter of the **The Midwest VHF/UHF Society**

Editors: Open



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Annual membership is \$12.00.

Make checks payable to Joe Muchnij, N8QOD. Mail
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www.mvus.org

September 2019

Beacons: 1296.079 W8KSE EM79ur Dayton, OH---- 2W to Big Wheel at 800' AGL.

Listen for the K9AYA Beacons at EM79qk, 2W @ 10,368.000 MHz

President's Column	3
Officers of MVUS	2
This and That	4
MVUS Picnic Photo's	5
MVUS Meeting Notes	6
Annual RRL Digital Conference	7
ARRLSept2019VHFContestNotes	8
VNA Comparison	10

MVUS Officials:

Pres. Tom Holmes, N8ZM,
Vice Pres. Mike Suhar, W8RKO
Secretary, Jim Bacher, WB8VSU
Treasurer, Joe Muchnij N8QOD
Newsletter Editor, Open
Membership: Joe Muchnij, N8QOD
E-mail List Admin: Jim Bacher, WB8VSU
Website: <http://www.mvus.org/>

Presidents Column

Last month we held our annual MVUS picnic, once again at the home of Daun and Karen Yeagley, near Wilmington, and it was a lot of fun, as always. Thanks to them both for again allowing us to invade their space, and for allowing me to again risk burning down their house while cooking on the grill. Actually, the flames from the low-fat burgers were kind of a disappointment this year, but maybe only to me. We had a good crowd, lots of good conversation, and measured some antennas, or tried to. I think there will be an article in this issue with more details about that, so stay tuned.

At the business meeting (in the middle of a picnic we stop for a meeting?!), we elected officers, always the same bunch of miscreants it seems. We also decided that Life memberships were an OK thing to do, so see elsewhere for info on that. Treasurer Joe says our finances are in good shape, so we are looking for projects of interest to the members. Suggestions are welcome!

Our long-time editor, Gerd, WB8IFM, reminded us that he really would like to hand off that job, and I am looking for volunteers to help by taking on pieces of the task. Jim, WB8VSU, has agreed to do the work of taking in articles and publishing Anom Prop, including emailing and printing, but he does not want to be the editor or solicitor of written material. If someone would please take that on, we can continue to publish an interesting and informative monthly newsletter. Gerd has agreed to provide a small amount of input, but after so many years, he deserves both a break and our sincere appreciation for his efforts. Thank you, Gerd!

9/27 is our next meeting at the MCL, and in addition to our usual business, the N8GA gang will be there to figure out antenna plans for the future at our contest site and how to get them implemented. Should be interesting to watch! So I hope to see you there!

de N8ZM

This and That

Were any of our readers part of the ham radio transmission project during NASA's Juno Mission to Jupiter?

Watch this video: <https://youtu.be/QOmu227V34Q>

Here are details in an ARRL article: <http://www.arrl.org/news/nasa-s-juno-spacecraft-hears-hams-say-hi>

Mission Goal: Understand origin and evolution of Jupiter, look for solid planetary core, map magnetic field, measure water and ammonia in deep atmosphere, observe auroras. Launched: Aug. 5, 2011

Arrival: July 4, 2016

More details: www.nasa.gov/mission_pages/juno/main/index.html

Anyone has distributors taking Pre-orders for a new V/U Mobile DMR / Analog radio.

LimeMicro has a new module in process named LimeSDR RPE. It turns the LimeSDR into a transiever.

MVUS Picnic Photos



MVUS Meeting Notes

MVUS Annual Meeting Notes. August 24, 2019

Tom called the meeting to order about 3:30 PM

Officers were re-elected.

Pres. Tom Holmes, N8ZM,

Vice Pres. Mike Suhar, W8RKO

Secretary, Jim Bacher, WB8VSU

Treasurer, Joe Muchnij N8QOD

Dana proposed life membership, and it was discussed and approved at \$240.

Newsletter editor replacement was discussed.

Discussion of Hamvention, TAPR, September VHF contest.

Meeting ended at 4:10 PM.

MVUS Annual Meeting Notes. August 21, 2018

Joe instigated starting at 12:45 PM

Joe gave a financial report.

Tom started discussion of MUD 2018 including pushing out a list of current papers.

Discussion of things to be tested.

CME was discussed

WWV shutdown discussed

Tom started elections at 1:08

Officers were re-elected.

Pres. Tom Holmes, N8ZM,

Vice Pres. Mike Suhar, W8RKO

Secretary, Jim Bacher, WB8VSU

Treasurer, Joe Muchnij N8QOD

Voted to remove term limits.

Gerd passed around sign in

Annual ARRL Digital Conference

The Annual ARRL/TAPR Digital Communications Conference ("DCC") was held in Detroit on Sep. 20-23. I think that Joe N8QOD and I were the only Dayton locals present, but Bruce ND8I who is a TAPR board member came up, and there were a number of faces we know from the Dayton/Ann Arbor nexus.

The big theme of the conference this year was HamSci (<https://hamsci.org>) and the Personal Space Weather Station (PSWS) project which is designed to allow amateurs to monitor for space weather -- solar flares, ionospheric disturbances, etc.

TAPR is playing a big role in that with a new Software Defined Radio called the Tangerine SDR that is designed to take what we've learned from previous SDR designs like OpenHPSDR/Anan and provide the capabilities that scientists need. A number of the presentations were about the PSWS and the TangerineSDR design. There was also a lot of TangerineSDR design work done in the hallways as developers noodled out new ideas.

In addition to the TangerineSDR, a group at Case Western Reserve University (W8EDU) is working on a low-cost receiver designed to track Doppler shift on WWV and CHU. Kristina Collins KD8OXT gave a presentation on their progress, as well as information about the WWV 100th anniversary activities going on right now including the WW100WWV special event station (see <https://wwv100.com>).

Bill Brown WB8ELK gave the talk at the Saturday banquet. Unfortunately Bill came down with a sinus infection and wasn't allowed to fly. He gave his presentation via Skype and it worked very well. Bill spoke about his history of balloon launches and described some of the tremendous round-the-world trips made by party balloons with a 1/2 ounce payload.

Every year the DCC includes a Sunday Seminar which is an in-depth look at a technical subject. This year, Dan White AD0CQ and Corey Shields KB9JHU described the SatNOGS open-source worldwide network of satellite ground stations (<https://satnogs.org>). SatNOGS stations are simple satellite downlink sites often using RTL-SDR dongles and Raspberry Pi computers that upload data to a worldwide network where researchers are able to access data downloaded from their satellites. It's quite easy to build your own station, and even without hardware you can participate in data analysis experiments from the online database.

There were about 105 attendees at this year's DCC, with 31 from Michigan and 10 from Ohio, so a very good local turnout. The facilities at the Marriott Detroit Metro were very good, but the road construction in the area wasn't.

ARRL Sept 2019 VHF Contest Notes

The September ARRL VHF contest was last weekend, and the crew at N8GA (we no longer are using N8ZM) did reasonably well, posting about 65k points. Not our greatest score ever, but it does appear to be competitive in the unlimited multi-op class where we compete. Band conditions weren't much, with a couple of minor enhancements observed. A lot of the post-contest comments I have seen on the internet are mostly the same complaints/praises regarding FT8 vs SSB/CW modes. Some love it, some hate it, some swear they are going to give up contesting because of it. Personally, I see the value in the digital modes for making contacts in grids that are otherwise difficult to impossible to work. That is awesome! BUT, there are some limitations and consequences to digi as well. They are probably obvious to anyone who participates in these contests, but I'll mention them anyway for those who don't.

An FT8 contact takes longer than an SSB contact when signals are strong. FT4 might be as fast as SSB, but that remains to be shown. CW contacts can also be fast or not depending on conditions and operator skills. Yes, I passed my Extra CW test at 20 wpm, but have used that mode very little in the 40+ years since, so I am probably slower than any FT8 contact ever made.

VHF contests are not the pressure cooker for using time wisely that most HF contests tend to be, so this isn't as critical in my book. If there does happen to be a band opening, then SSB is probably the best way to exploit it because the S/N will be good and very little time, if any, is wasted on repeating the elements of the exchange. Faster QSO's means more QSO's when the bands are open and there are a lot of stations available to work., says Captain Obvious.

A big complaint is that ops spend all of their time working digi mode and neglect opportunities to make a lot of quick SSB Q's. Some think that isn't a problem; they say it's just that the Luddites don't want to adapt to modern technology. Others say that digi is simply another mode and the choice of which mode to use, and when, is an operator decision which is simply a strategic consideration. Automobile races are often won as much by strategy as they are by having a superior car and driver. I think the same applies to any contest. You could have the best location, antennas, and radios in the world, but if the operator doesn't use them wisely for the QSO opportunities available, the score may not be as high as it could have been. More than once I have seen single op stations out-score our multi-op effort through better skills, persistence, and awareness of band conditions. But hey, we ate well and slept better. I'd like to think so anyway, if only as an excuse for getting trounced by a single op station.

Another complaint, actually a set of complaints, has to do with the limits of communicating other information and exchanging social pleasantries with the station you are working. Send CQ, send Grid, send RR, send 73. That's about it. Yes, you can send other short messages, but seldom are those messages seen on the other end because that op has moved on to the next QSO. This makes it tough to take the other op up through the higher bands, which is common practice on SSB/CW. If the other station is an old friend who you only get to work during contests, it's also tough to say HI, how are you? Ham radio IS a social hobby after all, and the digi modes tend to make it less personal.

There are other more subtle complaints but they generally fit into one of the above categories in one way or another. The jury is still out on this new mode, and maybe K1JT will come up with another giant leap for us that resolves these issues. Meanwhile, there are a lot of proposals being floated about changing the rules, scoring (handicapping, in effect), and even suggesting separate contests for digi operation. Maybe some of that will be needed, although I tend to be suspicious of changing the rules to attempt to level the playing field, and those usually seem to simply tilt it in a different way.

Many years ago, grid squares replaced ARRL sections as the multiplier in VHF contests in an effort to level things out, and probably did benefit some disadvantaged stations at the expense of some others. It may have made no difference at all to a station in Montana where the ham population density was low either way you scored it. Areas where there were many ARRL sections in one grid were penalized by it, and I still see the occasional gripe about that change from some grump on the East Coast who probably hasn't forgiven ARRL for incentive licensing yet either. It cost him some points but I'll bet he still turns in a respectable score.

At N8GA, we still seem to be fascinated by all the new grids we can work via digi, but I think we are missing a lot of good SSB opportunities. Some of the team will be eager to tell me I'm wrong, and that's their opinion, but that 65k point score suggests to me that we missed some SSB Q's that would have proved valuable.

VNA Comparisons

Below is a comparison of a Aglient FieldFox and a MRS miniVNA Tiny. The two graphics have a different scale, but return losses / frequencier where similar. Test was run at the MVUS annual meeting. antenna tested was run on the business end of a two meter antenna . The rest of the antenna didn't survive its tower removal.

Keysight Technologies: N9912A, SN: MY50022604

