



# ZERO BEAT



## In This Issue

- ⇒ President's Message
- ⇒ Antenna in 10 Steps
- ⇒ Minutes of General Meeting
- ⇒ Skywarn Training Schedule
- ⇒ Arrow Hamvention Bus
- ⇒ Activities
- ⇒ Elmer
- ⇒ Volunteers
- ⇒ Editor's Notes
- ⇒ Propagation
- ⇒ Health and Welfare
- ⇒ Letters to the Editor
- ⇒ Officers
- ⇒ Submissions
- ⇒ Committee Chairs
- ⇒ Mission

## President's QRM

Spring is around the corner! This means that the Earth's northern hemisphere is getting more solar energy, and that means that the higher HF bands are open more often and for longer periods of time. It also means that it's time to start planning your warmer-weather antenna projects, and especially with the relatively mild winter that we have had for most of this year so far, some of us have gotten started a bit early.



For instance, I'm currently range testing an off center fed vertical dipole for 17 meters. It's an interesting design that can work for portable and space-restricted deployments. So far, the performance is really good – I've worked as far as China, Russia, and Japan with it. Making it a multiband antenna will be the next challenge with that design, and of course, I'll need to ensure that the 4:1 balun will actually be 4:1 across the entire frequency range.

We had a good meeting at the library in February. Due to their book sale, the community room wasn't available, but they put us up in the main room. I'm really happy that they go out of their way to accommodate us every month. I enjoyed Joe WB8ADX's presentation on the DART repeater system, and getting that impromptu history lesson from Milt N8AYD was great, too.

Lastly, we had our most recent "new ham" session geared toward advanced Amateur Radio topics at Leonard AD8FK's place this month. While my demonstration on testing baluns didn't go entirely as planned, it was a learning experience for everyone, and I got to show the challenges of working with this stuff on the bench in real time.

Let's make 2024 a good one for the Hazel Park Amateur Radio Club, and Amateur Radio in general!

Thanks and 73,

Mike Phipps, K8WU President, Hazel Park Amateur Radio Club

## Build an Antenna in 10 Steps

This is Part 1, in a 3 part series where I will give you step by step instructions on how to build three antennas: a Yagi, a vertical dipole, and a 1/4 wave ground plane.

The 70 cm 1/4 Wave Ground Plane is a super easy project that will give you excellent results. It can be completed in just a few hours and should cost less than \$10. Easy, cheap, and very functional. So let's go!

1. Acquire the supplies and tools:

- o 951 mm of 12 or 14 AWG copper wire. (If you have wire in short lengths, you need one at least 165 mm and 4 at least 184 mm long.)
- o 1 - UHF Panel/chassis Mount SO-239 (4 hole) \$4 from Amazon
- o 4 - Electrical ring terminal connectors
- o 4 each - 6-32 x 1/2" machine screws, 6-32 lock nuts and #6 flat washers all stainless steel.
- o Wire cutters and strippers
- o Crimping tool for ring connectors
- o Soldering iron & Rosin core solder
- o Pliers
- o 1 can of beer

2. Cut one Radiating Element to 165 mm (I usually add 10 mm for tuning)

3. Cut 4 Radials - Each 184 mm (I usually add 10 mm for tuning)

4. Strip all elements of insulation.

5. Straighten the elements as best you can.

6. If they have them, remove the plastic insulators from the ring connectors and crimp them to one end of each of the 4 radials.

7. Solder the crimps to guarantee a good connection.

8. Solder the radiating element into the brass pin on the back side of the SO-239 connector. (Not the threaded side) Depending on the size you might need to reduce the wire diameter to fit in the pin hole. An emery board makes this task super easy. (You should ask your wife instead of stealing hers.)

9. Attach the radials to the 4 holes in the SO-239 connector using the machine screws washers and lock nuts. When attaching the radials, align them diagonally coming out of the 4 corners.

10. Using pliers, bend the radial elements down to 45 degrees (Away from the radiating element)

Crack open that beer because you probably have a working antenna. It is highly recommended that you tune your antenna but that is a different newsletter article. Since it is made from fairly thin wire it is somewhat fragile so not a great choice to mount to your chimney but, this is a great antenna for an attic installation. The measurements for this antenna are for the center of the 70 cm band (435 MHz) and should perform well across the whole band. If you follow these steps and simply change the lengths of the elements, you can make an antenna for any band/frequency but when you get below the 2 Meter band the elements get too long and it becomes unwieldy. You also don't need to use 12 or 14 AWG copper wire. I have made this antenna with several different gauges of copper wire, 1/8" brass tubing, 1/4" aluminum tubing and yes even a coat hanger, all with good results.

Have fun!

Let me know how it came out.



By Mike Slupinski  
N8VDZ

## Minutes of General Meeting February 14, 2024

Call to order 7:00pm

Pledge of Allegiance

Introductions

Presentation by Joe WB8ADX on the DART repeater

N8AYD- Helped with the DART in the 1980s, gave a little history.

Len AD8FK - Antenna workshop 24th of February 10am, 17th of March second one.

Announced contests, classes, and examinations.

Treasurer's report - Bob N8REL \$5741 in the bank and \$920 in PayPal. Not spending much.

Discussion of whether to change the time of the Sat night net - Folks not enthusiastic about it, so likely won't change it.

Bill N8QVS - Remaining stuff donated to the club will be auctioned next time, bring cash. Jim has some other things donated to the club.

Larry KE8LXA - Space project last month- teaching ourselves C programming, does anybody know that for Arduino?

---

### Skywarn Schedule

Here is the Spotter Training Schedule for this Spring.

<https://www.weather.gov/dtx/skywarncert>

Let me know if you have any questions. We need more Spotters!

Mike K8AGY

### Hamvention Bus

The ARROW Communication Association is once again organizing a motor coach trip to the 2024 Hamvention at Greene County Fairgrounds and Expo Center in Xenia, Ohio.

To Register or see full details visit:

<https://w8rp.org/daytonbus2024/>

---





## Activities (Continued)

### Oakland County ARPSC Siren Testing

First Saturday of the month, March through November, at 1:00PM on the KE8HR repeater, 146.760 MHz, Offset -0.6 MHz PL 100. Contact Marsha, N8FE, at [n8fe@arri.net](mailto:n8fe@arri.net), to be assigned a siren to test.

### Antenna Class and Workshop—Advanced

Greetings Fellow Hams; The next Antenna Class and Workshop is on March 16. This advanced Class will focus on wire antennas. Please let me know if you will be attending and I will send you the details of where and what time the classes will be held. I will be the facilitator. I will prepare the venue, make introductions, and assist leaders and coach as needed. Our objective is to meet the needs and interests of the participants. Cordially, Len AD8FK@[yahoo.com](mailto:yahoo.com)

### Elmer: Brad KE8WNV and Les KF8UU Work On Programming a Digital Radio



# Volunteers

- W8JXU Trustee Bill N8QVS
- Mentoring Leonard AD8FK
- Contesting Mentor Mike WD8S, Gerry K8GT
- STEM/STEAM Joe WB8ADX
- Siren Check Ldr Marsha N8FE
- LoTW Mgr (Log) Murray KE8UM
- Cook Bill N8QVS
- Lark in the Park John AA8UU
- Net Control Op Len AD8FK
- John W8TOY
- Mike K8WU
- Bob N8REL
- Media Team Hugh KE8BED
- John AA8UU
- Mike K8WU
- John W8TOY
- Public Info (PIO) Joe WB8ADX
- Webmaster Reuven KB3EHW
- Facebook Admin Aaron W8VIP
- Reuven KB3EHW
- Zero Beat Editor Donald KD8NYD

# Propagation - Sunspot Predictions

A nice graph and interesting links:

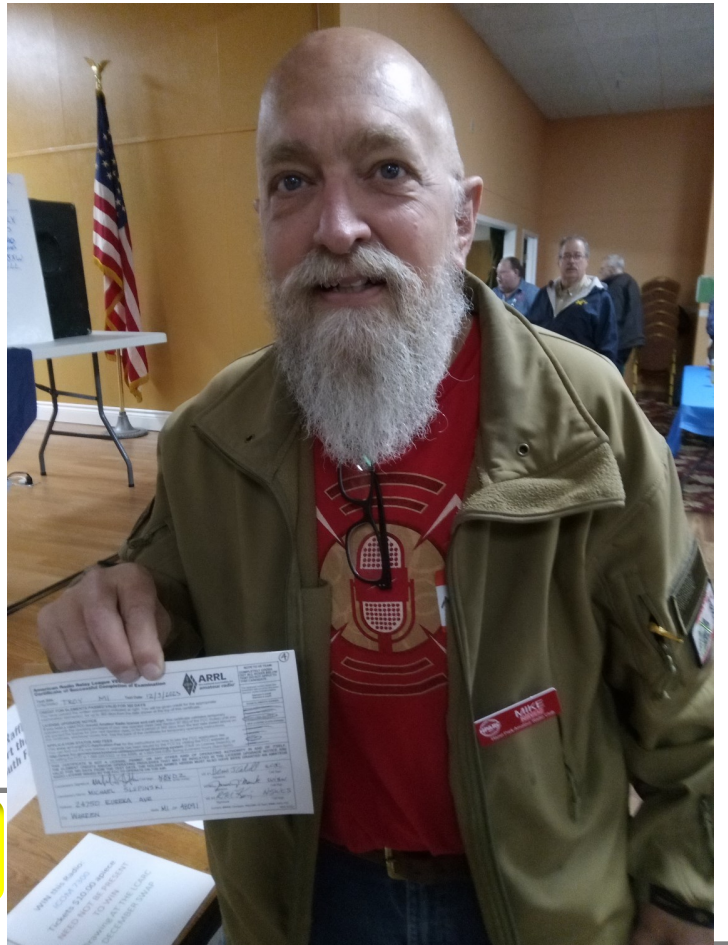
<https://www.weather.gov/news/102523-solar-cycle-25-update>

<https://www.space.com/solar-maximum-expected-2024-new-predictions-suggest>

<https://skyandtelescope.org/astronomy-news/new-forecast-resets-solar-cycle-expectations/>

# Health and Welfare

Congratulations on earning your Extra!



Mike Slupinski N8VDZ

# Editor's Note:

Thank you, Dot W8DOT, for proofing this Zero Beat.

Donald KD8NYD

# Letters to the Editor

Dear Editor:

Please let people know about the "Everything Net".

It is every Saturday at 3PM Eastern Time. It is on the DART 146.64 MHz and Echolink W8HP-R.

It is a general interest net not tied to ham radio subjects.

It is run by Richard Simble KJ5DWA located in Texas.

His QRZ page is <https://www.qrz.com/db/KJ5DWA>

It is a fairly new net but is growing each week.

Thank you!

John Little. W8TOY

# Officers

- President Mike K8WU [qrz@k8wu.me](mailto:qrz@k8wu.me)
- 1st. VP Joe WB8ADX [joeraznik@gmail.com](mailto:joeraznik@gmail.com)
- 2nd. VP Jim W8DPM [tenaciousjd@gmail.com](mailto:tenaciousjd@gmail.com)
- Secretary Reuven KB3EHW [rgevaryahu@gmail.com](mailto:rgevaryahu@gmail.com)
- Treasurer Bob N8REL [rlau6@aol.com](mailto:rlau6@aol.com)
- Parliamentarian Hugh KE8BED [photoink77@hotmail.com](mailto:photoink77@hotmail.com)
- Director Len AD8FK [len1perkins@yahoo.com](mailto:len1perkins@yahoo.com)

# Committee Chairs

- Holiday Pot Luck 12/?/24 John W8TOY
- Picnic-(Date?) Jim W8DPM
- Swap-(Date?) John KD8NYF
- Field Day 6/22/2024 John AA8UU
- Repeaters, W8HP/W8JXU Joe WB8ADX
- Education & Exams Jerry W9NPI,  
Bob N8REL
- Sunday 2m Net Bob N8REL
- Media Hugh KE8BE

# Submissions



[jonesdlus2@outlook.com](mailto:jonesdlus2@outlook.com)

# Mission

## Service Through Education

<https://hparc.org/>