

**2022 ARRL FIELD DAY SIGNED STATEMENT FOR**  
**THE 415 AMATEUR RADIO CLUB – N9WH**

This is to certify that the following statements are true and that “The 415 Amateur Radio Club” performed and complete each of the following described tasks and/or activities, in full compliance with the published rules.

**7.3.1 100% Emergency Power** – We operated as **3A** and all of our stations operated on Emergency Power for the entire Field Day period.

**7.3.4 Public Information Table** – We maintained a public information table during the duration of the event. Pictures of the table and Visitor Sign In list are attached.

**7.3.8 Alternate Power** – One of our HF Phone stations operated the entire 24-hour period using a battery that was initially charged by solar panels and was recharged during the day by the same solar panels. Pictures are attached.

**7.3.10 Education Activity** – We completed an educational event with a “hands on” demonstration of Lenz’s Law using pipes of various materials and a magnet. A copy of the demo material is attached.

**7.3.15 Youth Participation** – We had a total of 9 under-18 participants complete at least 1 contact during the Field Day operating period. A copy of the under-18 log sheet is attached.

**7.3.16 Social Media** – We created, maintained and interacted with the public thru a Facebook page, “The 415 Amateur Radio Club – Public”. We shared many of our posts onto the ARRL Facebook page. Several of the people who responded to our posts actually attended our FD activities and we now have several new club members because of this Facebook page.

Signed this 28<sup>th</sup> day of June, 2022

Sam Haldiman

Sam Haldiman, KC9GPY  
Field Day Co-Chairman  
The 415 Amateur Radio Club

# Lenz's Law: Magnet Through a Copper Tube

## Materials

- Copper pipe or fresh tube of aluminum foil
- Small neodymium magnet
- Voltmeter (optional)

# Procedure

1. Touch your magnet to your various materials to confirm that they're not magnetic.
2. Take your magnet and drop it from about the height of your pipe onto something soft.
3. Now, drop it through your pipe or tube of aluminum foil. *What do you expect to happen? What actually happens?*
4. Place your magnet on the cookie sheet and tilt the sheet so that it slides off. *Does it behave oddly? Why do you think that is?*
5. Tie your magnet to the string, and swing it in a low circle so that it passes over a metal washer placed on a smooth surface. *What happens to the Washer? Can you think of how this might be related to the other behavior you observed earlier?*

**Extra:** If you have a voltmeter, attach it to the objects you are moving your magnet next to. *When does the voltage change? Is it different depending on where you clip it to the metal?*

**Extra:** if you have two neodymium magnets, get a length of PVC pipe that's as long as your copper pipe or roll of aluminum foil. Race the magnets by dropping them through their respective pipes at the same time. *Which magnet do you think will win based on the behavior you observed earlier in the experiment?*

## Results

When you drop your magnet through a copper tube, it slows down. The voltage will spike when the magnet is moving next to the metal, but not when the magnet is sitting still.

## Why?

Magnetic fields are the result of electric currents. Changing a magnetic field (moving a magnet) next to a non-magnetic metal will **induce** an electric field (a voltage difference) in the metal, which subsequently generates a magnetic field with an opposite orientation with respect to your magnet.

When your magnet moves next to a metal it creates these fields, but the fields act in a very specific way. They want to cancel out the magnetic field in the metal, because metals don't like having electric or magnetic fields inside of them (that's why electricity flows through metals easily—they're trying to cancel out the difference in electric potential by moving electrons around!). This phenomenon is known as **Lenz's Law**.

The magnetic field induced in the metal attracts the falling magnet, creating resistance. This resistance is what slowed down your magnet. As your magnet slows down, it stops generating as much current, which reduces the resistance acting on the magnet's movement. Gravity speeds the magnet back up again until it reaches a happy medium

speed. Basically, your magnet is creating a whirlpool of electrons around it as it falls through your pipe. Neat, huh?

Field Day 2022 6-25 Ham Radio Visit By Elected Official

Mike Lesperance Nunda Township HIGHWAY COMMISSIONER

Signature of Official: Mike Lesperance

Date: 6-25-22

ARRL Field Day is the single most popular on-the-air event held annually in the US and Canada. On the fourth weekend of June of each year, more than 35,000 radio amateurs gather with their clubs, groups or simply with friends to operate from remote locations.

Field Day is a picnic, a campout, practice for emergencies, an informal contest and, most of all, FUN!

It is a time where many aspects of Amateur Radio come together to highlight our many roles. While some will treat it as a contest, other groups use the opportunity to practice their emergency response capabilities. It is an excellent opportunity to demonstrate Amateur Radio to the organizations that Amateur Radio might serve in an emergency, as well as the general public. For many clubs, ARRL Field Day is one of the highlights of their annual calendar.

The contest part is simply to contact as many other stations as possible and to learn to operate our radio gear in abnormal situations and less than optimal conditions.

We use these same skills when we help with events such as marathons and bike-a-thons; fund-raisers such as walk-a-thons; celebrations such as parades; and exhibits at fairs, malls and museums — these are all large, preplanned, non-emergency activities.

But despite the development of very complex, modern communications systems — or maybe because they ARE so complex — ham radio has been called into action again and again to provide communications in crises when it really matters. Amateur Radio people (also called “hams”) are well known for our communications support in real disaster and post-disaster situations.

Field Day 2022 Ham Radio Visit by Government / Served Agency


Representative:

Scott DeSantis

Agency:

Salvation Army SATERN

Signature of Representative:

  
KB9VRW

Date: June 27<sup>th</sup>, 2022

ARRL Field Day is the single most popular on-the-air event held annually in the US and Canada. On the fourth weekend of June of each year, thousands of radio amateurs gather with their clubs, groups or simply with friends to operate from remote locations.

Field Day is a picnic, a campout, practice for emergencies, an informal contest and, most of all, FUN!

It is a time where many aspects of Amateur Radio come together to highlight our many roles. While some will treat it as a contest, other groups use the opportunity to practice their emergency response capabilities. It is an excellent opportunity to demonstrate Amateur Radio to the organizations that Amateur Radio might serve in an emergency, as well as the general public. For many clubs, ARRL Field Day is one of the highlights of their annual calendar.

The contest part is simply to contact as many other stations as possible and to learn to operate our radio gear in abnormal situations and less than optimal conditions.

We use these same skills when we help with events such as marathons and bike-a-thons; fundraisers such as walk-a-thons; celebrations such as parades; and exhibits at fairs, malls and museums — these are all large, preplanned, non-emergency activities.

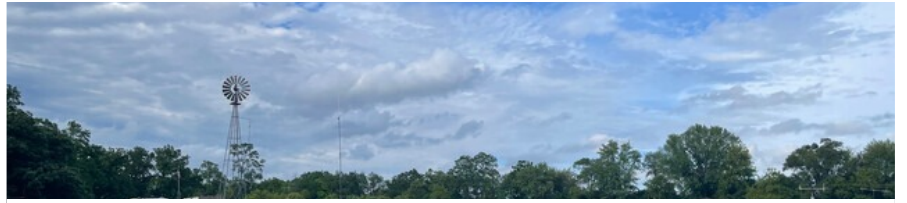
But despite the development of very complex, modern communications systems — or maybe because they ARE so complex — ham radio has been called into action again and again to provide communications in crises when it really matters. Amateur Radio people (also called "hams") are well known for our communications support in real disaster and post-disaster situations.


## GOTA STATION LOG

KD9OMH

## UNDER 18 OPERATOR

|    | DATE            | TIME  | CALL   | EXCHANGE | BAND           | FREQ    | MODE           | OPERATOR           |
|----|-----------------|-------|--------|----------|----------------|---------|----------------|--------------------|
|    | (M/DD)          | (UTC) |        |          |                |         |                | NAME               |
| 1  | 6/25            | 19:01 | KD6KHK |          | 2M             | 146.520 | FM             | CHARLIE            |
| 2  | 6/25            | 19:12 | KD6KHK |          | 2M             | 146.520 | FM             | ELISE              |
| 3  | 6/25            | 19:18 | KD6KHK |          | 2M             | 146.520 | FM             | ERIN               |
| 4  | 6/25            | 20:18 | W2IR   |          | SSB            | 14.195  | USB            | CHARLOTTE          |
| 5  | 6/25            | 21:12 | W2IR   |          | SSB            | 14.195  | USB            | OLIVIA             |
| 6  | 6/25            | 22:40 | W4TV   |          | SSB            | 7.225   | USB            | MATTHEW            |
| 7  | 6/25            | 23:55 | W2IR   |          | SSB            | 14.201  | USB            | JOSEPH             |
| 8  | 6/25            | 2:51  | W1BD   |          | SSB            | 14.205  | USB            | MIA                |
| 9  | 6/25            | 06:14 | K1DG   |          | SSB            | 14.269  | USB            | MADY               |
| 10 | <del>6/25</del> |       |        |          | <del>SSB</del> |         | <del>USB</del> | <del>ELENADE</del> |
| 11 |                 |       |        |          |                |         |                |                    |
| 12 |                 |       |        |          |                |         |                |                    |
| 13 |                 |       |        |          |                |         |                |                    |
| 14 |                 |       |        |          |                |         |                |                    |
| 15 |                 |       |        |          |                |         |                |                    |
| 16 |                 |       |        |          |                |         |                |                    |
| 17 |                 |       |        |          |                |         |                |                    |
| 18 |                 |       |        |          |                |         |                |                    |
| 19 |                 |       |        |          |                |         |                |                    |
| 20 |                 |       |        |          |                |         |                |                    |
| 21 |                 |       |        |          |                |         |                |                    |
| 22 |                 |       |        |          |                |         |                |                    |
| 23 |                 |       |        |          |                |         |                |                    |
| 24 |                 |       |        |          |                |         |                |                    |
| 25 |                 |       |        |          |                |         |                |                    |



 Edit

## The 415 Amateur Radio Club - Public

 Public group · 27 members







## Manage group



The 415 Amateur Radio Club - Public

Public group

Community home

Overview

### Admin tools



Admin Assist

1 action, 2 criteria



Badge requests

0 new today



Pending posts

0 new today



Scheduled Posts



Write something...

Photo/video

Room

About

Discussion

Featured

Rooms

More



Dave Whaley created an event for the group. The...

June 4 at 2:07 PM ·



SAT, JUN 25

ARRL Field Day



Dave, David and 2 friends went

Going

### Events

When events are created they appear in this card



Create

Only admins can see this.

Most Relevant



**Jonathan Lynn**

June 24 at 3:24 PM ·

Work in progress!



3 Comments 2 Shares Seen by 21

Like

Comment

Share

Most recent



Write a public comment...



**JoAnne Maenpaa**

Perfect job on the tower ... all 3 legs are exactly the correct length to reach the ground 😎

Haha Reply Share 3d



**Jonathan Lynn** Author

Up and plumb





[Like](#) [Reply](#) [Share](#) 3d Edited



**Jonathan Lynn** [Author](#)

Next year we remember all the way to the end



[Like](#) [Reply](#) [Share](#) 3d



**Sam Haldiman**

[Admin](#) · June 24 at 2:30 PM ·

Lunch for the Friday work crew! Thanks Bob!





12

Seen by 21

Like

Comment

Share



Write a public comment...



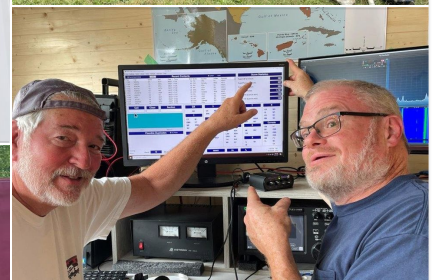
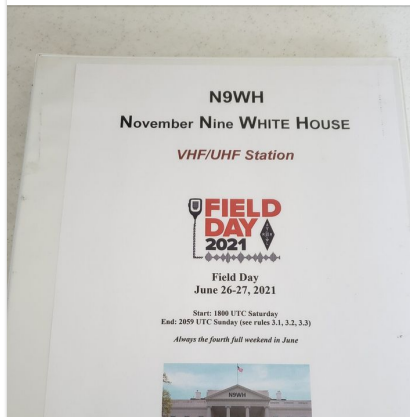
Laura Whiteside

Admin · June 23 at 7:56 PM ·

Flashback 2021: Year #4 and the best yet! David N9BSA built a mobile Yagi antenna trailer for satellite contacts, lots of fun! Hey [Sam Haldiman](#), this is it...your turn. What's your memory?

[#ARRLFD](#)

[#the415fd2022](#)



+20

9

1 Comment 1 Share Seen by 24

Like

Comment

Share

Most recent



Write a public comment...







am that at 1:30 we were going home to get some sleep. I remember how friendly everyone was to me (a stranger) and explained each of t... [See more](#)

[Like](#) [Reply](#) [Share](#) 4d



**Sam Haldiman**

[Admin](#) · June 22 at 8:39 PM ·

COME JOIN US ON SATURDAY & SUNDAY, 6/25 & 6/26! The 415 Amateur Radio Club will be celebrating our 5th anniversary Field Day. Bring the kids and experience firsthand what amateur radio is all about. 3208 Bay Road, Crystal Lake, IL.



7

3 Comments 2 Shares Seen by 22

Like

Comment

Share

Most recent



Write a public comment...



**Joe Witkins** 🙌

Need the address in your msg so I can repost

[Like](#) [Reply](#) [Share](#) 5d



[Sam Haldiman](#) replied · 1 Reply



**Joseph Schulz** 🙌

Yay! Best wishes for a safe & fun FD!

[Like](#) [Reply](#) [Share](#) 5d

2



**Sam Haldiman**

[Admin](#) · June 22 at 2:20 PM ·

IT SEEMS LIKE CHRISTMAS! W





ARE CHECKING THEM DAILY:  
**Join The 415 for Field Day.**

Nikki Daniele, Scott DeSantis and 1 other 1 Share Seen by 20

Like Comment Share

Write a public comment...

**Sam Haldiman**  
[Admin](#) · June 21 at 1:46 PM ·

Let's welcome our new members:  
[Joe Witkins](#)

Nikki Daniele, Angelo Franzone and 5 others Seen by 19

Like Comment Share

Write a public comment...

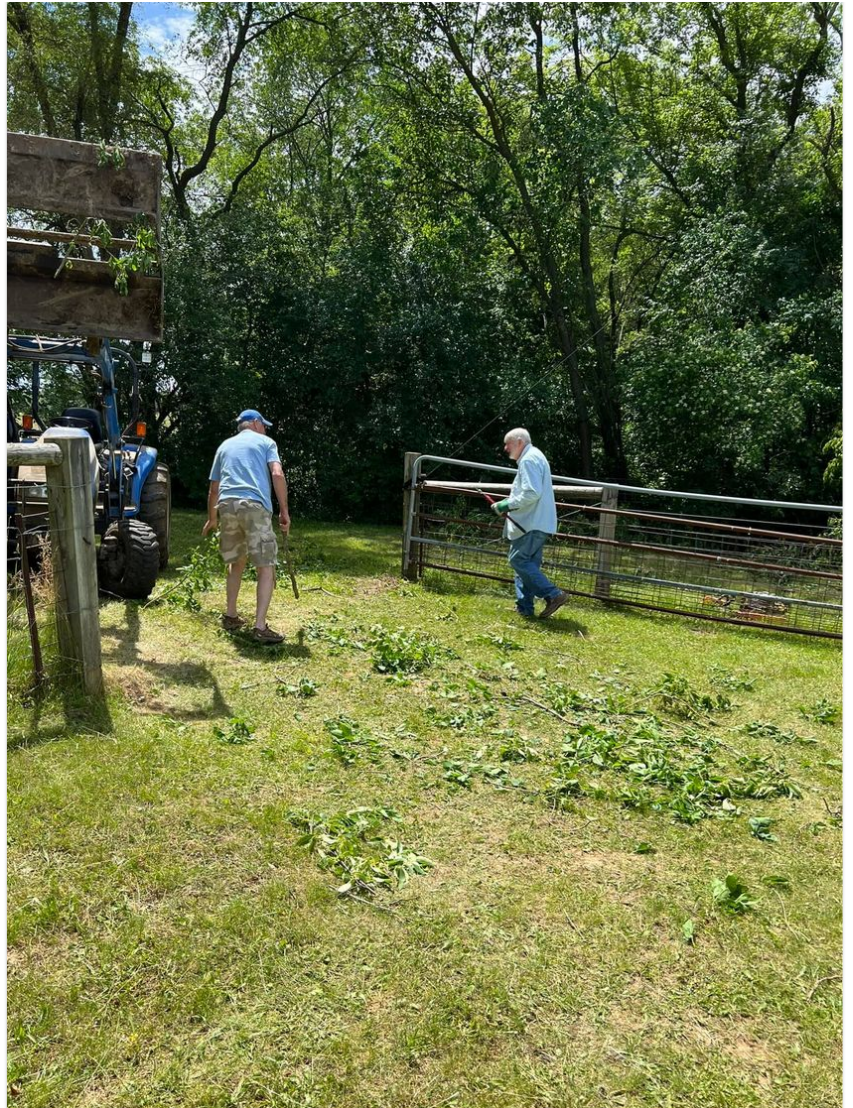
**Sam Haldiman**  
[Admin](#) · June 21 at 10:22 AM ·

**ONLY 4 MORE DAYS UNTIL  
FIELD DAY. JOIN THE 415  
AMATEUR RADIO CLUB ON  
6/25 FOR AMATEUR RADIO  
FUN!**

6 4 Shares Seen by 21

Like Comment Share

Write a public comment...



You, Scott DeSantis and 1 other Seen by 19

Like Comment Share

Write a public comment...

**Sam Haldiman**  
Admin · June 20 at 7:45 AM ·

Let's welcome our new members:  
[Ron Kritzman](#)

Nikki Daniele and Scott DeSantis Seen by 18

Like Comment Share

Write a public comment...

**Laura Whiteside**  
Admin · June 19 at 7:44 PM ·







What is your memory?

[#ARRLFD](#)

[#the415fd2022](#)



+16



You and Scott DeSantis

1 Comment 1 Share Seen by 13



Like



Comment



Share

Most recent



Write an answer...



**Sam Haldiman** [Admin](#)

1 year BEFORE I found the 415!

Like

Reply

Share

1w



**Laura Whiteside**

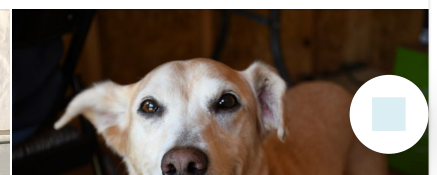
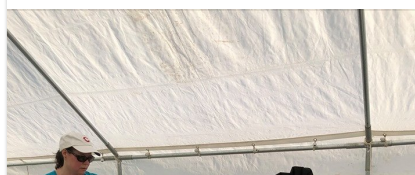
[Admin](#) · June 18 at 7:22 PM ·

Flashback 2019: Taking all that was good from year one and stepping it up a notch!

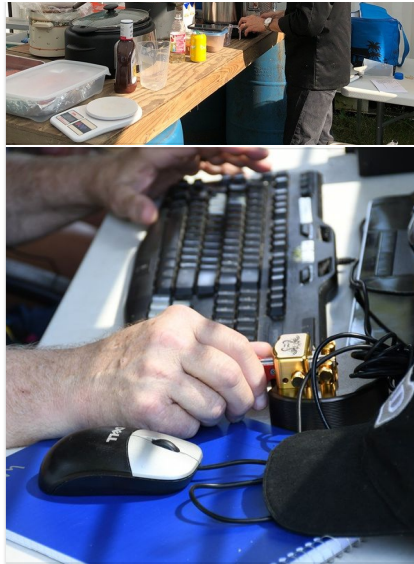
Share your Field Day memory of this year.

[#ARRLFD](#)

[#the415fd2022](#)







+18

4

1 Comment 1 Share Seen by 15

Like

Comment

Share

Most recent




Write a public comment...



**Sam Haldiman** [Admin](#)  
2 years BEFORE I found the 415!

[Like](#) [Reply](#) [Share](#) 1w



Admin · June 3 at 10:05 AM · 

Located in Crystal Lake, Illinois, The 415 Amateur Radio Club is made up of a group of like-minded licensed amateur radio operators. Our goal is to enjoy the amateur radio hobby and to enhance the public awareness of all aspects of the hobby. However, our main goal is to always have fun.

If you are a licensed amateur who is looking for a club or if you are looking to become licensed, please leave a comment below and we will get back to you. If you just want to find out more about amateur radio, then we would invite you to leave a comment and we will be glad to help you in your search.


 8scott DeSantis and 1 other

5 Comments Seen by 19



Like

Comment

Most recent




Write a public comment...

 Joseph Schulz 

Sam Haldiman Curious to learn more about the club. Been a ham for about 42 years - based on life, I've been in and out of the hobby over the time. For the past 6 years, I've been back on the bands. Mostly 20m and 40m doing SSB and FT8. I have VHF/U... [See more](#)


Like Reply 1w

 Sam Haldiman Author Admin

Joseph Schulz Joesph: Thanks for reaching out. The easiest way to answer your questions would be for you to give me a call. 815 590 8248





Like Reply 1w

 Sam Haldiman Author Admin

Joseph Schulz We frequently hang out on 146.415 simplex to talk. No formal meetings. Ham breakfast on 1st Saturday of each month. No repeater. Would be glad to talk with you. Interests cover all parts of ham radio. The 415 always tries to have fun whil... [See more](#)




Like Reply 1w

 Joseph Schulz 

Sam Haldiman Thank you!! I'll add the channel to my old FT7900 and keep an ear out. Also, I'll put the Field Day address in the GPS for next weekend!!

Like Reply 1w Edited

 Sam Haldiman Author Admin

[Joseph Schulz](#) Great usually a lunch bunch and another around 10 pm