



March, 2022

# THE HARC SPARK



Editors: K3UJ

The Official Newsletter of the  
Holmesburg Amateur Radio Club  
WM3PEN 146.685 Mhz Repeater  
K3RJC 444.9 Mhz Repeater  
K3FI – Club Calls – WM3PEN  
Web Site <http://www.harcnet.org>  
[WM3PEN@aol.com](mailto:WM3PEN@aol.com)

## Prez Sez!

First, I should say that I've realized I have inadvertently (unconsciously?) stolen the name of this column from the corresponding column in the Phil-Mont club newsletter. For this I apologize, though it does often work better to ask forgiveness than to ask permission.

I'm serendipitously happy about how the recent/upcoming meeting presentations fit together: activities for Tech licensees, ionospheric propagation, and antenna-building. I continue to seek further interesting programs, and certainly welcome any suggestions from members.

March's meeting talk by K9LA reminded me of the many areas of knowledge that ham radio relates to. When I hear or read about the amateur radio connection to the ionosphere, meteorology, satellite communication, electronic physics, etc., it makes me feel like I am part of science, the earth, and the universe.

Similarly, I feel more involved with the world, its geography, and its geopolitics. When I was an active short-wave listener, I was less a DXer and more a listener to the major international broadcasters, getting the news and cultural programs from the likes of the BBC, Radio Netherlands, Deutsche Welle, Radio Australia, and Radio Canada International. In some ways, amateur radio does the same for me, as it's enabled me to feel in touch and to make acquaintances in various countries and even in war zones.

When I returned to ham radio in 2014, I caught the tail-end of Solar Cycle #24, and I was thrilled to make so many DX contacts which I never could have imagined in my younger days. So here's to an exciting Solar Cycle #25 for all of us!

73,  
Saul - W3WHK

### March Trivia Question?

What are the DXCC Entities in Continental North America?

### HARC Membership Dues

Club membership begins on May 1<sup>st</sup>.  
Full member (licensed ham) @ \$20  
Family member (licensed ham, after first member pays full dues) @ \$5 (Name, Call)  
Associate member (unlicensed person) @ \$5

Make checks payable to H.A.R.C and mail to:  
3341 Sheffield Ave,  
Philadelphia, PA 19136

Please add a note with your:

Name

Call

Address

Phone Number

E-Mail address

Note if you are an ARRL member

As alternative use PayPal:

[Wm3pen@arrl.net](mailto:Wm3pen@arrl.net)

and put the information in the note box.

## FCC License Fee

From the ARRL web site: <https://www.arrl.org/fcc-application-fee> (read the full article there)

The new Amateur Radio license application fees will take effect on **April 19, 2022**. The Federal Communications Commission's authority to impose and collect fees is mandated by Congress.

The \$35 application fee, when it becomes effective on April 19, will apply to new, modification (upgrade and sequential call sign change), renewal, and vanity call sign applications. The fee will be per application.

Administrative updates, such as a change of name, mailing or email address, will be exempt from fees.

## History of the Car Rado

Seems like cars have always had radios, but they didn't. Here's the true story:

One evening, in 1929, two young men named William Lear and Elmer Wavering drove their girlfriends to a lookout point high above the Mississippi River town of Quincy, Illinois, to watch the sunset. It was a romantic night to be sure, but one of the women observed that it would be even nicer if they could listen to music in the car. Lear and Wavering liked the idea.

Both men had tinkered with radios (Lear had served as a radio operator in the U.S. Navy during World War I) and it wasn't long before they were taking apart a home radio and trying to get it to work in a car.

But it wasn't as easy as it sounds. Automobiles have ignition switches, generators, spark plugs, and other electrical equipment that generate noisy static interference, making it nearly impossible to listen to the radio when the engine was running. One by one, Lear and Wavering identified and eliminated each source of electrical interference. When they finally got their radio to work, they took it to a radio convention in Chicago. There they met Paul Galvin, owner of Galvin Manufacturing Corporation. He made a product called a "battery eliminator" a device that allowed battery-powered radios to run on household AC current. But as more homes were wired for electricity, more radio manufacturers made AC-powered radios. Galvin needed a new product to manufacture. When he met Lear and Wavering at the radio convention, he found it. He believed that mass-produced, affordable car radios had the potential to become a huge business.

Lear and Wavering set up shop in Galvin's factory, and when they perfected their first radio, they installed it in his Studebaker. Then Galvin went to a local banker to apply for a loan. Thinking it might sweeten the deal, he had his men install a radio in the banker's Packard. Good idea, but it didn't work - Half an hour after the installation, the banker's Packard caught on fire. (They didn't get the loan.) Galvin didn't give up. He drove his Studebaker nearly 800 miles to Atlantic City to show off the radio at the 1930 Radio Manufacturers Association convention. Too broke to afford a booth, he parked the car outside the convention hall and cranked up the radio so that passing conventioners could hear it. That idea worked -- He got enough orders to put the radio into production.

That first production model was called the 5T71. Galvin decided he needed to come up with something a little catchier. In those days many companies in the phonograph and radio businesses used the suffix "ola" for their names - Radiola, Columbiola, and Victrola were three of the biggest. Galvin decided to do the same thing, and since his radio was intended for use in a motor vehicle, he decided to call it the Motorola.

But even with the name change, the radio still had problems: When Motorola went on sale in 1930, it cost about \$110 uninstalled, at a time when you could buy a brand-new car for \$650, and the country was sliding into the Great Depression. (By that measure, a radio for a new car would cost about \$3,000 today.)

On 1930, it took two men several days to put in a car radio. The dashboard had to be taken apart so that the receiver and a single speaker could be installed, and the ceiling had to be cut open to install the antenna. These early radios ran on their own batteries, not on the car battery, so holes had to be cut into the floorboard to accommodate them. The installation manual had eight complete diagrams and 28 pages of instructions.

Selling complicated car radios that cost 20 percent of the price of a brand-new car wouldn't have been easy in the best of times, let alone during the Great Depression. Alvin lost money in 1930 and struggled for a couple of years after that. But things picked up in 1933 when Ford began offering Motorola's pre-installed at the factory. In 1934 they got another boost when Galvin struck a deal with B.F. Goodrich tire company to sell and install them in its chain of tire stores. By then the price of the radio, installation included, had dropped to \$55. The Motorola car radio was off and running. (The name of the company would be officially changed from Galvin Manufacturing to "Motorola" in 1947.) In the meantime, Galvin continued to develop new uses for car radios. In

1936, the same year that it introduced push-button tuning; it also introduced the Motorola Police Cruiser, a standard car radio that was factory preset to a single frequency to pick up police broadcasts. In 1940 he developed the first handheld two-way radio, the "Handie-Talkie" for the U. S. Army. A lot of the communications technologies that we take for granted today were born in Motorola labs in the years that followed World War II. In 1947 they came out with the first television to sell under \$200. In 1956 the company introduced the world's first pager; in 1969 it supplied the radio and television equipment that was used to televise Neil Armstrong's first steps on the Moon. In 1973 it invented the world's first handheld cellular phone. Today Motorola is one of the largest cell phone manufacturers in the world. And it all started with the car radio.

Whatever happened to the two men who installed the first radio in Paul Galvin's car, Elmer Wavering and William Lear, ended up taking very different paths in life. Wavering stayed with Motorola. In the 1950's he helped change the automobile experience again when he developed the first automotive alternator, replacing inefficient and unreliable generators. The invention led to such luxuries as power windows, power seats, and, eventually, air-conditioning.

Lear also continued inventing. He holds more than 150 patents. Remember eight-track tape players? Lear invented that. But what he's really famous for are his contributions to the field of aviation. He invented radio direction finders for planes, aided in the invention of the autopilot, designed the first fully automatic aircraft landing system, and in 1963 introduced his most famous invention of all, the Lear Jet, the world's first mass-produced, affordable business jet. (Not bad for a guy who dropped out of school after the eighth grade.)

### 13 Colonies

Wow...In a little over 3 months it will be time for the annual 13 Colonies event. This year's theme is Land Battles of the Revolution. The WM3PEN qsl card shows the Battle of Germantown.

I hope everyone will be able to participate again this year. With band conditions improving who knows how many contacts will be made.

Besides normal hf operations there are a few additional things being worked on.

1) We will be on DSTAR. No DMR/Fusion this year.

2) W3YP is hoping to be on the satellites this year.

3) We are talking to Greg, KC3SMW, and members of Phil Mont to get on SSTV during the event.

4) This past weekend we had an inquiry from the GB13COL gang about the possibility of serving as their qsl manager. Postage is going up in England and OQRS is expensive. They also have had their qsl cards printed by UX5UO in Ukraine. That's not happening this year.

So we supplied them with info on KB3IFH printing. Randy prints most of the 13 Colonies qsl cards at half price. We did offer to be their qsl manager. There are a lot of unknowns to be learned. The number of qsls from the US v DX stations. Question would then be how much would the mail to PEN increase vs DX mail that might go via the qsl bureau. Depending on answers this could mean that a person could request 2 cards in 1 envelop. We might have separate requests going to the same address or a different address for each card. Regardless of the path it's still cheaper than postage to England and \$3 for a card to come back. We are waiting a response to see what they want to do.

Bob, WA3PZO

### Homebuilt

Do you like building antennas or try to figure out how they work? Roy Lewallen, W7EL, the creator of the EZNEC antenna modeling software has retired on Jan 1<sup>st</sup> 2022. In a contribution to the amateur radio community, he is offering his software for free. It can be downloaded from ez nec.com. This is a very useful tool for anyone building their own antenna or trying to see the performance of what you are currently using.

We should thank Roy for his generous gift.

<https://www.eznec.com/>

## Events

Warminster Amateur Radio Club Hamfest  
May 3, 2022

Bucks County Community College  
1304 Veteran's Highway (Rt. 413),  
Bristol, PA 19007

Open 7:00 AM (Vendors 6 AM)

**Talk-in** 147.09+ (131.8) / 443.95+ (131.8)

New & Used Ham Radio & PC Equipment • Equipment  
check-out table • VE Testing at 10:00 am • DXCC card  
checking • Door prizes every hour • Food service  
available • ARRL Guest Speaker Program

<http://wp.k3dn.org/wp-content/uploads/2020/03/warminster-hamfest-flyer-2020.pdf>

HARC will be there with a table.

If you have anything you want to donate to the club to  
sell, please contact us. [wm3pen@aol.com](mailto:wm3pen@aol.com)

Also please stop by to say hi.

## On The Air

Eight Belgian operators will be active from Bornholm  
island EU-030 (Denmark) during April 24 to May 1,  
2022. QRV as 5P5BI on 160-6m; CW, SSB & Digi. QSL  
via ON6EF.

<https://www.dx-world.net/5p5bi-bornholm-island-eu-030-denmark/>

.....  
**CQ WPX SSB Announced Operations**  
**Mar 26-27, 2022**

<https://www.ng3k.com/misc/wpxs2022.html>

## HF AWARDS MANAGER

Are you getting close to having all 50 states confirmed  
for the Worked All States award or working enough grid  
squares for to qualify for the VUCC Award? As a HARC  
service you can now have your QSL cards verified by  
Bob, WA3PZO, and not have to ship the cards to ARRL  
Headquarters. You must be an ARRL member to qualify  
for the awards.

Additional information and links can be found on the  
HARC website  
([www.harcnet.org](http://www.harcnet.org))

## SFTW

### Stamps For The Wounded

We are still collecting and sending packages of stamps in  
support of this very worthwhile program. Save what you  
can, especially those foreign QSL mailings, cut off the  
corner of the envelope, leaving at least a 1/4" around, and  
bring them to the meeting or mail to:

Rich Shivers  
9029 Eastview Rd.  
Philadelphia, PA 19152

## Stay Connected!

The HARC Club net meets every Wednesday night at 8  
PM on the Club repeater. Check in and see what's going  
on. Net control, Austin – KA3ATT.

### **The Elmer Net**

The "The Elmer Net" has now become part of the  
HARC weekly club net.

Are you a new ham, or an old hand with questions? Log  
into the HARC net and ask away!

Groups.io: WM3PEN/Holmesburg Amateur Radio Club

Facebook: Holmesburg Amateur Radio Club

## Associations

HARC just joined the SKCC – Straight Key Century  
Club #24642 under both WM3PEN and K3FI.

We are also members of;  
Ten-Ten International #71057  
PODXS 070 Club #1493 (PSK activity)  
ARRL Special Services Club

---

## Meetings

Club meetings are held the third Thursday of the month at the Philadelphia Protestant Home, 6401 Martins Mill Road, Philadelphia, PA 19111. Time is 8PM.

**Currently club meetings will be conducted online using Zoom.**

### **Upcoming Topics**

April 21, 2022

John - W6NBC How to Build a 10-meter Moxon Antenna

## PHILA ARES INFORMATION

All amateurs interested in participating in ARES should check into the Phila ARES Net, Sunday's at 9:00 PM, local time, hosted on the Phil-Mont Repeater System; 147.030 MHz (+offset 91.5 PL); 444.80 MHz (+offset 186.2 PL) When control operators are available, Echolink node 29742, WU3I-L, is on the repeater. Backup link is KB3IV-L.

All amateurs are welcomed and encouraged to check in for more information. There is always a different topic of interest to the amateur community discussed with an informal round table of comments and suggestions.

HARC member, Cliff – KC3PGT, is the Philadelphia Emergency Coordinator, Section 1, EPA Region.

We look forward to hearing everyone on Sunday nights @ 9:00 pm. See web site for more information.

- Visit the Philadelphia ARES web site  
<http://www.phlares.org/>

## Helping Hams

Would you like to assist your fellow club members? Do you have an expertise in any particular area and would like to make that available to other hams? If so, let me know and I will maintain a list here.

eMail Rich – K3UJ at [ab3eo@comcast.net](mailto:ab3eo@comcast.net)

I'll start.

Kit building. - I will offer assistance, finish something started or do a complete build for you.

eMail Rich – K3UJ at [ab3eo@comcast.net](mailto:ab3eo@comcast.net)

## Your Contributions

Please tell us what you are doing. Have you received any awards, upgraded your license, done any activations, (SOTA, IOTA, etc), built something special. Or if you would like to write an article. We would be happy to receive all material. Email Rich [AB3EO@comcast.net](mailto:AB3EO@comcast.net)

### **HARC Board of Directors**

President – Saul Broudy, W3WHK  
Vice President – Steve Miller, W3AZT  
Treasurer – Bob Josuweit, WA3PZO  
Secretary – Saul Broudy, W3WHK  
Technical - Ron Cardullo, K3RJC  
Member-at-Large – Rich Shivers, K3UJ  
Greg Malone, WA3GM  
Webmaster - Rich Shivers, K3UJ

**WM3PEN @ AOL.COM**

### **Trivia Question Answer.**

U.S., Canada, Mexico, Panama, Honduras, Nicaragua, El Salvador, Alaska, UN HQ