



Spark Gap

Vol. 38, Issue 6, June 2021 *MARC - Serving Central Indiana Communities for thirty-eight years*

On Our MARC:

The June meeting location will be at the Johnson County Prosecutor's office in the garage 1 Casson Drive in Franklin. The meeting starts at 8 AM with VE Testing after the meeting is adjourned. Masks are optional for the meeting but required for the testing session. For more information about the VE Testing go to the club webpage www.midstatehams.org. Preregistration is required to take a test to obtain your Tech license or upgrade your license.

The ISS will be sending 12 different images from:

Monday, June 21 @ 09:40 UTC through Saturday, June 26 @18:30 UTC

Downlink frequency will be 145.800 MHz and the mode will be PD120.

For further information including decoding software see:

https://docs.google.com/presentation/d/1K9rW_rl3oHOkMwCZJQeybCGOC8jTbIXg_oU2oFNB0f0/e/dit?usp=sharing

ARRL Field Day is June 26 (starting at 2 pm local time) & 27 (concluding at 4:59 pm). Please let me know the following:

- What times Sat/Sun you can participate at the Radio Room 1 Caisson Dr.**
- Will you use your personally owned radio (best for familiarity) or do you need to use a club radio (only 2 available and one I am told is complicated to operate unless you are familiar with the model)**
- Will you use your personally owned antenna or a club antenna (3 available in the radio room)**

Please bring your own radio and portable antenna that you already are familiar with the operation. If you need to connect to a club antenna, there are only 3 and one can be extended into the garage area of the radio room and a power supply moved there as well if needed. If you need to use a club radio, please let me know so multiple people don't plan to use it at the same time. If you plan to use a club radio, please go operate and get familiar with it prior to field day.

<http://www.arrl.org/field-day-rules>

The Amateur Radio on the International Space Station (ARISS) cross-band repeater will be available for [ARRL Field Day](#), June 26 - 27. Contacts will count toward Field Day bonus points as satellite contacts and Field Day contacts.

Field Day rules limit stations to one contact on any single-channel FM satellite. Note that contacts made during Field Day by ISS crew would only count for contact credit, but not for satellite bonus points. ISS cross-band repeater contacts are also valid AMSAT Field Day satellite contacts.

The ARISS cross-band repeater uplink is 145.990 MHz (67 Hz tone), with a down link of 437.800 MHz.

ARISS suggests that those unfamiliar with the ISS repeater may want to practice with it prior to Field Day. ARISS had planned to switch modes to the Automatic Packet Reporting System (APRS) during the second week of June, but this won't happen until after the first ARISS school contact following ARRL Field Day. The ARISS ham station will be off-air during spacewalks on June 16 and June 20.

73,
Tim
WC9G

https://docs.google.com/presentation/d/1K9rW_rl3oHOkMwCZJQeybCGOC8jTbIXg_oU2oFNB0f0/e/dit?usp=mail



Birthdays for the month of June:

WA9VBG - Sam Carter
W8ISH - Jack Parker
K9OMT - Michael Turner
N9KMS - Vince Mathews
W9KMS - Steven Seifert



What amateur radio clubs and services are worth paying for?

By Dan Romanchik, KB6NU



On the amateurradio subreddit (<https://www.reddit.com/r/amateurradio/>), someone asked:

I have always wondered what subscriptions/memberships are worth having? Is ARRL worth the \$50/year? What about QRZ \$30/year for XML data? Is there something that is a must have ?

Several replied in the affirmative about the ARRL:

I joined the ARRL so they can lobby for amateur radio when needed.

I think ARRL is worth it.

If you care about things like DXCC awards, and are in the US, you will need to be an ARRL member. Now that QEX, The National Contest Journal, On the Air and QST digital are all member benefits, I would say you get enough for your \$50 to make it worthwhile

Of course, there were differing opinions:

They [expletive deleted] up the Parity Act so badly that it's almost hilarious. ARRL will never see a dime from me.

There were a lot of comments about subscribing to QRZ.Com:

I spend a bunch of time on QRZ every day, and I log every contact in their logbook, and then send it to LoTW, so the XML is well worth it. Also, will all the time on the forums and the articles I spend I enjoy not having the ads, and supporting what I believe is a fantastic website.

QRZ is worth it so you can integrate with logging software or if you want upload your ADIF file from WSJT-X, if you do FT8, that sort of thing.

I've never felt the need for a QRZ subscription. Only when I was the noobest of noobs and couldn't tell the difference between ON4 and OH2 did I ever run up the 100 lookup a day limit. Now with...alternate... lookup services even hitting the limit might not matter for most hams.

There were some comments about supporting local groups:

You should definitely seek out your local club(s) and join whatever ones seem like a good fit to you. You can learn a lot from a good club, and having a couple of hands to help with antennas/ loan equipment is a fantastic benefit.

I donated to the repeater I use the most.

As for me, I am a member of the ARRL, and at various times, have been a member of:

- AMSAT
- Amateur Radio Lighthouse Society (ARLHS)
- TAPR
- QRP Amateur Radio Club Intl. (QRP-ARCI)
- Quarter Century Wireless Assn. (QCWA)
- Northern California DX Foundation (NCDXF)
- Michigan QRP Club
- ARROW – the amateur radio club here in Ann Arbor

My membership is current in AMSAT, ARLHS, QRP-ARCI, MI QRP Club, and ARROW.

I would encourage you to become an ARRL member and a member of other groups that serve your particular interest in amateur radio. I like operating from lighthouses, so I'm a member of ARLHS. If you're a big DXer, join NCDXF. If you're a QRPer, then QRP-ARCI is the group for you. Becoming a member really will help you have more fun with amateur radio.

You probably belong to your local club if you're reading this column, but I'm curious about what other amateur radio subscriptions you have or which services you pay for. Feel free to email me and let me know which groups you support and why you do so.

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Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog (KB6NU.Com), the "No Nonsense" amateur radio license study guides (<https://KB6NU.Com/study-guides/>), and often appears on the ICQPodcast (<https://icqpodcast.com>). When he's not paying his dues, he teaches online ham radio classes and operates CW on the low end of the HF bands.



Revitalization of Field Services with New Organization

The Field Services that ARRL HQ provides to its member-volunteers is now in the spotlight with a reorganization and a fresh start to Section Manager and Affiliated Club engagement!

The backbone of ARRL, and the Amateur Radio Service, is the expansive field organization of volunteers. This is especially true of our Board members, our "first among peers," who provide leadership to this vast network of engaged volunteers. During a marathon series of Zoom calls on Wednesday, June 9 with ARRL Section Managers and most ARRL Board members in attendance, the restructuring of the Field Services organization at HQ was announced.

Bob Naumann, W5OV, who has a lifetime of experience as a radio amateur from contesting, to public service, to working with a number of well-known industry retailers, is now serving as the Director of Operations following the retirement of Norm Fusaro, W3IZ.

Mike Walters, W8ZY, who has been involved with field volunteers for many years and is currently the Section Emergency Coordinator (SEC) for Connecticut, is now serving as the Field Services Manager.

Bart Jahnke, W9JJ, who was managing Field Services, remains responsible for Radiosport and is also taking on the role of Regulatory & Advocacy following the retirement of Dan Henderson, N1ND.

The meetings went on to discuss the focus the ARRL Board has placed on Field Services, working to create a new standing committee to oversee its revitalization and growth. Also discussed were the initiatives being undertaken with Section Managers to foster collaboration, share content, undertake projects, and set expectations.

The first project will be a focused census that a dozen Section Managers across the country will be driving with local clubs to understand the disparity between the ever-growing number of licensed hams versus the unchanging number of active hams.

We are very excited to turn the page and begin this new chapter for Field Services, and to continue forward with our digital transformation of ARRL.

..... *ARRL News June 2021*



THE INVENTION OF THE CAR RADIO

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

WHAT'S IN A NAME

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.) In 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 – Galvin 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, with 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 Handy-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 for under \$200. In 1956 the company introduced the world's first pager; in 1969 came 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 lead 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.)

Sometimes it is fun to find out how some of the many things that we take for granted actually came into being!

..... Thanks to Bruce K9ICP for finding this interesting article.

2021 Indiana ARRL Hamfest Schedule

June 12

Monroe Co Tailgate Fest

8 am to 12 pm

Southside Christian Church

500 E Empire Mill Rd

Bloomington

July 9 & 10

Indianapolis Hamfest

2021 - ARRL – Indiana Section Convention

Marion County Fairgrounds

7300 E Troy Ave – Indianapolis

<http://indyhamfest.com>

July 10

Auburn Hamfest

Auburn Cord Duesenberg Museum

1600 S. Wayne Street – Auburn

<http://W9OU.ORG>

July 31

East Central Indiana Hamfest

Randolph County Fairgrounds

1885 S US Highway 27 - Winchester, IN

<https://sites.google.com/view/ecindianahamfest>

August 7

Elkhart East Hamfest

Norther Indiana Event Center

21565 Executive Parkway

Elkhart, IN

<https://elkharteasthamfest.com/>

August 14

Hendricks County Tailgate Fest

Avon United Methodist Church

6850 E. Highway 36 – Avon

August 28

North Central Indiana Hamfest

Miami County 4-H Fairgrounds

1029 W. 200 North, Peru, Indiana

9am – 2pm

<http://www.nci-hamfest.net>

September 11

**Tippecanoe County Hamfest
Tippecanoe County 4H Fairgrounds**

1406 Teal Road - Lafayette, IN

8 AM - 2 PM

October 2

Hoosier Hills Ham Club Hamfest

Lawrence Co. 4H Fairgrounds

11265 US Hwy 50 W – Bedford, IN

http://www.w9qyq.org/pdf/2021_Hamfest_Flyer.pdf

October 16

Shelbyville Tailgate Hamfest

Blue River Valley ARS

8 AM - 12 PM

Shelby Co Fairgrounds

500 Frank St. Shelbyville, IN

<http://www.brvars.com>

OCTOBER 23

Hamtober Fest

7 AM - 12 PM

Lynnville Community Center

416 W ST RD IN-68 - Lynnville, IN

<http://www.w9og.net/hamtoberfest-hamfest-2021>

November 13 & 14

Fort Wayne Hamfest & Computer Expo

2021 - ARRL - Central Division Convention

Allen County War Memorial Coliseum

4000 Parnell Ave – Fort Wayne

<http://www.fortwaynehamfest.com>

November 27

Wabash Valley ARC - Turkey Fest

8 am to 12 pm

Clay Co. Fairgrounds

6550 N SR IN 59 - Brazil, IN

www.w9uuu.org/hamfest/turkeyfest_2021.pdf

Greater Indianapolis Hamfest



Indiana Section ARRL Convention

JULY 9&10, 2021

FRIDAY 2-7 p.m.

SATURDAY 6a.m. - 2p.m.

\$8 AT GATE
GOOD BOTH DAYS

INDOOR SALES OPEN AT 7 A.M. SATURDAY

FEATURING

*Meet & Greet your ARRL Officials
at the Friday 5 to 7 p.m. Social
Sat. Presentations by League Staff*

*Air Conditioned Indoor Sales
and
Indiana's **LARGEST** Outdoor
Electronic Flea Market*

MAIN PRIZE DRAWING ON SATURDAY @ 2P.M.

Visit our website at
WWW.INDYHAMFEST.COM



MID-STATE AMATEUR RADIO CLUB

The Mid-State Amateur Radio Club meets the **THIRD SATURDAY** of each month at the Johnson County REMC 750 International Drive Franklin, IN 46131.

See our website, www.midstatehams.org, for maps on how to get to our meeting.

Everyone is welcome; you do not have to be a *HAM* to attend our meetings or a member of the club.

W9MID Repeater:

146.835/
146.235 MHz
(151.4 Hz PL Tone)

Club Officers:

President: Tim Aldridge - WC9G
Vice President: Jacki Frederick - KI6QOG
Secretary: Chris Read - W9OQ
Treasurer: Chris Mazzarella - KC9VGG
Repeater Trustee - Chris Frederick - KQ9Y

W9MID Repeater:

443.525/
448.525 MHz
(151.4 Hz PL Tone)

Weekly Net: Sunday evening 7:00 PM ARES/RACES members and ALL RADIO AMATEURS
146.835/146.235 MHz (151.4 Hz PL Tone)

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Spark Gap Editor: Robert LaGrange N9SIU

Please send your articles to my email: n9siu@yahoo.com no later than the 2nd week of the month.

