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February 1, 2024

John E. Ross, KD8IDJ, [Editor](#)

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The First Amateur Radio Station on the Moon, JS1YMG, is Now Transmitting

The Japan Aerospace Exploration Agency (JAXA) successfully landed their Smart Lander for Investigating Moon (SLIM) on January 19, 2024. Just before touchdown, SLIM released two small lunar surface probes, LEV-1 and LEV-2.

A vertical advertisement for Schulman Auction and RigiExpert. The top section is for Schulman Auction, featuring their logo and the text 'AMATEUR RADIO EQUIPMENT SPECIALISTS'. Below this, it says 'Collections, Estates, Specialty & Premium Gear' and 'BUY/SELL Click here for more information.' The bottom section is for RigiExpert, with the text 'RigiExpert ORANGE ZONE' and 'LOW PRICE FREEZE! AA-35/55/230 ZOOM ANTENNA ANALYZERS *FINAL SALE'. There are small images of a person using a radio and a close-up of an antenna analyzer.

LEV-2 collects data while moving on the lunar surface, and LEV-1 receives the data.

The JAXA Ham Radio Club (JHRC), JQ1ZVI, secured amateur radio license JS1YMG for LEV-1, which has been transmitting Morse code on 437.41 MHz since January 19. The probe uses a 1 W UHF antenna with circular polarization and is transmitting "matters related to amateur business."

Radio amateurs have been busy analyzing JS1YMG's signal, with [Daniel Estévez's, EA4GPZ, blog](#) introducing the method and extraction results for demodulating Morse code from the signal, as well as extracting the code string.

It's unclear how long signals will be heard. JAXA has said that SLIM was not designed to survive a lunar night, which lasts about 14 days, and is due to return in a few days.

SLIM was launched on September 6, 2023, and landed on January 19, 2024, with the mission of analyzing the composition of rocks to aid research about the origin of the moon. SLIM's landing made Japan the fifth country to achieve a soft touchdown on the moon. The landing was achieved with exceptional precision -- within 180 feet of its targeted touchdown location.

ARRL Midwest Division Convention, Winterfest
Newly licensed ham Charlie Hartley, KF0OOP, 18, is one of ARRL's newest members. He's majoring in sound engineering at Webster University in St. Louis, Missouri, and is an accomplished musician, playing both bass guitar and the upright string bass. Ham radio, live sound, and music run in his blood; he's the grandson of Bob Heil, K9EID.



A rendering of the Smart Lander for Investigating Moon (SLIM) on the lunar surface. [Japan Aerospace Exploration Agency, image]

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A laptop displaying Morse code software on a beach scene with palm trees and a sunset.

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A hand holding a RIGOL oscilloscope, showing the screen and controls.



Charlie Hartley, KF00OP, applies to be an ARRL member while his grandfather, Bob Heil, K9EID, smiles. [ARRL Midwest Division Vice Director Dave Propper, K2DP, photo]

Charlie had been secretly studying for his license. After passing his test, he revealed his new Technician-class privileges and call sign to his famous-ham grandpa as a birthday surprise. The pair joined many others at the ARRL Midwest Division Convention/Winterfest, which is organized and sponsored by the St. Louis and Suburban Radio Club.

ARRL Midwest Division Vice Director Dave Propper, K2DP, personally took Charlie's membership application at the event. ARRL Director of Emergency Management Josh Johnston, KE5MHV, was a keynote speaker for the DX/ARRL Banquet at the event.

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He said it was a good gathering to connect with hams in the division. "Ham radio is alive and well in the heartland of America, and it was encouraging to meet with so many members who were clearly passionate about serving their community through amateur radio," Johnston said.

Several major manufacturers exhibited at the event, which was held at the Gateway Convention Center in Collinsville, Illinois, on January 27. The hamfest hosted the 2024 ARRL Midwest Division Convention.

Find more about being an ARRL member at

www.arrl.org/membership



The ARRL table at Winterfest. (L to R) ARRL Midwest Division Vice Director Dave Propper, K2DP; Section Manager of the ARRL Illinois Section Thomas Beebe, W9RY; and ARRL Director of Emergency Management Josh Johnston, KE5MHV.



Heil Sound Donates Equipment to W1AW

The [Hiram Percy Maxim Memorial Station, W1AW](#), at ARRL Headquarters in Newington, Connecticut, has received a generous donation of equipment from the [Heil Ham Radio division](#) of [Heil Sound](#).

The company's founder, Bob Heil, K9EID, is a pioneering audio engineer and avid radio amateur. At his direction, the company donated four Heil Pro Set Elite HC-6 headsets, three Heil Pro Set 3 stereo headphones, two Heil FS-3 press-to-talk foot switches, one Heil iCM microphone, one Heil PR 30 microphone, and various adapters. The equipment has been placed into service at the station for use by [visiting operators](#), and for the [voice bulletins](#) transmitted each weekday evening by W1AW.

W1AW Station Manager Joe Carcia, NJ1Q, says the gear is going to be of great use. "We are fortunate to host many visiting operators each year, but all that use takes a toll on the gear," he said. "The generosity of Heil Ham Radio to help us keep the equipment fresh is greatly appreciated."

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The donated gear on the operating console of W1AW. [Sierra Harrop, W5DX, photo]

ARRL Foundation Accepting Grant Applications in February

The ARRL Foundation is now accepting grant applications from amateur radio organizations for eligible amateur radio-related projects and initiatives, particularly those focused on educating, licensing, and supporting amateur radio activities, to grow amateur radio's future, youth-based projects and initiatives are especially encouraged.

The ARRL Foundation grants program accepts proposals on a cyclical model three times a year: in February, June, and October.

Proposals for the June grant period are accepted through February 29.

Awardees will be notified approximately 1 month after the closing of each cycle.

The Foundation, which celebrated 50 years of service last year, carefully manages a portfolio of endowments where donors have provided specific goals for their gifts, and that portfolio is invested and managed in a way that it can continue to support those goals for many years to come.

Additional information and a link to the grant application can be found at

<http://www.arrl.org/amateur-radio-grants>





Winter Field Day a Success for Ohio Club

The [Delaware Amateur Radio Association \(DELARA\)](#) in Delaware, Ohio, was one of many clubs who participated in this year's Winter Field Day (WFD).

This was the second year DELARA worked WFD. Club member Joe Papworth, K8MP, and three event station captains -- Ed Brady, AE8Q; Guy Merrill, KD8KWH, and Tom Foy, N4HAI -- provided support and helped set up for the event.

"We had 16 participants this year and over 1,100 contacts," said Papworth. "At least 200 more contacts than last year, and operators were on most modes and bands."

DELARA members wrapped a shelter house at Delaware State Park with plastic sheets to protect them from the winter weather, and the Elm Valley Joint Fire District loaned them a generator to provide power for the transceivers, as well as a few portable heaters. Three antennas and stations were set up inside.

"WFD is a great experience and a chance to get on the air," added Papworth. "We're planning on participating next year and looking forward to [the] [2024 ARRL Field Day on June 22 - 23](#)"

[Winter Field Day \(WFD\)](#), sponsored by the Winter Field Day Association, is open to participants worldwide. It's held on the last full weekend in January and is a communications exercise designed to help preparedness for disasters.



Shelter house wrapped and ready for DELARA's WFD activities.

[Photo courtesy of Joe Papworth, K8MP]



Guy Merrill, KD8KWH, makes contacts from inside the wrapped shelter house for the DELARA Winter Field Day event. [Photo courtesy for Joe Papworth, K8MP]

Amateur Radio in the News
ARRL Public Information Officers,
Coordinators, and many other member-volunteers help keep amateur radio and ARRL [in the news](#).

["Amateur radio club hosts annual field day"](#) / The Kerrville Daily Times (Texas), January 26, 2024 -- Hill Country Amateur Radio Club.

["Go 'off grid' with the Tehachapi Amateur Radio Association this weekend"](#) / KGET (California), January 27, 2024 -- *The Tehachapi Amateur Radio Association is an ARRL Affiliated Club.*

["Ham radio 'Field Day' signals importance of emergency preparedness"](#) / WTAP-TV (West Virginia), January 28, 2024 -- *The Parkersburg Amateur Radio Klub is an ARRL Affiliated Club.*

["Baldwin County Amateur Radio Club takes part in Winter Field Day"](#) / WALA (Alabama), January 28, 2024 -- *The Baldwin County Amateur Radio Club is an ARRL Affiliated Club.*

["Ham Radio Winter Field Day in Lackawanna County"](#) / WNEP (Pennsylvania), January 29, 2024 -- *The Windmill Amateur Radio Group is an ARRL Affiliated Club.*

["If the grid goes down, amateur \(ham\) radio works when all else fails"](#) / The Citizen (Georgia), January 29, 2024 -- *The Fayette County Amateur Radio Club is an ARRL Affiliated Club.*

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ARRL Podcasts

On the Air

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Maintaining a "junk box" -- a collection of odds and ends that can be used in future projects and repairs -- is a time-honored practice among hams. Every ham radio junk box has to start somewhere, though, and the cover story of the January/February 2024 issue of *On the Air*, "A Fine Mess: Starting Your Junk Box," by Eric P. Nichols, KL7AJ, offers advice about how to do just that. The January 2024 episode of the On the Air podcast digs deeper by going on location to the workshop of W1AW, ARRL's Hiram Percy Maxim Memorial Station. Station Manager Joe Carcia, NJ1Q, welcomes us into this working space to show us some real-life junk boxes and discuss how they come in handy.

ARRL Audio News

Listen to [ARRL Audio News](#), available every Friday. ARRL Audio News is a summary of the week's top news stories in the world of amateur radio and ARRL, along with interviews and other features.

The On the Air podcast and ARRL Audio News are available on blubrry, iTunes, and Apple Podcasts -- [On the Air](#) | [ARRL Audio News](#).



Announcements

Errata to the 2024 - 2028 Amateur Extra-Class Question Pool

Released. The National Conference of Volunteer Examiner Coordinators ([NCVEC](#)) Question Pool Committee ([QPC](#)) has released errata for the new [2024 - 2028 Element 4 Extra Class Question Pool](#), which goes into effect on July 1. The errata includes minor question changes, the removal of one question, and one modified graphic. These updates are reflected in the new downloadable files, dated January 31, 2024. The [ARRL VEC](#) advises the community to regularly check the NCVEC website at <https://www.ncvec.org/> for updates to the question pools. [Submit](#) feedback or questions to the Question Pool Committee.



In Brief...

February 17, 2024, marks the 160th anniversary of the sinking of the USS *Housatonic* by the H.L. Hunley submarine. The event took place in 1864 in Charleston, South Carolina, and was the first successful sinking of a warship by a submarine. The [Trident Amateur Radio Club](#) will commemorate the submarine by operating special event station N4HLH on Saturday, February 17, 2024, from Fort Moultrie on Sullivan's Island from 10:00 AM to 2:00 PM EST. Proposed frequencies are 7.117 (CW), 7.262, and 14.262, as well as 28.462 MHz for Technician-class licensees. A QSL card will be available for those who send a request with their contact information to N4HLH/Trident Amateur Radio Club, PO Box 60732 N. Charleston, SC 29419. A QSL card will be sent upon receipt of a SASE for US requests and a SAE with 2 USD for international requests.

The K7RA Solar Update

Tad Cook, K7RA, of Seattle, Washington, reports for this week's ARRL Propagation Bulletin, ARLP005:

Seven new sunspot groups emerged this week, but solar activity was lower. One new spot appeared on January 26, two more on January 28, three more on January 30, and one more on January 31.

The average daily sunspot number dropped from 130.6 to 71.6, and the average daily solar flux declined from 173.3 to 145.4. The average planetary A index changed from 7.4 to 6.9, while middle latitude averages increased from 5.1 to 5.6. Next month, it looks like there will be a modest peak in solar flux at 175 on February 20.

Predicted solar flux is 135 on

February 1; 140 on February 2 - 3; 145 on February 4 - 7; 165 on February 8 - 11; 170 on February 12; 165 on February 13 - 15; 170 on February 16 - 19; 175 on February 20; 170, 165, 160, 150, 140, 135, and 140 on February 21 - 27; 145 on February 28 - 29, and 150 on March 1 - 2.

The predicted planetary A index is 8 and 5 on February 1 - 2; 8 on February 3 - 5; 5 on February 6 - 16; 8 on February 17 - 18; 5 on February 19 - 24; 10, 12, and 10 on February 25 - 27, and 5 on February 28 through March 2.

Visit <https://bit.ly/48Yjcpa> and <https://bit.ly/3u53ZDK> to find out if there will be a cycle peak this year.

Read about the sun's poles flipping at <https://bit.ly/4bvvmro> and <https://bit.ly/42kfljC>.

Read about a powerful solar flare causing a radio blackout at <https://bit.ly/3HGWYfn>.

FXStreet reports on how you can leverage the solar cycle for investing at <https://bit.ly/3UodRTE>, but I'm skeptical.

Sunspot numbers for January 25 - 31, were 101, 97, 52, 75, 48, 53, and 75, with a mean of 71.8. The 10.7-centimeter flux was 160.5, 156.7, 148.1, 141.1, 140.3, 135, and 136.2, with a mean of 145.4. Estimated planetary A indices were 6, 6, 5, 8, 9, 8, and 6, with a mean of 6.9. The middle latitude A index was 4, 4, 4, 5, 7, 8, and 7, with a mean of 5.6.

Send your tips, questions, or comments to k7ra@arrrl.net.

A comprehensive K7RA Solar Update is posted Fridays on the ARRL website. For more information concerning radio propagation, [visit](#) the ARRL Technical Information Service, [read](#) "What the Numbers Mean...", and [check out](#) the Propagation Page of Carl Luetzelschwab, K9LA.

A propagation bulletin [archive](#) is available. For customizable propagation charts, visit the [VOACAP Online for Ham Radio](#) website.

[Share](#) your reports and observations.

A weekly, full report is posted on [ARRL News](#).



This solar disk image was taken on February 1, 2024. [Photo courtesy of NASA SDO/HMI]

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Just Ahead in Radiosport

- February 1 - 2 -- Walk for the Bacon QRP Contest (CW)
- February 1 -- NRAU 10m Activity Contest (CW, phone, digital)
- February 1 -- SKCC Sprint Europe (CW)
- February 3 - 4 -- VHF/UHF Vermont QSO Party (CW, phone, digital)
- February 3 - 4 -- 10-10 Int'l Winter Contest, SSB (phone)
- February 3 - 4 -- European Union DX Contest (CW, phone)
- February 3 - 4 -- F9AA Cup, (CW)
- February 3 - 4 -- Mexico RTTY International Contest (RTTY)
- February 3 -- Minnesota QSO Party (CW, phone, digital)
- February 3 -- FYBO Winter QRP Sprint (CW, phone, digital)
- February 3 -- AGCW Straight Key Party (CW)
- February 3 - 4 -- British Columbia QSO Party (CW, phone)
- February 4 -- North American Sprint, (CW)
- February 5 -- RSGB 80m Club Championship, SSB (phone)
- February 6 -- ARS Spartan Sprint (CW)
- February 7 -- UKEICC 80m Contest (phone)
- February 7 - 11 -- AWA Linc Cundall Memorial CW Contest (CW)

Visit the [ARRL Contest Calendar](#) for more events and information.

Upcoming Section, State, and Division Conventions

- February 2 - 3 | [Capital City Hamfest 2024](#), hosting the ARRL Mississippi State Convention, Jackson, Mississippi
- February 9 - 11 | [Orlando HamCation](#), hosting the ARRL Florida State Convention, Orlando, Florida
- February 24 | [Central Dakota Amateur Radio Club](#), hosting the ARRL North Dakota State Convention, Bismarck, North Dakota
- February 24 | [HAM-CON](#), hosting the ARRL Vermont State Convention, Colchester, Vermont
- March 1 - 2 | [Greater Houston HamFest](#), hosting the ARRL West Gulf Division Convention, Rosenberg, Texas
- March 8 - 9 | [Acadiana DX Association Hamfest & Swapmeet](#), hosting the ARRL Louisiana State Convention, Rayne, Louisiana
- March 16 | [49th Annual Stuart Hamfest](#), hosting the ARRL Southern Florida Section Convention, Stuart, Florida
- March 16 | [St. Patrick's Day Hamfest](#), hosting the ARRL West Texas Section Convention, Midland, Texas
- April 6 | [Raleigh Hamfest](#), hosting the ARRL Roanoke Division Convention, Raleigh, North Carolina

- April 12 - 13 | [Green Country Hamfest 2024](#), hosting the ARRL Oklahoma State Convention, Claremore, Oklahoma
- April 20 | [Delmarva Amateur Radio and Electronics Expo](#), hosting the ARRL Delaware State Convention, Georgetown, Delaware

Search the [ARRL Hamfest and Convention Database](#) to find events in your area.

Have News for ARRL?

Submissions for the ARRL Letter and ARRL News can be sent to news@arrl.org. -- John E. Ross, KD8IDJ, ARRL News [Editor](#)

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- *The ARRL Letter* is available in an accessible format, posted weekly to the [Blind-hams Groups.io](#) email group. The group is dedicated to discussions about amateur radio as it concerns blind hams, plus related topics including ham radio use of adaptive technology.
- [NCJ -- National Contest Journal](#). Published bimonthly, features articles by top contesters, letters, hints, statistics, scores, NA Sprint, and QSO parties.
- [QEX -- A Forum for Communications Experimenters](#). Published bimonthly, features technical articles, construction projects, columns, and other items of interest to radio amateurs and communications professionals.



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