



# Di-Dah-Dit

Official Newsletter of the Parkersburg Radio Klub  
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## Undersea Expedition Planned to Retrieve Titanic's Radio Gear

The company with sole rights to salvage artifacts from the RMS Titanic has gone to court to gain permission to carry out a "surgical removal and retrieval" of the Marconi radio equipment on the ship, a Washington Post article reports. The Titanic sank in 1912 on its maiden voyage after striking an iceberg in the North Atlantic. As the radio room filled with water, radio operator Jack Phillips transmitted, "Come at once. We have struck a berg. It's a CQD, old man," and other frantic messages for help, using the spark transmitter on board. CQD was ultimately replaced with SOS -- which Phillips also used -- as the universal distress call. The passenger liner RMS Carpathia responded and rescued 705 of the passengers.



A recreation of the Titanic radio room.

As might be expected, the deteriorating Marconi equipment is in poor shape after more than a century under water. The undersea retrieval would mark the first time an artifact was collected from within the Titanic, which many believe should remain undisturbed as the final resting place of some 1,500 victims of the maritime disaster, including Phillips. The wreck sits on the ocean floor some 2 1/2 miles beneath the surface, remaining undiscovered until 1985.

A just-signed treaty between the UK and the US grants both countries authority to allow or deny access to the wreck and to remove items found outside the vessel. "This momentous agreement with the United States to preserve the wreck means it will be treated with the sensitivity and respect owed to the final resting place of more than 1,500 lives," British Transport and Maritime Minister Nusrat Ghani said in a statement.

The request to enter the rapidly disintegrating wreck was filed in US District Court in Eastern Virginia by RMS Titanic, Inc. of Atlanta, Georgia, which said that it hopes to restore the Titanic radio transmitter to operating condition, if it is allowed to go forward.

The company plans to use a manned submarine to reach the wreck and then deploy a remotely controlled sub that would perforate the hull and retrieve the radio equipment.

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### President Signs PIRATE Act to Combat Illegal Broadcasting

On January 24, President Donald Trump signed into law the "Preventing Illegal Radio Abuse Through Enforcement Act," or the PIRATE Act. The measure, which amends the Communications Act of 1934, authorizes enhanced penalties for violators. Under the new law, pirate radio broadcasters would be subject to a fine of not more than \$2 million, and violators could be fined up to \$100,000 for each day during which an offense occurs. The new law stipulates that the FCC "shall not decrease or diminish the regular enforcement efforts targeted to pirate radio broadcast stations for other times of the year."

The FCC is to submit to the House Committee on Energy and Commerce and the Senate Committee on Commerce, Science, and Transportation a report summarizing the implementation of this section and associated enforcement activities

for the previous fiscal year. The new law also requires "annual sweeps," during which FCC personnel will be assigned to "focus specific and sustained attention on the elimination of pirate radio broadcasting within the top five radio markets identified as prevalent for such broadcasts." The Commission also "shall conduct monitoring sweeps to ascertain whether the pirate radio broadcasting identified by enforcement sweeps is continuing and whether additional pirate radio broadcasting is occurring."



Under the new law, the FCC will change its rules so that it proceeds directly to issuance of a Notice of Apparent Liability (NAL) without first issuing a Notice of Unlicensed Operation (NOUO).

The FCC will develop and publish a database of all licensed AM and FM broadcasters, accessible directly from the FCC home page. The FCC is also required to publish a list of "all entities that have received a Notice of Unlicensed Operation, Notice of Apparent Liability, or forfeiture order," as well as "each entity...operating without a Commission license or authorization."

The law defines pirate radio broadcasting as transmitting within the

AM and FM bands without an FCC license, but excluding unlicensed operations in compliance with Part 15.

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### HuskySat-1 With VHF/UHF Linear Transponder Set to Deploy Soon

The University of Washington's HuskySat-1 3U CubeSat, launched November 2, 2019, is set to deploy on January 31 after the vehicle that carried it to the International Space Station undocks. HuskySat-1 has remained stowed aboard a Northrop Grumman Cygnus supply vehicle. Within 24 hours after Cygnus' departure from the ISS, HuskySat-1 and SwampSat 2 will be deployed into orbit.



University of Washington graduate student Paige Northway with HuskySat-1. She has been involved in the project since its inception.

After deployment, HuskySat-1's 1,200 bps BPSK beacon on 435.800 MHz should be active and decodable with the latest release of AMSAT's FoxTelem software. HuskySat-1 is expected to carry out its primary mission before being turned over to AMSAT for amateur radio operation.

HuskySat-1 features a 30 kHz wide V/U linear transponder for SSB and CW. The uplink passband will be 145.910 - 145.940 MHz LSB/CW. The downlink passband will be

435.840 - 435.810 MHz USB/CW (inverting). Telemetry will be transmitted on 435.800 MHz, 1k2 bps BPSK with an experimental downlink at 24.049 GHz. The "Fox-in-a-Box" FoxTelem software has been updated for HuskySat-1 operation at its download website. The new release now contains the SD card image, FIAB-distro8-V1.08w.zip. This file, when unzipped and written to a 16 GB SD card, will provide the latest software for FoxTelem and will run on a Raspberry Pi 4. The 1.08 versions can switch bands between listening on VHF and UHF, based on which Fox and Husky satellites are overhead at the time.

The linear transponder and telemetry system carried aboard AMSAT's Fox-1E was designed for use in different CubeSats merely by adding an interface adapter for connection to the host bus. Noting the prevalence of CubeSats built and launched by universities and other organizations, AMSAT adopted a goal of "amateur radio in every CubeSat."

Additional information is posted on the University of Washington Husky Satellite Lab site. -- Thanks to AMSAT News Service via the HuskySat-1 Team, AMSAT Engineering, AMSAT Operations, the Fox Telemetry Team, and NASA



Toon via the web. No owner listed

# ARES Volunteers Establish "Plan B" Communication Network in Puerto Rico

Amateur Radio Emergency Service (ARES®) volunteers in Puerto Rico continued over the weekend to report for daily duty at an American Red Cross (ARC) distribution center in Mayagüez and at ARC Headquarters in San Juan. The two sites are ready to provide a "Plan B" communication backbone in the event the seismic situation worsens. A magnitude 6.4 earthquake struck southwestern Puerto Rico on January 7, fast on the heels of a magnitude 5.8 tremor the day before, damaging homes in Guayanilla, Peñuelas, Yauco, and Guánica. ARRL Puerto Rico Section Manager Oscar Resto, KP4RF, told ARRL this week that the situation is relatively "calm and quiet" for now and starting on January 22, volunteers began monitoring from their homes or vehicles, permitting most, including Resto himself, to get back to their jobs and homes.



ARES volunteers had been deployed to an ARC distribution center in Yauco, but that part of the operation was shifted to Mayagüez over the weekend, because it was considered safer there. An ARRL-provided VHF/UHF radio and antenna have been set up at the Mayagüez facility. Resto said a second operating position is being add-

ed at the San Juan ARC Headquarters site.

Resto said Red Cross officials know that they can rely on amateur radio, if the situation calls for it, but for now commercial communications are fully operational, although aftershocks from the January 7 quake persist. "In case the situation escalates, the ARES team will immediately mobilize at the ARC sites and establish communication (VHF/UHF or HF) as required," Resto said.



The ARRL Ham Aid program provided this antenna, installed in Mayagüez. [Oscar Resto, KP4RF, photo]

Last week, the Red Cross had requested assistance from the ARES volunteers as well as volunteers from the CB radio and GMRS communities, to identify undeclared refugee camps and to report on close or damaged roadways and bridges. Resto said the ARES volunteers

"did a marvelous job" that earned praise from Red Cross officials. Resto said about two dozen volunteers have made themselves available in the Mayagüez area. In the event they're needed, Resto said, he has seven or eight HF radios and 15 VHF/UHF transceivers left over from the Hurricane Maria emergency response. He said the HF equipment has been safely stowed for use in case of another major earthquake, when they might be needed. He was expecting additional antennas and feed lines provided through ARRL's Ham Aid program to show up this week.

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## US Air Force Space Fence Nearing Operational Acceptance

According to NASA's most recent Orbital Debris Quarterly News, the space agency calculates about 17.6 million pounds of objects are in earth orbit, a number that will grow as launches proliferate -- including thousands of small satellites -- presenting a huge problem. The US Air Force Space Fence -- a second-generation space surveillance system now nearing completion -- is expected to play a crucial role.



Space Fence is located on Kwajalein Atoll in the Marshall Islands. [US Army photo]

Using advanced solid-state S-band radar technology, Space Fence is located on Kwajalein Atoll in the Marshall Islands. Such critical space-based technologies as weather forecasting, banking, global communications, and GPS navigation are under threat from space junk orbiting Earth. Collisions already are frequent, and defunct satellites and rocket boosters have increased the amount of space debris.

The Air Force Space Surveillance Network tracks about 25,000 objects. When Space Fence comes online, the catalog will expand considerably, and when fully operational, it will be the world's largest and most advanced radar system, offering unprecedented space situational awareness. Beyond cataloging objects, Space Fence will detect closely spaced objects, breakups, maneuvers, launches, and more. Contractor Lockheed Martin reported last spring that Space Fence was able to detect debris from a micro-satellite destroyed by India as part of an anti-satellite test. It then was able to determine the orbit of the remnants and predict when the space junk would pass through the fence again.

Space Fence is expected to become fully operational this year. --

Thanks to AMSAT News Service via Milsat Magazine; Lockheed Martin  
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## ARRL On the Air Podcast Premieres January 16

ARRL's new On the Air podcast for those just getting started on their amateur radio journey will debut this Thursday, January 16, with a new episode posted each month. The podcast is a companion to the new bimonthly On the Air magazine, which is already on its way to member subscribers. On the Air magazine's Editorial Director Becky Schoenfeld, W1BXY, will be the host of the new podcast. Both the podcast and the magazine are aimed at offering new and beginner-to-intermediate-level radio amateurs a fresh approach to exploring radio communication.



Listeners can find the On the Air podcast at Blubrry, Apple iTunes (or by using your iPhone or iPad podcast app -- search for On the Air), and Stitcher (or through the free Stitcher app for iOS, Kindle, or Android devices). Episodes will be archived on the ARRL website.

Each On the Air podcast will take a deeper dive into the articles and issues raised in the magazine, including advice and insight on topics covering the range of amateur radio interests and activities: radio technology, operating, equipment, proj-

ect building, and emergency communication.

Supplementing On the Air will be a new Facebook page for those who share a love of radio communication and are looking to learn and explore more about their interests. The biweekly Eclectic Tech podcast for experienced radio amateurs will launch on February 13. Hosted by QST Editor Steve Ford, WB8IMY, Eclectic Tech will highlight topics involving amateur and non-amateur technology, offer brief interviews with individuals involved in projects of interest to amateurs, and include practical information of immediate benefit to today's hams. Eclectic Tech will be available via iTunes and Stitcher.

The ARRL Mags apps including QST and On the Air are now live on Apple iTunes and Google Play. The digital edition of On the Air magazine is also live and linked from the On the Air page on the ARRL website.

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### Minutes November 11, 2019

The Parkersburg Amateur Radio Klub met at the Western Sizzlin Restaurant for the November Meeting.

Prior to the meeting start, a video commemorating Veterans Day was shown. Two additional videos were planned for after meeting viewing.

The meeting was called to order at 6:32 pm by president Jerry Wharton KA8NJW. Introductions were made by 26 members and guests.

Minutes of the October meeting were read by John W8IDW and accepted.

Treasurers report was delivered by Jane N8MOW, one check transaction was made.

The 50-50 drawing was won by Darlene W8PAN which she donated back to Klub. One dozen eggs each were won by Dave N8NWV and Mary Malson

**UNFINISHED BUSINESS:**

The Klub purchased Gin Pole was used to erect Connard's (KE8HLU) 50 ft tower. Antennas have been mounted.

Shane Brannan (issued call) KE8NCX was voted into the Klub by voice vote.

**NEW BUSINESS:**

The December Klub meeting will include the Christmas program. Jane N8MOW to arrange for entertainment by the PKB South Madrigals. Darlene W8PAN will decorate the meeting room.

The ARRL phone sweepstakes will be held on Nov 16-17.

Kenny Harris WA8LLM is installing two new towers. A suggestion has been made to consider creating a repeater linking.

**MISC:**

None.

The motion was made by Bob KB8EFB, seconded by Phil KE8GCL to adjourn the meeting at 6:53 pm.

Minutes by John W8IDW, secretary

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**Minutes December 19**

Parkersburg amateur radio club minutes December 2019

Meeting was called to order at about 650 by Jerry Wharton KA8NJW

The minutes of the November 19 meeting were read and approved by Mary Wharton in the absence of the secretary treasures report was given by Jane Holtz.

50-50 drawing was won by Conard KE 8HOU \$26

Dues are due starting January 1 Cards were signed to send to our shut ins.

We were treated to a nice Christmas dinner entertainment provided by the Parkersburg South high school singers. Thank you Jane Hulce.

And thank you for Darlene for preparing these Christmas decorations and table dressings you always do a great job.

Having no further business Bob KB8EFB made a motion the meeting be adjourned.

31 people were in attendance minutes submitted by Mary Wharton acting secretary

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Xmas Photos:

