
ARISS: NEW APPARATUS ON THE ISS

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ARLS003 ARISS Celebrating Successful Launch Carrying Interoperable Radio System to ISS Amateur Radio on the International Space Station (ARISS) is celebrating the successful launch and docking of the SpaceX-20 commercial resupply mission to the International Space Station (ISS).

One payload on the flight is the ARISS Interoperable Radio System (IORS), which ARISS calls "the foundational element of the ARISS next-generation radio system" on the space station.

Amateur radio has been an integral component of ISS missions since 2000.

The Dragon cargo capsule docked successfully with the space station on March 9. ARISS-US Delegate for ARRL Rosalie White, K1STO, said hundreds of ARRL members contributed to make the IORS project happen, and ARISS is celebrating the 4-year-long IORS project. "ARISS is truly grateful to ARRL and AMSAT for their co-sponsorship and support of ARISS since day one," White said. "ARISS greatly appreciates the hundreds of ham radio operators who have stood by ARISS, sending financial support and encouragement.

A robust ham station is on its way to replace the broken radio on the ISS, and tens of thousands of hams will enjoy strong ARISS packet and ARISS SSTV signals as a result. In addition, thousands of students will discover and use ham radio to talk with a ham-astronaut. We hope to see the trend continue where more ARISS teachers and local clubs set up school ham clubs." The new system includes a higher-power radio, an enhanced voice repeater, updated digital packet radio (APRS), and slow-scan television (SSTV) capabilities for both the US and Russian space station segments.

White called the March 7 launch, "beautiful, flawless." ARRL President Rick Roderick, K5UR, told ARISS that he had his fingers crossed for a successful launch. According to NASA Mission Control, it will take the three ISS crew members up to a month to unload and stow the 4,300 pounds of cargo on board the Dragon capsule, and the IORS is not a priority. The actual ham equipment will be installed in the ISS Columbus module.

Another IORS unit is in line to be launched and installed in the Russian segment of the ISS later this year. The IORS consists of a custom-modified JVCKenwood TM-D710GA transceiver, a multi-voltage power supply, and interconnecting cables. The ARISS hardware team will assemble four flight units - and 10 IORS units in all - to support onboard flight operations, training, operations planning, and hardware testing.

ARISS-International Chair Frank Bauer, KA3HDO, said earlier this year that future upgrades and enhancements to the next-generation system are in various stages of design and development. These include a repaired Ham Video system - currently planned for launch in mid-to-late 2020, an L-band (uplink) repeater, a microwave "Ham Communicator," and Lunar Gateway prototype experiment.