

Startical achieves a new milestone: the first transmission of VHF communications and data from space

- With two demonstration satellites in orbit, Startical is conducting tests over the South Atlantic in collaboration with air navigation service providers and airlines within the framework of the European-funded ECHOES project.
- By using predefined messages in data communications, aviation safety is enhanced thanks to greater clarity and efficiency in exchanges.
- The technology behind the Startical initiative aims to improve the safety, efficiency, and punctuality of transoceanic flights. It will also enable the creation of new routes, helping to reduce operating costs and CO₂ emissions.

Madrid, September 8, 2025 – Startical has reached another historic milestone for aviation. The company, jointly created by ENAIRE and Indra, has successfully transmitted, for the first time worldwide, data between an aircraft and an air traffic controller using VHF communications sent from space in real time. This breakthrough follows the achievement reached in May, when the first-ever real-time voice communication between a pilot and an air traffic controller using VHF signals transmitted via satellite was completed. With these two pioneering accomplishments — voice and data — Startical establishes itself as the first company capable of offering VHF voice and data communications from space, a decisive step toward ensuring continuous coverage over oceanic and remote areas and optimizing the future of air traffic management.

During a functional test carried out within the framework of the European ECHOES project over the Atlantic Ocean, an Air Europa aircraft established a data link with the Gran Canaria control center, performing the first pilot-controller datalink via satellite using standard procedures. This success provides practical evidence of how satellite-based data communications can optimize daily air traffic operations, by providing coverage on oceanic areas where conventional VHF radio systems have insufficient range. In addition to Air Europa, airlines such as Iberia, TAP Air Portugal, Plus Ultra, and Vueling, among others, are also participating in the functional voice and data tests.

Startical's satellite data communications significantly increase air traffic efficiency thanks to the use of predefined messages, which reduce controller workload and enhance aviation safety by ensuring greater clarity and efficiency in exchanges. This translates into safer and more streamlined operations, while also paving the way for new services based on the exchange of digital data. Likewise, it enables airlines to send and receive operational messages during flight, a more efficient and cost-effective solution compared to other conventional communication methods. For air navigation service providers, this solution delivers a global coverage layer, eliminating the costs of deploying and maintaining ground infrastructure.

Currently, not all transoceanic flights and those in remote areas without VHF coverage have real-time voice and data communications. This limitation requires greater separation between aircraft and reduces airspace capacity. With the global coverage proposed by Startical, these limitations will disappear: aircraft will be able to operate over oceans and remote regions with the same level of efficiency as in continental airspace. This will allow for greater safety, immediate responses in case of emergency, optimized traffic management, and the possibility of designing more direct and sustainable routes.

“With the transmission of voice and now also VHF data from space, Startical opens a new era in global air traffic management, providing coverage where communication is currently limited,” said Juan Enrique González Laguna, CEO of Startical.

In June 2025, Startical successfully launched its second demonstration satellite, IOD-2, with which it will continue functional tests in the South Atlantic corridor, in collaboration with air navigation service providers ENAIRE, NAV Portugal, ASA, ASECNA, and DECEA.

Both demonstration satellites and the functional tests are supported at European level through the ECHOES project, co-funded by the European Union's Connecting Europe Facility (CEF Transport), managed by the European Climate, Infrastructure and Environment Executive Agency (CINEA), with the support of SESAR Joint Undertaking.

Beyond the technological demonstration, these tests will help define future international standards for satellite-based aeronautical communications. They also lay the foundation for Startical's future constellation, which will include more than 200 low-Earth orbit satellites to provide global coverage.

About Startical

Startical is a public-private company created by Indra and ENAIRE, approved by the Council of Ministers, which will position Spain as a leader in global satellite services for air navigation. The initiative aims to deploy over 200 small satellites in low-Earth orbit to improve air traffic management, extending coverage in oceanic and remote areas. Startical will pioneer by integrating ADS-B surveillance with VHF radio communication between air traffic controller systems and aircraft via satellite, following aeronautical standards. In 2025, it carried out the first two launches to validate the technology in orbit. With these advancements, the initiative will enhance the safety, efficiency, and sustainability of global air traffic, facilitating the creation of new routes, and contributing to the reduction of operational costs and CO₂ emissions.

About ECHOES

The overall objective of ECHOES is to demonstrate the technical feasibility of a space-based solution for VHF communications (voice and datalink) for the aviation sector, which in combination with space-based ADS-B, would greatly contribute to ATM in terms of safety, capacity, cost-efficiency and environmental impact, focused mainly in oceanic areas. To provide the required services and test this technology, ECHOES is set to develop, manufacture and launch two satellites in a low-Earth orbit, IOD-1 and IOD-2. These satellites will serve as the platform to test the technologies and services aimed at improving the Air Navigation Services. The project is led by Startical with participation of ENAIRE, Indra, Nav Portugal, Deutsches Zentrum für Luft- und Raumfahrt (DLR) and Mitiga Solutions. For additional information on the ECHOES project, please visit www.sesarju.eu/projects/ECHOES.

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