

# Developments related to the Worldwide Radionavigation System

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The United Nations specialized agency responsible for safe, secure, and efficient shipping and the prevention of pollution from ships



# Regulatory framework

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**SOLAS regulation V/19** requires ships to have a receiver for a global navigation satellite system or a terrestrial radionavigation system, or other means, suitable for use at all times throughout the intended voyage to establish and update the ship's position by automatic means.

**Resolution A.915(22)** *Revised maritime policy and requirements for a future global navigation satellite system (GNSS)* (adopted in 2001)

**Resolution A.1046(27)** *Revised Report on the Study of a Worldwide Radionavigation System* (adopted in 2011)

# Recognized satellite navigation systems

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- ❖ Global Positioning System (GPS)
- ❖ Global Navigation Satellite System (GLONASS)
- ❖ Beidou Satellite Navigation System (BDS)
- ❖ Galileo Global Navigation Satellite System
- ❖ Indian Regional Navigation Satellite System (IRNSS)
- ❖ Japanese Quasi-Zenith Satellite System (QZSS)

# Performance standards for shipborne receiving equipment

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Resolution A.819(19) Performance Standards for Shipborne **Global Positioning System (GPS)** Receiver Equipment

Resolution MSC.53(66), as amended, Performance Standards for Shipborne **GLONASS** Receiver Equipment

Resolution MSC.74(69), annex I, as amended, Performance Standards for Shipborne **Combined GPS/GLONASS** Receiver Equipment

Resolution MSC.233(82) Performance standards for Shipborne **GALILEO** receiver equipment

Resolution MSC.379(93) Performance standards for shipborne **BDS** receiver equipment

# Performance standards for shipborne receiving equipment

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Resolution MSC.401(95) Performance standards for **multi-system** shipborne radionavigation receivers (as amended by resolution MSC.432(98))

Resolution MSC.449(99) Performance standards for shipborne **IRNSS** receiver equipment,

Resolution MSC.480(102) Performance standards for shipborne **Japanese Quasi-Zenith Satellite System (QZSS)** receiver equipment

# Current developments

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## *Development of generic performance standards for shipborne satellite navigation system receiver equipment*

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