

U.S. Coast Guard AIS Regulations Now & Proposed



Automatic Identification System (AIS) is a maritime navigation safety communications system standardized by the International Telecommunication Union (ITU), adopted by the International Maritime Organization (IMO), that: Provides vessel information, including the vessel's identity, type, position, course, speed, navigational status and other safety-related information automatically to appropriately equipped shore stations, other ships, shore stations, aides to navigation and aircraft; receives automatically such information from similarly fitted ships, monitors and tracks ships; and exchanges data with shore-based facilities.

- It works as a digital VHF-FM radio self-organizing local area network—imagine a party line GPS-enabled cell phone system where all users within radio range know where each is and autonomously and continuously send each other (navigation) messages.
- These messages (AIS data) are transmitted every 2, 4, 6 or 10 seconds dependent on the vessel's speed or course change; 3 minute intervals when at anchor or at speeds under 3 knots (Class B units transmit at every 30 seconds).

Current U.S. AIS carriage rules are denoted in Title 33, Code of Federal Regulations which states:

§ 164.46 Automatic Identification System (AIS)

(a) The following vessels must have a properly installed, operational, type approved AIS as of the date specified:

(1) Self-propelled vessels of 65 feet or more in length, other than passenger and fishing vessels, in commercial service and on an international voyage, not later than December 31, 2004.

(2) Notwithstanding paragraph (a)(1) of this section, the following, self-propelled vessels, that are on an international voyage must also comply with SOLAS, as amended, Chapter V, regulation 19.2.1.6, 19.2.4, and 19.2.3.5 or 19.2.5.1 as appropriate (Incorporated by reference, see § 164.03):

(i) Passenger vessels, of 150 gross tonnage or more, not later than July 1, 2003;

(ii) Tankers, regardless of tonnage, not later than the first safety survey for safety equipment on or after July 1, 2003;

(iii) Vessels, other than passenger vessels or tankers, of 50,000 gross tonnage or more, not later than July 1, 2004; and

(iv) Vessels, other than passenger vessels or tankers, of 300 gross tonnage or more but less than 50,000 gross tonnage, not later than the first safety survey for safety equipment on or after July 1, 2004, but no later than December 31, 2004.

(3) Notwithstanding paragraphs (a)(1) and (a)(2) of this section, the following vessels, when navigating an area denoted in table 161.12(c) of § 161.12 of this chapter, not later than December 31, 2004.

(i) Self-propelled vessels of 65 feet or more in length, other than fishing vessels and passenger vessels certificated to carry less than 151 passengers-for-hire, in commercial service;

(ii) Towing vessels of 26 feet or more in length and more than 600 horsepower, in commercial service;

(iii) Passenger vessels certificated to carry more than 150 passengers-for-hire.

(b) The requirements for Vessel Bridge-to-Bridge radiotelephones in §§ 26.04(a) and (c), 26.05, 26.06 and 26.07 this chapter, also apply to AIS. The term "effective operating condition" used in § 26.06 includes accurate input and upkeep of AIS data fields.

(c) The use of a portable AIS is permissible, only to the extent that electromagnetic interference does not affect the proper function of existing navigation

and communication equipment on board, and such that only one AIS unit may be in operation at any one time.

(d) The AIS Pilot Plug, on each vessel over 1,600 gross tons, on international voyage, shall be available for pilot use, easily accessible from the primary conning position of the vessel, and near 120 volt, AC power, 3-prong receptacle.

Note to § 164.46(a): "Properly installed" refers to an installation using the guidelines set forth in IMO SN/Circ.227 (Incorporated by reference, see § 164.03). Not all AIS units are able to broadcast position, course, and speed without the input of an external positioning device (e.g. DGPS); the use of other external devices (e.g. transmitting heading device, gyro, rate of turn indicator) is highly recommended, however, not required except as stated in § 164.46(a)(2). "Type approved" refers to an approval by an IMO recognized Administration as to comply with IMO Resolution MSC.74(69), ITU-R Recommendation M.1371-I, and IEC 61993-2 (Incorporated by reference, see § 164.03). "Length" refers to "registered length" as defined in 46 CFR, part 69. "Gross tonnage" refers to "tonnage" as defined under the International Convention on Tonnage Measurement of Ships, 1969.

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PROPOSED RULEMAKING [USCG-2003-21869]

On December 16th, 2008 (73 FR 78295)—in an effort to improve navigation safety, enhance the ability to identify and track vessels, heighten our overall maritime domain awareness, and thus help us address threats to maritime transportation safety and security and mitigate the possible harm from such threats, the Coast Guard published and solicited comments on a proposed rule that would expand the applicability of AIS requirements, beyond USCG Vessel Traffic Service areas, to all U.S. navigable waters and require it use by most commercial self-propelled vessels (in excess of 17,000); which states:

§ 164.46 Automatic Identification System (AIS)

(a) Definitions. As used in this section—

Automatic Identification Systems or AIS means a maritime navigation safety communications system standardized by the International Telecommunication Union (ITU), adopted by the International Maritime Organization (IMO), that--(1) Provides vessel information, including the vessel's identity, type, position, course, speed, navigational status and other safety-related information automatically to appropriately equipped shore stations, other ships, and aircraft; (2) Receives automatically such information from similarly fitted ships; monitors and tracks ships; and (3) Exchanges data with shore-based facilities.

Gross tonnage means tonnage as defined under the International Convention on Tonnage Measurement of Ships, 1969.

International voyage means a voyage from a country to which the present International Convention for the Safety of Life at Sea (SOLAS), 1974 applies to a port outside such country, or conversely.

Properly installed, operational means an Automatic Identification System (AIS) that is installed and operated using the guidelines set forth by the International Maritime Organization (IMO) Safety of Navigation Circulars (SN/Circ.) 227, 236, 244, and 245, and Resolution A.917(22)(Incorporated by reference, see § 164.03).

(b) AIS carriage. The following vessels must have onboard a properly installed, operational, Coast Guard type-approved Automatic Identification System (AIS):

(1) A self-propelled vessel of 65 feet or more in length, engaged in commercial service;

(2) A towing vessel of 26 feet or more in length and more than 600 horsepower, engaged in commercial towing;

(3) A self-propelled vessel carrying 50 or more passengers, engaged in commercial service;

(4) A vessel carrying more than 12 passengers for hire and capable of speeds in excess of 30 knots;

(5) A dredge or floating plant engaged in or near a commercial channel or shipping fairway in operations likely to restrict or affect navigation of other vessels except for an unmanned or intermittently manned floating plant under the control of a dredge; and

(6) A self-propelled vessel carrying or engaged in the movement of certain dangerous cargoes as defined in § 160.202 of this subchapter.

Note to paragraph (b): Except for those vessels denoted in paragraph (c) of this section, use of Coast Guard type-approved AIS Class B is permissible, however, not well-suited, on vessels that are highly maneuverable, navigate at high speed, or routinely operate on or near very congested waterways or in close-quarter situations with other AIS equipped vessels.

(c) SOLAS provisions. The following self-propelled vessels must comply with International Convention for Safety of Life at Sea (SOLAS), as amended, Chapter V, regulation 19.2.1.6, 19.2.4 (AIS Class A), and 19.2.3.5 or 19.2.5.1 as applicable (Incorporated by reference, see § 164.03):

(1) A vessel of 500 gross tonnage or more;

(2) A vessel of 300 gross tonnage or more, on an international voyage; and

(3) A vessel of 150 gross tonnage or more, when carrying more than 12 passengers on an international voyage.

(d) Operations. The requirements in this paragraph are applicable to any vessel equipped with AIS.

(1) Use of AIS does not relieve the vessel of the requirements to sound whistle signals or display lights or shapes in accordance with the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS), 28 U.S.T. 3459, T.I.A.S. 8587, or Inland Navigation Rules, 33 U.S.C. 2001 through 2073; nor of the radio requirements of the Vessel Bridge-to-Bridge Radiotelephone Act, 33 U.S.C. 1201-1208, part 26 of this chapter, and 47 CFR part 80.

(2) AIS must be maintained in effective operating conditions which includes the:

(i) ability to reinitialize the AIS should the need arise (this could require access and knowledge of the AIS power source and password);

(ii) ability to access AIS information from the primary conning position of the vessel;

(iii) accurate broadcast of a properly assigned Maritime Mobile Service Identity (MMSI) number;

(iv) accurate input and upkeep of all AIS data and system updates; and

(v) continual operation of AIS, and its associated devices (e.g., GPS, gyro, converters), at all times the vessel is underway, at anchor, or moored in or near a commercial channel or shipping fairway in operations likely to restrict or affect navigation of other vessels, except--

(A) When use of AIS would compromise the safety or security of the vessel or a security incident is imminent.

(B) The AIS should be returned to continuous operation as soon as the compromise has been mitigated or the security incident has passed. At that time, those vessels denoted in paragraph (b), must report to the nearest U.S. Captain of the Port or Vessel Traffic Center, and record in the ship's official log, the AIS operational interruption and the reason for the interruption.

(3) AIS messaging must be conducted in English and solely to exchange or communicate navigation safety information (for example, SECURITE). Although not prohibited, it should not be relied upon as the primary means for broadcasting distress or urgent communications (for example, MAYDAY or PAN PAN). (47 CFR 80.1109, Distress, urgency, and safety communications).

Note to paragraph (d): AIS devices must be able to broadcast vessel position, course, and speed, and may require the input of an external positioning device (e.g., DGPS) to do so. Although of great benefit, the integration of existing, or installation of, other external devices or displays (e.g., transmitting heading device, gyro, rate of turn indicator, ECDIS/ECS, and radar) is highly recommended but is not currently required except as denoted in § 164.46(c).

(e) Watchkeeping. AIS is primarily intended for use of the master or person in charge of the vessel, or the person designated by the master or person in charge to pilot or direct the movement of the vessel, who must maintain a periodic watch for AIS information.

(f) Portable AIS. The use of a portable AIS is permissible only to the extent that electromagnetic interference does not affect the proper function of existing navigation and communication equipment on board and such that only one AIS unit may be in operation at any one time.

(g) Pilot Port. The AIS Pilot Port, on any vessel subject to pilotage, must be readily available and easily accessible from the primary conning position of the vessel and within at least 3 feet of a 120-volt 50/60 Hz AC power receptacle.

(h) Exceptions. Only those vessels that operate solely within a very confined area (e.g., less than a one nautical-mile radius, shipyard, fleeting area), or on short and fixed schedules (e.g., a bank-to-bank river ferry service), or that otherwise are not likely to encounter another AIS equipped vessel, may request a yearly deviation from this section as set forth in § 164.55.

(i) Implementation date. Those vessels identified in paragraph (b) of this section that were not previously subject to AIS carriage must install AIS no later than [date of the first day of the seventh month after publication of the final rule to be inserted].

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This proposed regulation may change in view of the comments submitted to docket USCG-2003-21869 at www.regulations.gov. For additional information contact cgnav@uscg.mil or visit www.navcen.uscg.gov/enav/ais.

