

USCG AIS Inspection Checklist & Report

This checklist is for voluntary use intended to assist the surveyor or owner in ensuring that the ship's Automatic Identification System (AIS) installation is operating properly as defined in 33 CFR §164, 47 CFR §80, and, Safety of Life at Sea Convention (SOLAS) Chapter V Regulation 18.9.

The checklist is based on the International Maritime Organization (IMO) Marine Safety Circular (MSC.1) 1252 and Safety of Navigation (SN) Circular 227. We suggest that this inspection be undertaken, when applicable, at the same time as other mandated radio inspection, i.e. Bridge-to-Bridge Radiotelephone inspection regardless of the vessel's tonnage.

Although current U.S. regulations do not require a qualified inspection of an AIS, IMO Circ.1252 does state that the inspection "should be carried out by a qualified radio inspector authorized by the administration or a recognized organization". Consequently, it is recommended that inspections be conducted by a technician holding a General Radiotelephone Operator License or a Global Maritime Distress Safety System (GMDSS) Radio Maintainer's License.

Inspection requirements of the Safety of Life at Sea (SOLAS) Convention

SOLAS Chapter V Regulation 19.2.4 requires *"All ships of 300 gross tonnage and upwards engaged on international voyages and cargo ships of 500 gross tonnage and upwards not engaged on international voyages and passenger ships irrespective of size shall be fitted with an automatic identification system (AIS)."*

SOLAS Chapter V Regulation 18.9 requires *"The automatic identification system (AIS) shall be subjected to an annual test. The test shall be conducted by an approved surveyor or an approved testing or servicing facility. The test shall verify the correct programming of the ship static information, correct data exchange with connected sensors as well as verifying the radio performance by radio frequency measurement and on-air test using, e.g., a Vessel Traffic Service (VTS). A copy of the test report shall be retained on board the ship."*

Note: Requirements below marked with an asterisk "*" apply only to ships regulated by the SOLAS Convention.

AUTOMATIC IDENTIFICATION SYSTEM SHIP DETAILS

| | |
|-------------------------|--|
| Name of ship/call sign: | |
| MMSI number: | |
| Port of registry: | |
| IMO Number: | |
| Gross tonnage / GRT: | |
| Date keel laid: | |

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|-------------------------|--|--|
| 1. Installation details | | |
| 1.1 | AIS transponder type: | |
| 1.2 | Type approval certificate | |
| 1.3 | Initial installation configuration report on board? | |
| 1.4 | Drawings provided? (Positioning antenna(s) -arrangement and block diagram) | |
| 1.5 | Main source of electrical power | |
| 1.6 | Emergency source of electrical power * | |
| 1.7 | Capacity ¹ to be verified if the AIS is connected to a battery | |
| 1.8 | Pilot plug near pilots operating position? * | |
| 1.9 | 120 V AC provided near pilot plug? (Panama and St. Lawrence requirement) * | |

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| 2. AIS programming - Static information | | |
| 2.1 | MMSI number | |
| 2.2 | IMO ² number | |
| 2.3 | Radio call sign | |
| 2.4 | Name of ship | |
| 2.5 | Type of ship | |
| 2.6 | Location of positioning antenna(s), source for ship length and beam. See #7 | |

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| 3. AIS programming - Dynamic information | | |
| 3.1 | Ships position with accuracy and integrity status (Source: EPFS) | |
| 3.2 | Time in UTC (Source: GPS) | |
| 3.3 | Course over ground (COG) (may fluctuate at dockside) (Source EPFS) | |
| 3.4 | Speed over ground (SOG) (zero at dockside) (Source: EPFS) | |
| 3.5 | Heading (Source: gyro) | |
| 3.6 | Navigational status | |
| 3.7 | Rate of turn, where available (ROT) ³ | |
| 3.8 | Angle of heel, pitch and roll, where available ⁴ | |

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| 4. AIS programming - Voyage related information ⁵ | | |
| 4.1 | Ships draught | |
| 4.2 | Type of cargo | |
| 4.3 | Destination and ETA (at masters discretion) | |
| 4.4 | Route plan (optional) | |
| 4.5 | Short safety-related messages | |

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| 5. Performance test using measuring instrument | | |
| 5.1 | Frequency measurements AIS ch. 1 and 2, GMDSS ch. 70 | |
| 5.2 | Transmitting output, AIS ch. 1 and 2, GMDSS ch. 70 | |
| 5.3 | Polling information ch. 70 ⁶ | |
| 5.4 | Read data from AIS | |
| 5.5 | Send data to AIS | |
| 5.6 | Check AIS response to "virtual vessels" | |

¹ Amp-hour

² Or vessel number (AIS Class A only)

³ AIS Class A only

⁴ AIS Class A only

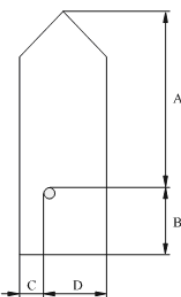
⁵ AIS Class A only

⁶ No longer required

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| 6. | "On air" performance test | |
| 6.1 | Check reception performance ⁷ | |
| 6.2 | Confirm reception of own signal from other ship/VTS | |
| 6.3 | Polling by VTS/shore installation ⁸ | |

7. Reference point for reported position, positioning system antenna location, dimensions of the ship. Note, AIS Class A devices require the programming of two sets of ABCD (positioning systems antenna location) values (in meters). Record both here:

| | Internal AIS GPS Positioning System | Ship's Electronic Position Fixing System (EPFS) | |
|-----|-------------------------------------|---|---|
| A = | | |  |
| B = | | | |
| C = | | | |
| D = | | | |

Electromagnetic interference from AIS observed to other installations. Other Remarks

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⁷ Confirm receipt of vessels to line of sight
⁸ SOLAS only

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United States Supplement to MSC.1 Circ 1252

1. Installation details

| | | |
|-----|--|---|
| 1.1 | AIS type | <input type="checkbox"/> Class A <input type="checkbox"/> Class B/CS <input type="checkbox"/> B/SO |
| 1.2 | AIS certification approval numbers: | FCC : USCG: |
| 1.3 | Main source of electrical power | Voltage: |
| 1.4 | Is the AIS information accessible to the primary conning position? | Yes <input type="checkbox"/> No <input type="checkbox"/> |

2. AIS programming – Dynamic information. Confirm connected where applicable and operational

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| 2.1 | Can the Master reinitialize the AIS? <i>(note: requires knowledge of the system password and source of power)</i> | Yes <input type="checkbox"/> No <input type="checkbox"/> |
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3. Electromagnetic Interference to AIS

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| 3.1 | Confirm absence of VHF interference with LED navigation and other above decks lighting activated (see note) | Yes <input type="checkbox"/> No <input type="checkbox"/> |
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NOTE to 7.1 above: Use of a VHF handheld near AIS VHF antenna is suggested. Turn off LED light(s). Tune the radio to a weak NOAA weather radio station. Turn on the LED light(s) one at a time, and then all on. If the NOAA channel vanishes after a lamp is energized, it's generating RF interference.

As an alternative to tuning to a weak NOAA weather channel, tune the VHF radio to some quiet channel. Adjust the VHF radio's squelch control until the radio outputs audio noise. Re-adjust the squelch until the audio noise is quiet, only slightly above the noise threshold. If the radio does now output audio noise, then the LED light(s) have raised the noise floor.

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| The AIS has been tested according to IMO SN/Circ.227, Resolution MSC.74(69) annex 3. In addition, it has been tested to USA supplement 33 CFR §164 and 47 CFR §80 as appropriate | | |
| Name of radio inspector | Date and place | Name of Radio Inspector company |
| | | |