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# United States Coast Guard Waterways Management



**Providing navigation  
safety information for  
America's waterways**

**Jorge Arroyo**  
U.S. Coast Guard  
Navigation Systems Division  
Washington, DC

**Navigation Safety Advisory  
Council (NAVSAC)**  
Savannah, GA  
May 20<sup>th</sup>, 2009

# AIS Rulemaking [Changes in **Bold-type**]

- ✓ 10/23/03 current AIS requirement (33 CFR 164.46)
- ✓ 07/01/03-01/09/04 sought AIS expansion comment
- ✓ 10/31/05 - notice expansion of AIS to **all** waters
- ✓ 12/16/08 NPRM ...4/15/09 comment deadline
- Could effect 17,442 vessels / 14,506 small biz's, i.e.
  - Commercial self-propelled vessels of  $\geq 65$  feet
    - **No exclusions**
  - Towing vessels  $\geq 26$  feet &  $>600$  hp
  - Vessels with  $\geq 50$  passengers (vice 150 for hire)
  - **Hi-speed passenger vessels ( $\geq 12$  pax)**
  - **Certain dredges & floating plants, &**
  - **Vessel moving certain dangerous cargoes**

Estimated Expanded AIS Population	
<b>Ships <math>&gt;65</math>ft</b>	<b>2,973</b>
Freight Ship	298
Industrial Ship	748
MODU	210
OSV	553
Research Vessel	97
School Ship	19
Tank Ship	122
Unclassified	385
Unknown	541
<b>Fishing <math>&gt;65</math>ft</b>	<b>5,520</b>
Documented	4,571
Undocumented (est.)	949
<b>Towing <math>&gt;26</math>ft &amp; <math>&gt;600</math>hp</b>	<b>4,560</b>
<b>Passenger</b>	<b>3,235</b>
$>65$ ft	2,167
$<65'$ but $>50$ pax	1,062
$>30$ kts & $>12$ pax for hire	6
<b>Dredges</b>	<b>35</b>
<b>Total (U.S.)</b>	<b>16,323</b>
<b>Foreign Flag <math>&gt;65</math>ft</b>	<b>1,119</b>
<b>Total (All)</b>	<b>17,442</b>

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# Noteworthy Proposed AIS Rule Changes...

**Spells out ‘effective operating conditions’ which now includes the:**

- **ability to reinitialize the AIS**
- **ability to access AIS from conning position**
- **accurate broadcast of an official MMSI**
- **accurate input, upkeep, and updating**

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# Noteworthy Proposed AIS Rule Changes...

- **AIS (& assoc. sensors) shall remain on when:**
  - underway
  - at anchor
  - moored in or near a channel or fairway
- **Except if it compromises safety or security**
  - Non-transmitting must be logged & reported

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# Noteworthy Proposed AIS Rule Changes...

- **AIS is primarily for the person controlling the vessel, who must maintain a periodic watch**
- **AIS does not relieve you of sound, lights or shapes nor radiotelephone requirements**
- **AIS messaging must be in English & solely for navigation safety information**
- **AIS Pilot Plug requirement extended to any vessel subject to pilotage & limits the distance between it & an AC outlet to no more than 3'**

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# **Noteworthy Proposed AIS Rule Changes...**

**Applies to all navigable waters, no exemptions.**

**Individual yearly deviations/waivers permissible, but, only for vessels:**

- that solely operate within a very confined area  
e.g. shipyard, fleeting area, etc.**
- on short & fixed schedules  
e.g. a bank-to-bank river ferry service**
- otherwise not likely to encounter other AIS**

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# Noteworthy Proposed AIS Rule Changes...

**CG type-approved Class B are permissible, but, not recommended on vessels that are:**

- **highly maneuverable**
- **navigate at high speed**
- **routinely operate in congested waters, or**
- **operate in close-quarter situations**

**Should cautionary note be mandatory provision?**

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# AIS Comment Period...

- **Public Meetings**

- **Washington, DC – March 5<sup>th</sup>, 2009**

- **30+ attendees, 11 commenters**

- **Seattle, WA – March 25<sup>th</sup>, 2009**

- **30+ attendees, 12 commenters**

- **Comment period closed: April 15<sup>th</sup>, 2009**

- **Public Submissions**

- **80+ submitters, 70+ regarding AIS**

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# Some AIS Public Comments or Concerns

- **Undue economic burden**
- **Not capturing total economic impact—no ECS**
- **Don't need it...I've never collided...I have VMS**
- **Not here...not needed...exempt my waterway**
- **Will not help security...all vessel needed**
- **Exempt tows > 1200hp, assist towers, pax > 150**
- **Waivers indefinite or > 1 year**

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# Some AIS Public Comments or Concerns

- **Continuous operation on unmanned moored vessel**
- **Carriage on floating plants and/or other vessel that lack onboard power**
- **AIS Class B yes...on hi-speed vessels no**
- **AIS conning information from display-less Class B**
- **Would attract vessels and/or disclose fish areas**
- **Extend implementation period >7months**

February 25, 2009



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<b>Title</b>	Vessel Requirements for Notices of Arrival and Departure, and Automatic Identification System
<b>Type</b>	Rulemaking
<b>Sub Type</b>	Commercial Vessels
<b>Sub Type Level 2</b>	
<b>Disposition</b>	Pending
<b>Action Office</b>	G-LRA
<b>Docket Subject</b>	Subject: Vessel Requirements for Notices of Arrival and Departure, and Automatic Identification System
<b>Docket Parties</b>	
<b>DMS Docket No.</b>	
<b>RIN</b>	
<b>Docket Close Date</b>	nulldate

## Documents

Number of Results to Display Show Me All  Posted within the Past   

Document ID	Title	Date Posted	Type	Views	Add Comments
<a href="#">USCG-2005-21869-0001</a>	Vessel Requirements for Notices of Arrival and Departure, and Automatic Identification System	12/16/2008	RULES	 	
<a href="#">USCG-2005-21869-0002</a>	Regulatory Analysis & Initial Regulatory Flexibility	12/16/2008	SUPPORTING & RELATED MATERIALS		
<a href="#">USCG-2005-21869-0002.1</a>	Regulatory Analysis & Initial Regulatory Flexibility	12/16/2008	SUPPORTING & RELATED MATERIALS		
<a href="#">USCG-2005-21869-0003</a>	Valuing Mortality Risk Reductions in Homeland Security Regulatory Analyses - Final Report June 2008	12/16/2008	SUPPORTING & RELATED MATERIALS		
<a href="#">USCG-2005-21869-0003.1</a>	Valuing Mortality Risk Reductions in Homeland Security Regulatory Analyses - Final Report June 2008	12/16/2008	SUPPORTING & RELATED MATERIALS		
<a href="#">USCG-2005-21869-0004</a>	Environmental Checklist	12/16/2008	SUPPORTING & RELATED MATERIALS		
<a href="#">USCG-2005-21869-0004.1</a>	Environmental Checklist	12/16/2008	SUPPORTING & RELATED MATERIALS		
<a href="#">USCG-2005-21869-0005</a>	AIS Regulations - Now and Proposed	01/05/2009	SUPPORTING & RELATED MATERIALS		
<a href="#">USCG-2005-21869-0005.1</a>	AIS Regulations - Now and Proposed	01/05/2009	SUPPORTING & RELATED MATERIALS		

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## **CG Request NAVSAC input on Class B use...**

**CG type-approved Class B are permissible, but, not recommended on vessels that are:**

- **highly maneuverable**
- **navigate at high speed**
- **routinely operate in congested waters, or**
- **operate in close-quarter situations**

### **NAVSAC Task Statement:**

- **Class B caution vs. a mandatory provision?**

<b>AIS Comparison</b>	<b>Class A</b>	<b>Class B/CS</b>
<b>Transmit Power</b>	12.5w / 2w (low-power)	2w
<b>Reporting Rate</b>	2 - 10 sec - speed and/or course dependent	30 sec. fixed
<b>Communication Protocol</b>	<b>SO-TDMA</b> Self-Organizing amongst Class A's	<b>CS-TDMA</b> Carrier-Sense(s), polite to Class A's
<b>Frequency Range &amp; Bandwidth</b>	156.025 -162.025 MHz @ 12/25 kHz DSC Required	161.500 - 162.025 MHz @ 25 kHz DSC & 12.5 kHz Optional
<b>Position Source</b>	External GNSS & Internal GPS	Internal GPS
<b>Digital Interfaces</b>	2 Input-Output Ports & Multiple Outputs	Optional
<b>Display</b>	Multiple Keyboard Display (MKD)	Optional
<b>Safety Text Messaging</b>	Receive & Transmit	Transmit Optional & Pre-configured
<b>Data</b>	All	No Rate of Turn, Navigation Status, Destination, ETA, Draft, IMO#
<b>CG Type-Approvals</b>	22 Models - 16 Manufacturers	8 Models - 8 Manufacturers
<b>Approximate Cost</b>	\$2,800 - 4,000	\$700 - 1,500

# Feet Traveled Per Knots @ Each AIS Reporting Rate

		Kts>	1	2	3	4.5	10	13	14	22	23	24	30	65	Class
Rpt. Rate in	2											81	101	220	A
	6							142	223	233					
	10			51	76	169	220								
	180	304	608												
Sec.	30		101	152	228	507	659	709	1115	1165	1216	1520	3294	B	
	180	304													

# Current AIS Prices



**Furuno FA150 AIS Transponder**  
 Product ID: FJ1150-15 MFG ID: FA150  
 Furuno FA150 is a shipborne Universal AIS (Automatic Identification System) Transponder capable of exchanging navigation and ship data between own ship and other ships or coastal stations.  
 Availability: Usually ships within 24 hours

List Price ~~\$4,495.00~~ **Our Price \$3,999.95**

Qty:  [+](#) [ADD TO CART](#)

## \$699 – 3,999



**FURUNO FA30 BLACK BOX AIS**  
 List Price: ~~\$1,102.50~~  
**Our Price: \$805.00**  
 You Save: ~~\$297.50~~ (27%)

SKU: FURFA30  
**In Stock**  
 Usually ships in 1-2 business days

## Milltech Marine Online Store



**ACR Nauticast2 Class A AIS Transponder**  
 The ACR Nauticast2 AIS Transponder is a class A unit that is specifically designed to fulfill non-SOLAS carriage requirements. This product is packaged in an All-in-One kit that includes the AIS transponder, VHF & GPS antennas, data cables, and pivot mount kit. An ECDIS port adapter is included which can directly interface with your ECDIS display or marine navigation package. The system can be ordered for use with 12 or 24 volt DC power.

ACR-2609 **\$2,999.00** [Add to Cart](#)

WEST MARINE **NEW!**



**AIS-1000 Class B "Send and Receive" AIS Transponder**  
**\$699.99 USD**

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AIS-1000 Class B "Send and Receive" AIS Transponder



**Simrad AI50 Automatic Identification System**  
 Product ID: SM1139-00 MFG ID: 000-0135-00  
 Simrad AI50 AIS Automatic Identification System. See and be seen. Be in control - avoid collisions at sea. Simrad AI50 AIS transmit function works by broadcasting a digital signal that contains information about your boat's identity, speed and direction to other AIS equipped vessels in your area. Has now received FCC approval for the US.

Availability: Usually ships within 24 hours

List Price ~~\$1,627.00~~ **Our Price \$1,248.95**

Qty:  [+](#) [ADD TO CART](#)

**100% CERTIFIED BRAND NEW**

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# United States Coast Guard

## Waterway Management

**Thank You**



**Questions**

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Homeland  
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