



Date: May 5, 2009  
Ref: PGN Proposal: AIS Class B “CS” Static Data Report  
and AIS Class B Group Assignment Command

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## National Marine Electronics Association Technical Corrigendum Number 2-2009

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1. Corrections to errors in existing AIS Class A parameter groups that were discovered while developing the AIS B parameter groups.

### **Documents Affected**

- Appendix B Version 1.210 and earlier.

### **Changes to NMEA 2000 Appendix B**

Replace the following parameter group definitions with those accompanying this document:

<b>PGN</b>	<b>Parameter Group Name</b>
129794	AIS Class A Static and Voyage Related Data
129795	AIS Addressed Binary Message
129797	AIS Binary Broadcast Message
129798	AIS SAR Aircraft Position Report
129801	AIS Addressed Safety Related Message
129802	AIS Safety Related Broadcast Message

# AIS Class A Static and Voyage Related Data

PGN: 129794

hex: 1FB02

This parameter group provides data associated with the ITU-R M.1371 Message 5 Ship Static and Voyage Related Data Message. An AIS device may generate this parameter group either upon receiving a VHF data link message 5, or upon receipt of an ISO or NMEA request PGN. The Command Group Function PGN 126208 may be used with this PGN to configure static and voyage related parameters (see ITU-R M.1371-1 for additional information). Note that future revisions to the ITU-R M.1371 VHF Data Link Messages may result in their spare or reserved bits being defined with a specific meaning, requiring the spare or reserved parameter in this parameter group to have the corresponding new meaning in future revisions of this standard.

Single Frame: No Priority Default: 6 Default Update Rate: NA milliseconds Frequency: NA cycles per second  
 Destination: Global Query Support: No ACK Rqmnts:

Field #	Field Name	Byte Field Size:	Bit Field Size:	Request Parameter	Original Reference ID #
1	<b>Message ID</b> DD188 AIS Message Identifier		6	No	111
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
5 = Ship Static and Voyage Related Data Message.					
2	<b>Repeat Indicator</b> DD185 AIS Repeater Indicator		2	No	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
3	<b>User ID</b> DD010 Generic numeric ID, large	4		No	
	DF55 Integer, 32 bit unsigned	uint32 Range: 0 to 4,294,967,292	Resolution: 1 bit		Unit-less number
MMSI number of mobile station reporting its static and voyage related data.					
4	<b>IMO</b> DD010 Generic numeric ID, large	4		No	
	DF55 Integer, 32 bit unsigned	uint32 Range: 0 to 4,294,967,292	Resolution: 1 bit		Unit-less number
IMO number of mobile station reporting its static and voyage related data.					
5	<b>Call Sign</b> DD192 Generic String, ASCII, Fixed length	char n		No	
	DF63 String, fixed	char8(n) Range: 0 to 1,785 characters	Resolution: 1 char		0 to 1,785 bytes. Character count not included, length is specified by application in Data Dictionary
This is a 7 character string, see ITU-R M.1371-1 for more information.					
6	<b>Name</b> DD192 Generic String, ASCII, Fixed length	char n		No	
	DF63 String, fixed	char8(n) Range: 0 to 1,785 characters	Resolution: 1 char		0 to 1,785 bytes. Character count not included, length is specified by application in Data Dictionary
This is a 20 character string, see ITU-R M.1371-1 for more information.					

# AIS Class A Static and Voyage Related Data

PGN: 129794

hex: 1FB02

**7 Ship/Cargo Type** *Byte Field Size:* **8** *Bit Field Size:* **8** *Request Parameter* **No**  
**DD193** Ship/Cargo Type  
 0=Not Available or no ship (default),  
 1-99= (See the latest version of ITU-R M.1371 Section 3.3.8.2.3.2 Table 18),  
 100-199=Reserved for Regional (See the latest version of ITU-R M.1371),  
 200-255=Reserved for future (See the latest version of ITU-R M.1371).

**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

**8 Ship Length** *Byte Field Size:* **2** *Bit Field Size:* **2** *Request Parameter* **No**  
**DD194** Distance, medium  
 Dependent upon PG Field definition.

**DF75** Distance, Medium **uint16** *Range:* 0 to 6553.2 m *Resolution:* 1x10E-1 m

Length of mobile station reporting its static and voyage related data. A value of 65535 indicates that data is not available.

**9 Ship Beam** *Byte Field Size:* **2** *Bit Field Size:* **2** *Request Parameter* **No**  
**DD194** Distance, medium  
 Dependent upon PG Field definition.

**DF75** Distance, Medium **uint16** *Range:* 0 to 6553.2 m *Resolution:* 1x10E-1 m

Beam of mobile station reporting its static and voyage related data. A value of 65535 indicates that data is not available.

**10 Position Reference Point from Starboard** *Byte Field Size:* **2** *Bit Field Size:* **2** *Request Parameter* **No**  
**DD194** Distance, medium  
 Dependent upon PG Field definition.

**DF75** Distance, Medium **uint16** *Range:* 0 to 6553.2 m *Resolution:* 1x10E-1 m

Position reference point from starboard side of mobile station reporting its static and voyage related data. A value of 65535 indicates that data is not available.

**11 Position Reference Point aft of Ship's Bow** *Byte Field Size:* **2** *Bit Field Size:* **2** *Request Parameter* **No**  
**DD194** Distance, medium  
 Dependent upon PG Field definition.

**DF75** Distance, Medium **uint16** *Range:* 0 to 6553.2 m *Resolution:* 1x10E-1 m

Position reference point from aft of ship's bow of mobile station reporting its static and voyage related data. A value of 65535 indicates that data is not available.

**12 Estimated Date of Arrival** *Byte Field Size:* **2** *Bit Field Size:* **2** *Request Parameter* **No**  
**DD039** Generic date  
 Days since January 1, 1970, Date is relative to UTC Time.

**DF41** Date, day count **uint16** *Range:* 0 to 65,532 days *Resolution:* 1 day 0 = January 1, 1970, max = ~179 years

EDA of mobile station reporting its static and voyage related data.

**13 Estimated Time of Arrival** *Byte Field Size:* **4** *Bit Field Size:* **4** *Request Parameter* **No**  
**DD158** Generic time of day  
 24 hour clock, 0 = midnight, time is in UTC

**DF06** Time of day **uint32** *Range:* 0 to 86,401 s *Resolution:* 1x10E-4 s ~24 hours, 0 = midnight, range allows for up to two leap seconds per day

ETA of mobile station reporting its static and voyage related data.

**14 Draft** *Byte Field Size:* **2** *Bit Field Size:* **2** *Request Parameter* **No**  
**DD196** Draft  
 The depth of a ship in the water. The vertical distance between the waterline and the keel.

**DF13** Distance, short **uint16** *Range:* 0 to 655.32 m *Resolution:* 1x10E-2 m

# AIS Class A Static and Voyage Related Data

PGN: 129794

hex: 1FB02

**15 Destination** *Byte Field Size:* char n *Bit Field Size:* Request Parameter No  
**DD192** Generic String, ASCII, Fixed length Length specified by PGN field definition.  
**DF63** String, fixed **char8(n)** *Range:* 0 to 1,785 characters *Resolution:* 1 char 0 to 1,785 bytes. Character count not included, length is specified by application in Data Dictionary

This is a 20 character string, see ITU-R M.1371-1 for more information.

**16 AIS Version** *Byte Field Size:* *Bit Field Size:* 2 *Request Parameter* No  
**DD304** AIS Version Indicator 0 = Station compliant with AIS edition 0  
 1-3 = Station compliant with AIS editions 1, 2, and 3  
 See the latest version of ITU-R M.1371 for more information.  
**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

**17 Type of Electronic Positioning Device** *Byte Field Size:* *Bit Field Size:* 4 *Request Parameter* No  
**DD191** AIS Electronic Positioning Device Type 0=Undefined (default),  
 1 = GPS,  
 2 = GLONASS,  
 3 = Combined GPS/GLONASS,  
 4 = Loran-C,  
 5 = Chayka,  
 6 = Integrated Navigation System,  
 7 = Surveyed (Base Station),  
 8 = Galileo  
 9-15 = Reserved for future use.  
 See the latest version of ITU-R M.1371 for more information.  
**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

**18 Data Terminal Equipment (DTE)** *Byte Field Size:* *Bit Field Size:* 1 *Request Parameter* No  
**DD242** Data Terminal Equipment (DTE) 0=Available,  
 1=not available.  
 See the latest version of ITU-R M.1371 for more information.  
**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

**19 Spare** *Byte Field Size:* *Bit Field Size:* resv 1 *Request Parameter* No  
**DD001** Reserved field Variable number of reserved bits, all set to logic "1"  
**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

This field mirrors the "Spare" bit field found within the corresponding AIS message such that future definition within the AIS message can also be accommodated within this field. Normally, spare or reserved bits in NMEA 2000 are encoded with logic 1's, however for AIS PGNs the unused or reserved bits are to be encoded as logic 0's.

**20 AIS Transceiver Information** *Byte Field Size:* *Bit Field Size:* 5 *Request Parameter* No  
**DD246** AIS Transceiver Information 0 = Channel A VDL reception,  
 1 = Channel B VDL reception,  
 2 = Channel A VDL transmission,  
 3 = Channel B VDL transmission,  
 4 = Own information not broadcast,  
 5-31 = Reserved.  
**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

# AIS Addressed Binary Message

PGN: 129795

hex: 1FB03

This parameter group provides data associated with the ITU-R M.1371 Message 6 Addressed Binary Message supporting address communication of binary data. An AIS device may generate this parameter group either upon receiving a VHF data link message 6, or upon receipt of an ISO or NMEA request PGN. The Command Group Function PGN 126208 may be used with this PGN to configure parameters such as the Destination ID and Binary Data (see ITU-R M.1371-1 for additional information). Note that future revisions to the ITU-R M.1371 VHF Data Link Messages may result in their spare or reserved bits being defined with a specific meaning, requiring the spare or reserved parameter in this parameter group to have the corresponding new meaning in future revisions of this standard.

Single Frame: **No** Priority Default: **5** Default Update Rate: **NA** milliseconds Frequency: **NA** cycles per second  
 Destination: **Global** Query Support: **No** ACK Rqmnts:

Field #	Field Name	Byte Field Size:	Bit Field Size:	Request Parameter	Original Reference ID # 112
1	<b>Message ID</b> DD188 AIS Message Identifier		<b>6</b>	<b>No</b>	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
6 = Addressed Binary Message.					
2	<b>Repeat Indicator</b> DD185 AIS Repeater Indicator		<b>2</b>	<b>No</b>	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
0 = Default 1 = First retransmission 2 = Second retransmission 3 = Final retransmission					
See the latest version of ITU-R M.1371 for more information.					
3	<b>Source ID</b> DD010 Generic numeric ID, large		<b>4</b>	<b>No</b>	
	DF55 Integer, 32 bit unsigned	uint32 Range: 0 to 4,294,967,292	Resolution: 1 bit		Unit-less number
MMSI number of source station.					
4	<b>NMEA 2000 Reserved</b> DD001 Reserved field		<b>resv 1</b>	<b>No</b>	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
Used to align subsequent data on byte boundary.					
5	<b>AIS Transceiver Information</b> DD246 AIS Transceiver Information		<b>5</b>	<b>No</b>	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
0 = Channel A VDL reception, 1 = Channel B VDL reception, 2 = Channel A VDL transmission, 3 = Channel B VDL transmission, 4 = Own information not broadcast, 5-31 = Reserved.					
6	<b>Sequence Number</b> DD243 AIS Sequence Number		<b>2</b>	<b>No</b>	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
Range 0-3 See the latest version of ITU-R M.1371 for more information.					

# AIS Addressed Binary Message

PGN: 129795

hex: 1FB03

7	<b>Destination ID</b>	<i>Byte Field Size:</i> 4	<i>Bit Field Size:</i>	<i>Request Parameter</i> No
	<b>DD010</b> Generic numeric ID, large	Number of route, waypoint, event, mark, etc.		
	<b>DF55</b> Integer, 32 bit unsigned	<b>uint32</b>	<i>Range:</i> 0 to 4,294,967,292	<i>Resolution:</i> 1 bit
	Unit-less number			
	MMSI Number of destination station.			
8	<b>NMEA 2000 Reserved</b>	<i>Byte Field Size:</i>	<i>Bit Field Size:</i> resv 6	<i>Request Parameter</i> No
	<b>DD001</b> Reserved field	Variable number of reserved bits, all set to logic "1"		
	<b>DF52</b> Bit field	<b>bit(n)</b>	<i>Range:</i> Variable	<i>Resolution:</i> 1
	Used to construct bit fields			
	Used to align subsequent data on byte boundary.			
9	<b>Retransmit Flag</b>	<i>Byte Field Size:</i>	<i>Bit Field Size:</i> 1	<i>Request Parameter</i> No
	<b>DD244</b> AIS Retransmit Flag	0=No retransmission, 1=retransmitted.		
	See the latest version of ITU-R M.1371 for more information.			
	<b>DF52</b> Bit field	<b>bit(n)</b>	<i>Range:</i> Variable	<i>Resolution:</i> 1
	Used to construct bit fields			
10	<b>Spare</b>	<i>Byte Field Size:</i>	<i>Bit Field Size:</i> resv 1	<i>Request Parameter</i> No
	<b>DD001</b> Reserved field	Variable number of reserved bits, all set to logic "1"		
	<b>DF52</b> Bit field	<b>bit(n)</b>	<i>Range:</i> Variable	<i>Resolution:</i> 1
	Used to construct bit fields			
	This field mirrors the "Spare" bit field found within the corresponding AIS message such that future definition within the AIS message can also be accommodated within this field. Normally, spare or reserved bits in NMEA 2000 are encoded with logic 1's, however for AIS PGNs the unused or reserved bits are to be encoded as logic 0's.			
11	<b>Number of Bits in Binary Data Field</b>	<i>Byte Field Size:</i> 2	<i>Bit Field Size:</i>	<i>Request Parameter</i> No
	<b>DD007</b> Generic numeric ID, medium	Number of route, waypoint, event, mark, etc.		
	<b>DF54</b> Integer, 16 bit unsigned	<b>uint16</b>	<i>Range:</i> 0 to 65,532	<i>Resolution:</i> 1 bit
	Unit-less number			
	Indicates the number of binary data bits that are contained within the Binary Data field.			
12	<b>Binary Data</b>	<i>Byte Field Size:</i>	<i>Bit Field Size:</i> n	<i>Request Parameter</i> No
	<b>DD142</b> Binary Bit Field	Binary data bit field.		
	<b>DF52</b> Bit field	<b>bit(n)</b>	<i>Range:</i> Variable	<i>Resolution:</i> 1
	Used to construct bit fields			
	Application specific data.			

# AIS Binary Broadcast Message

PGN: 129797

hex: 1FB05

This parameter group provides data associated with the ITU-R M.1371 Message 8 Binary Broadcast Message supporting broadcast communication of binary data. An AIS device may generate this parameter group either upon receiving a VHF data link message 8, or upon receipt of an ISO or NMEA request PGN. The Command Group Function PGN 126208 may be used with this PGN to configure parameters such as the Binary Data (see ITU-R M.1371-1 for additional information). Note that future revisions to the ITU-R M.1371 VHF Data Link Messages may result in their spare or reserved bits being defined with a specific meaning, requiring the spare or reserved parameter in this parameter group to have the corresponding new meaning in future revisions of this standard.

Single Frame: No Priority Default: 5 Default Update Rate: NA milliseconds Frequency: NA cycles per second  
 Destination: Global Query Support: No ACK Rqmnts:

Field #	Field Name	Byte Field Size:	Bit Field Size:	Request Parameter	Original Reference ID # 114
1	<b>Message ID</b> DD188 AIS Message Identifier		6	No	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
8 = Binary Broadcast Message.					
2	<b>Repeat Indicator</b> DD185 AIS Repeater Indicator		2	No	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
0 = Default 1 = First retransmission 2 = Second retransmission 3 = Final retransmission See the latest version of ITU-R M.1371 for more information.					
3	<b>Source ID</b> DD010 Generic numeric ID, large		4	No	
	DF55 Integer, 32 bit unsigned	uint32 Range: 0 to 4,294,967,292	Resolution: 1 bit		Unit-less number
MMSI number of source station.					
4	<b>NMEA 2000 Reserved</b> DD001 Reserved field		resv 1	No	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
Used to align subsequent data on byte boundary.					
5	<b>AIS Transceiver Information</b> DD246 AIS Transceiver Information		5	No	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
0 = Channel A VDL reception, 1 = Channel B VDL reception, 2 = Channel A VDL transmission, 3 = Channel B VDL transmission, 4 = Own information not broadcast, 5-31 = Reserved.					
6	<b>Spare</b> DD001 Reserved field		resv 2	No	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
This field mirrors the "Spare" bit field found within the corresponding AIS message such that future definition within the AIS message can also be accommodated within this field. Normally, spare or reserved bits in NMEA 2000 are encoded with logic 1's, however for AIS PGNs the unused or reserved bits are to be encoded as logic 0's.					

# AIS Binary Broadcast Message

PGN: 129797

hex: 1FB05

7 **Number of Bits in Binary Data Field** *Byte Field Size:* 2 *Bit Field Size:* *Request Parameter* No  
**DD007** Generic numeric ID, medium  
Number of route, waypoint, event, mark, etc.  
**DF54** Integer, 16 bit unsigned **uint16** *Range:* 0 to 65,532 *Resolution:* 1 bit Unit-less number

Indicates the number of binary data bits that are contained within the Binary Data field.

8 **Binary Data** *Byte Field Size:* *Bit Field Size:* n *Request Parameter* No  
**DD142** Binary Bit Field  
Binary data bit field.  
**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

Application specific data.

# AIS SAR Aircraft Position Report

PGN: 129798

hex: 1FB06

This parameter group provides data associated with the ITU-R M.1371 Message 9 SAR Aircraft Position Report Message for Airborne AIS units conducting Search and Rescue operations. An AIS device may generate this parameter group either upon receiving a VHF data link message 9, or upon receipt of an ISO or NMEA request PGN (see ITU-R M.1371-1 for additional information). Note that future revisions to the ITU-R M.1371 VHF Data Link Messages may result in their spare or reserved bits being defined with a specific meaning, requiring the spare or reserved parameter in this parameter group to have the corresponding new meaning in future revisions of this standard.

Single Frame: No Priority Default: 4 Default Update Rate: NA milliseconds Frequency: NA cycles per second  
 Destination: Global Query Support: No ACK Rqmnts:

Field #	Field Name	Original Reference ID #	115
1	<b>Message ID</b> DD188 AIS Message Identifier	Byte Field Size:	Bit Field Size: 6 Request Parameter No
	DF52 Bit field	bit(n) Range: Variable Resolution: 1	Used to construct bit fields
9 = SAR Aircraft Position Report Message			
2	<b>Repeat Indicator</b> DD185 AIS Repeater Indicator	Byte Field Size:	Bit Field Size: 2 Request Parameter No
	DF52 Bit field	bit(n) Range: Variable Resolution: 1	Used to construct bit fields
3	<b>User ID</b> DD010 Generic numeric ID, large	Byte Field Size: 4	Bit Field Size: Request Parameter No
	DF55 Integer, 32 bit unsigned	uint32 Range: 0 to 4,294,967,292 Resolution: 1 bit	Unit-less number
MMSI number of SAR aircraft reporting position.			
4	<b>Longitude</b> DD023 Longitude, WGS-84	Byte Field Size: 4	Bit Field Size: Request Parameter No
	DF25 Longitude	int32 Range: +/- 180 deg Resolution: 1x10E-7 deg	"-" = West, resolution ~1.1 cm
Longitude of SAR aircraft reporting position.			
5	<b>Latitude</b> DD022 Latitude, WGS-84	Byte Field Size: 4	Bit Field Size: Request Parameter No
	DF23 Latitude	int32 Range: +/- 90 deg Resolution: 1x10E-7 deg	"-" = South, resolution ~1.1 cm
Latitude of SAR aircraft reporting position.			
6	<b>Position Accuracy</b> DD184 AIS Position Accuracy	Byte Field Size:	Bit Field Size: 1 Request Parameter No
	DF52 Bit field	bit(n) Range: Variable Resolution: 1	Used to construct bit fields

**7 RAIM-Flag** *Byte Field Size:* *Bit Field Size:*  *Request Parameter*   
**DD189** AIS RAIM-flag  
 0 = RAIM not in use (default),  
 1 = RAIM in use

See the latest version of ITU-R M.1371 for more information.

**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

**8 Time Stamp** *Byte Field Size:* *Bit Field Size:*  *Request Parameter*   
**DD186** AIS Time Stamp  
 0-59=UTC second when the report was generated,  
 60=time stamp not available (default),  
 61=positioning system is in manual input mode,  
 62=Electronic position fixing system operates in estimated (dead reckoning) mode,  
 63=positioning system is inoperative

See the latest version of ITU-R M.1371 for more information.

**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

**9 COG** *Byte Field Size:*  *Bit Field Size:* *Request Parameter*   
**DD165** Course-Over-Ground (COG)  
 The direction of the path over ground actually followed by a vessel.

**DF02** Angle **uint16** *Range:* 0 to 2Pi rad *Resolution:* 1x10E-4 rad Resolution ~0.0057deg, 1 deg = .01745 rad

COG of SAR aircraft reporting position.

**10 SOG** *Byte Field Size:*  *Bit Field Size:* *Request Parameter*

**DD044** Generic Speed

**DF35** Speed **uint16** *Range:* 0 to 655.32 m/s *Resolution:* 1x10E-2 m/s 1 Knot = 0.5144 m/s

SOG of SAR aircraft reporting position.

**11 Communication State** *Byte Field Size:* *Bit Field Size:*  *Request Parameter*

**DD187** AIS Communication State

The Communication State contains information used by the various TDMA slot allocation algorithms and synchronization information

See the latest version of ITU-R M.1371 for more information.

**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

**12 AIS Transceiver Information** *Byte Field Size:* *Bit Field Size:*  *Request Parameter*

**DD246** AIS Transceiver Information

0 = Channel A VDL reception,  
 1 = Channel B VDL reception,  
 2 = Channel A VDL transmission,  
 3 = Channel B VDL transmission,  
 4 = Own information not broadcast,  
 5-31 = Reserved.

**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

**13 Altitude** *Byte Field Size:*  *Bit Field Size:* *Request Parameter*

**DD115** Distance

**DF15** Distance, signed **int32** *Range:* +/-~2.147x10E+7 m *Resolution:* 1x10E-2 m

Altitude of SAR aircraft reporting position.

**14 Reserved for Regional Applications** *Byte Field Size:* *Bit Field Size:* **resv 8** *Request Parameter* **No**  
**DD001** Reserved field Variable number of reserved bits, all set to logic "1"  
**DF52** Bit field **bit(n)** *Range:* **Variable** *Resolution:* **1** Used to construct bit fields

This field mirrors the "Reserved for Regional Applications" bit field found within the corresponding AIS such that future definition within the AIS message can also be accommodated within this field. Normally, spare or reserved bits in NMEA 2000 are encoded with logic 1's, however for AIS PGNs the unused or reserved bits are to be encoded as logic 0's.

**15 Data Terminal Equipment (DTE)** *Byte Field Size:* *Bit Field Size:* **1** *Request Parameter* **No**  
**DD242** Data Terminal Equipment (DTE) 0=Available,  
 1=not available.  
 See the latest version of ITU-R M.1371 for more information.  
**DF52** Bit field **bit(n)** *Range:* **Variable** *Resolution:* **1** Used to construct bit fields

**16 Spare** *Byte Field Size:* *Bit Field Size:* **resv 5** *Request Parameter* **No**  
**DD001** Reserved field Variable number of reserved bits, all set to logic "1"  
**DF52** Bit field **bit(n)** *Range:* **Variable** *Resolution:* **1** Used to construct bit fields

This field mirrors the "Spare" bit field found within the corresponding AIS message such that future definition within the AIS message can also be accommodated within this field. Normally, spare or reserved bits in NMEA 2000 are encoded with logic 1's, however for AIS PGNs the unused or reserved bits are to be encoded as logic 0's.

# AIS Addressed Safety Related Message

PGN: 129801

hex: 1FB09

This parameter group provides data associated with the ITU-R M.1371 Message 12 Addressed Safety Related Message supporting addressed communication of safety related data. An AIS device may generate this parameter group either upon receiving a VHF data link message 12, or upon receipt of an ISO or NMEA request PGN. The Command Group Function PGN 126208 may be used with this PGN to configure safety related message parameters (see ITU-R M.1371-1 for additional information). Note that future revisions to the ITU-R M.1371 VHF Data Link Messages may result in their spare or reserved bits being defined with a specific meaning, requiring the spare or reserved parameter in this parameter group to have the corresponding new meaning in future revisions of this standard.

Single Frame: **No** Priority Default: **5** Default Update Rate: **NA** milliseconds Frequency: **NA** cycles per second  
 Destination: **Global** Query Support: **No** ACK Rqmnts:

Field #	Field Name	Byte Field Size:	Bit Field Size:	Request Parameter	Original Reference ID # 117
1	<b>Message ID</b> DD188 AIS Message Identifier		<b>6</b>	<b>No</b>	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
12 = Addressed Safety Related Message					
2	<b>Repeat Indicator</b> DD185 AIS Repeater Indicator		<b>2</b>	<b>No</b>	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
0 = Default 1 = First retransmission 2 = Second retransmission 3 = Final retransmission					
See the latest version of ITU-R M.1371 for more information.					
3	<b>Source ID</b> DD010 Generic numeric ID, large		<b>4</b>	<b>No</b>	
	DF55 Integer, 32 bit unsigned	uint32 Range: 0 to 4,294,967,292	Resolution: 1 bit		Unit-less number
MMSI number of station which is the source of the message.					
4	<b>NMEA 2000 Reserved</b> DD001 Reserved field		<b>resv 1</b>	<b>No</b>	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
Used to align subsequent data on byte boundary.					
5	<b>AIS Transceiver Information</b> DD246 AIS Transceiver Information		<b>5</b>	<b>No</b>	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
0 = Channel A VDL reception, 1 = Channel B VDL reception, 2 = Channel A VDL transmission, 3 = Channel B VDL transmission, 4 = Own information not broadcast, 5-31 = Reserved.					
6	<b>Sequence Number</b> DD243 AIS Sequence Number		<b>2</b>	<b>No</b>	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
Range 0-3 See the latest version of ITU-R M.1371 for more information.					

# AIS Addressed Safety Related Message

PGN: 129801

hex: 1FB09

**7 Destination ID** *Byte Field Size:* **4** *Bit Field Size:* *Request Parameter* **No**  
**DD010** Generic numeric ID, large Number of route, waypoint, event, mark, etc.  
**DF55** Integer, 32 bit unsigned **uint32** *Range:* 0 to 4,294,967,292 *Resolution:* 1 bit Unit-less number

MMSI number of station which is the destination of this message.

**8 NMEA 2000 Reserved** *Byte Field Size:* *Bit Field Size:* **resv 6** *Request Parameter* **No**  
**DD001** Reserved field Variable number of reserved bits, all set to logic "1"  
**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

Used to align subsequent data on byte boundary.

**9 Retransmit Flag** *Byte Field Size:* *Bit Field Size:* **1** *Request Parameter* **No**  
**DD244** AIS Retransmit Flag 0=No retransmission, 1=retransmitted.  
 See the latest version of ITU-R M.1371 for more information.  
**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

**10 Spare** *Byte Field Size:* *Bit Field Size:* **resv 1** *Request Parameter* **No**  
**DD001** Reserved field Variable number of reserved bits, all set to logic "1"  
**DF52** Bit field **bit(n)** *Range:* Variable *Resolution:* 1 Used to construct bit fields

This field mirrors the "Spare" bit field found within the corresponding AIS message such that future definition within the AIS message can also be accommodated within this field. Normally, spare or reserved bits in NMEA 2000 are encoded with logic 1's, however for AIS PGNs the unused or reserved bits are to be encoded as logic 0's.

**11 Safety Related Text** *Byte Field Size:* **8 or 16 n** *Bit Field Size:* *Request Parameter* **No**  
**DD004** Generic name string, short Name of place, route, waypoint, destination, vessel, vehicle, etc.  
**DF50** String, variable, short **ch8or16(n)** *Range:* 0 to 250 ASCII or 0 to 125 Unicode Characters *Resolution:* 1 ASCII or 1 Unicode Character 2 to 252 bytes. First byte in string (uint8) is the Count byte indicating the number of bytes in the string, including the Count and Control bytes. Second byte in string is the Control byte. The Control byte indicates if the string consists of ASCII characters (Char8) or Unicode characters (Char16). Control byte = 0 => Unicode characters Control byte = 1 => ASCII characters A string with no characters (total length of 2 bytes, i.e. Count = 2) is a null string.

Maximum size is 156 8-bit ASCII characters.

# AIS Safety Related Broadcast Message

PGN: 129802

hex: 1FB0A

This parameter group provides data associated with the ITU-R M.1371 Message 14 Safety Related Broadcast Message supporting broadcast communication of safety related data. An AIS device may generate this parameter group either upon receiving a VHF data link message 14, or upon receipt of an ISO or NMEA request PGN. The Command Group Function PGN 126208 may be used with this PGN to configure parameters such as the Safety Related Text (see ITU-R M.1371-1 for additional information). Note that future revisions to the ITU-R M.1371 VHF Data Link Messages may result in their spare or reserved bits being defined with a specific meaning, requiring the spare or reserved parameter in this parameter group to have the corresponding new meaning in future revisions of this standard.

Single Frame: No Priority Default: 5 Default Update Rate: NA milliseconds Frequency: NA cycles per second  
 Destination: Global Query Support: No ACK Rqmnts:

Field #	Field Name	Byte Field Size:	Bit Field Size:	Request Parameter	Original Reference ID # 118
1	<b>Message ID</b> DD188 AIS Message Identifier		6	No	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
14 = Safety Related Broadcast Message. See the latest version of ITU-R M.1371 for more information.					
2	<b>Repeat Indicator</b> DD185 AIS Repeater Indicator		2	No	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
Used by the repeater to indicate how many times a message has been repeated (range of 0 to 3). 0 = Default 1 = First retransmission 2 = Second retransmission 3 = Final retransmission See the latest version of ITU-R M.1371 for more information.					
3	<b>Source ID</b> DD010 Generic numeric ID, large		4	No	
	DF55 Integer, 32 bit unsigned	uint32 Range: 0 to 4,294,967,292	Resolution: 1 bit		Unit-less number
MMSI number of station which is the source of the message.					
4	<b>NMEA 2000 Reserved</b> DD001 Reserved field		resv 1	No	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
Used to align subsequent data on byte boundary.					
5	<b>AIS Transceiver Information</b> DD246 AIS Transceiver Information		5	No	
	DF52 Bit field	bit(n) Range: Variable	Resolution: 1		Used to construct bit fields
0 = Channel A VDL reception, 1 = Channel B VDL reception, 2 = Channel A VDL transmission, 3 = Channel B VDL transmission, 4 = Own information not broadcast, 5-31 = Reserved.					

<b>6</b>	<b>Spare</b>	<i>Byte Field Size:</i>	<i>Bit Field Size:</i> <b>resv 2</b>	<i>Request Parameter</i> <b>No</b>
	<b>DD001</b> Reserved field	Variable number of reserved bits, all set to logic "1"		
	<b>DF52</b> Bit field	<b>bit(n)</b> <i>Range:</i> Variable	<i>Resolution:</i> 1	Used to construct bit fields

This field mirrors the "Spare" bit field found within the corresponding AIS message such that future definition within the AIS message can also be accommodated within this field. Normally, spare or reserved bits in NMEA 2000 are encoded with logic 1's, however for AIS PGNs the unused or reserved bits are to be encoded as logic 0's.

<b>7</b>	<b>Safety Related Text</b>	<i>Byte Field Size:</i> <b>8 or 16 n</b>	<i>Bit Field Size:</i>	<i>Request Parameter</i> <b>No</b>
	<b>DD004</b> Generic name string, short	Name of place, route, waypoint, destination, vessel, vehicle, etc.		
	<b>DF50</b> String, variable, short	<b>ch8or16(n)</b> <i>Range:</i> 0 to 250 ASCII or 0 to 125 Unicode Characters	<i>Resolution:</i> 1 ASCII or 1 Unicode Character	2 to 252 bytes. First byte in string (uint8) is the Count byte indicating the number of bytes in the string, including the Count and Control bytes. Second byte in string is the Control byte. The Control byte indicates if the string consists of ASCII characters (Char8) or Unicode characters (Char16). Control byte = 0 => Unicode characters Control byte = 1 => ASCII characters A string with no characters (total length of 2 bytes, i.e. Count = 2) is a null string.

Maximum size is 163 8-bit ASCII characters.