



AIS 300 Installation Instructions

Use these instructions to install the Garmin® AIS 300 Automatic Identification System (AIS) Class B receiver device. Compare the contents of this package with the packing list on the box. If any pieces are missing, contact your Garmin dealer immediately.

Use the following instructions to install the AIS 300 device. Details for the following steps are included in this document:

1. Select locations for the AIS components.
2. Mount the AIS 300 receiver box.
3. Connect the AIS 300 to power.
4. Connect the AIS 300 to a VHF antenna and to an optional VHF radio ([page 4](#)).
5. Connect the AIS 300 to a NMEA 2000 network or to a NMEA 0183-compatible chartplotter (optional - [page 4](#)).

WARNING

When navigating, carefully compare information provided by the unit to all available navigation sources, including information from visual sightings, local waterway rules and restrictions, and maps. For safety, always resolve any discrepancies or questions before continuing navigation.

Use this unit only as a navigational aid. Do not attempt to use the unit for any purpose requiring precise measurement of direction, distance, location, or topography.

This product, its packaging, and its components contain chemicals known to the State of California to cause cancer, birth defects, or reproductive harm. This Notice is provided in accordance with California's Proposition 65. See www.garmin.com/prop65 for more information.

CAUTION

Wear safety goggles and a dust mask when drilling, cutting, or sanding.

Safe Compass Distance

Ensure that you install the AIS 300 receiver box at least 15 3/4 in. (40 cm) from any compass. Test your compass to verify that it operates correctly when the AIS 300 is operating.

Selecting Locations for the AIS 300 Components

Use the wiring layout diagrams starting on [page 2](#) to determine how to best organize the AIS 300 components on your boat. Ensure that the cables reach all components before permanently mounting any component.

Mounting the AIS 300 Receiver Box

Install the AIS 300 receiver box below deck on a bulkhead. Select a location that is dry and protected from washdown. Ensure that the location is well ventilated and away from objects that generate heat. Ensure that the receiver box is at least 15 3/4 in. (40 cm) from any compass to avoid interference.

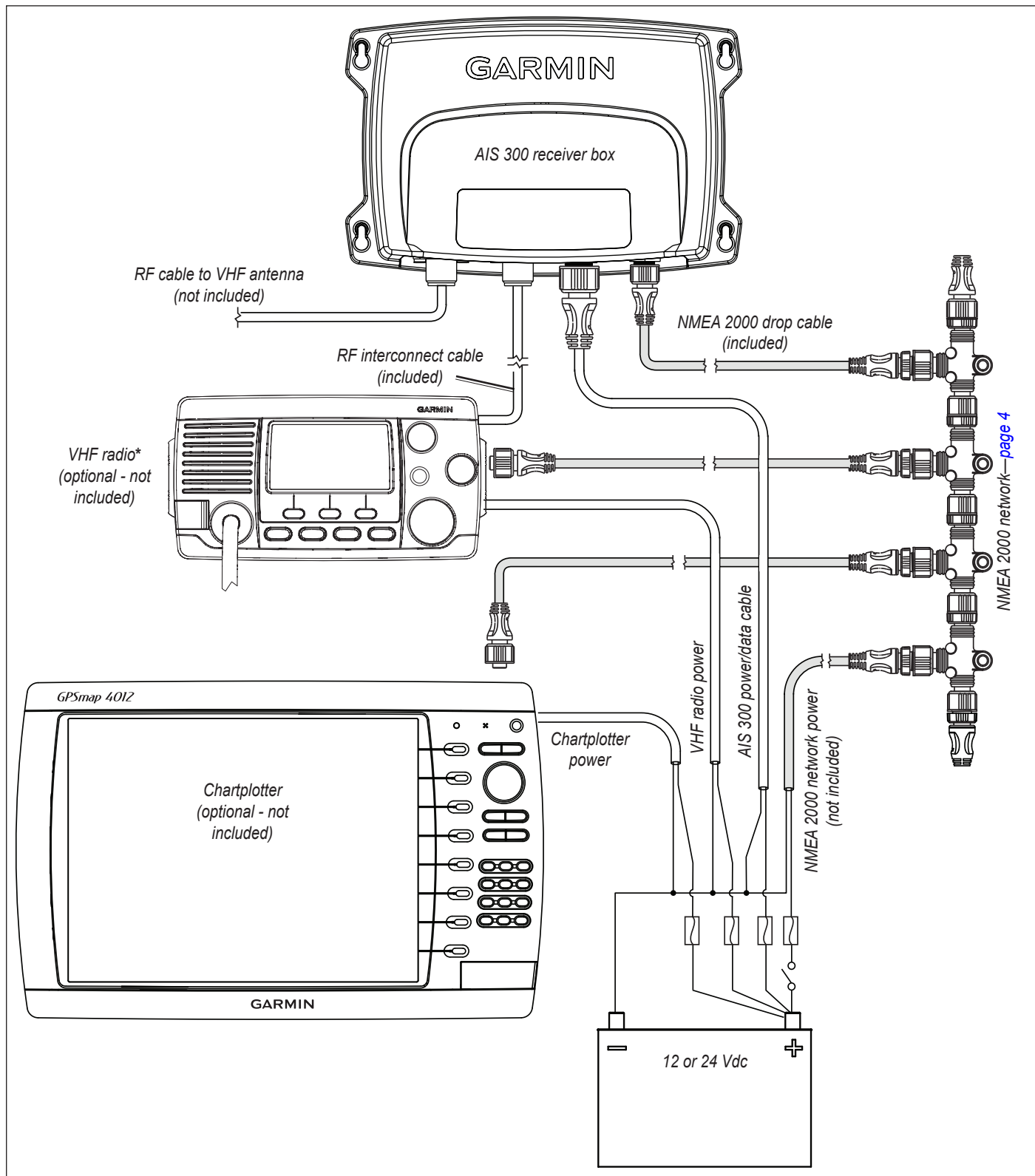
Needed Tools

- Drill and drill bits
- Number 2 Phillips screwdriver

To mount the receiver box:

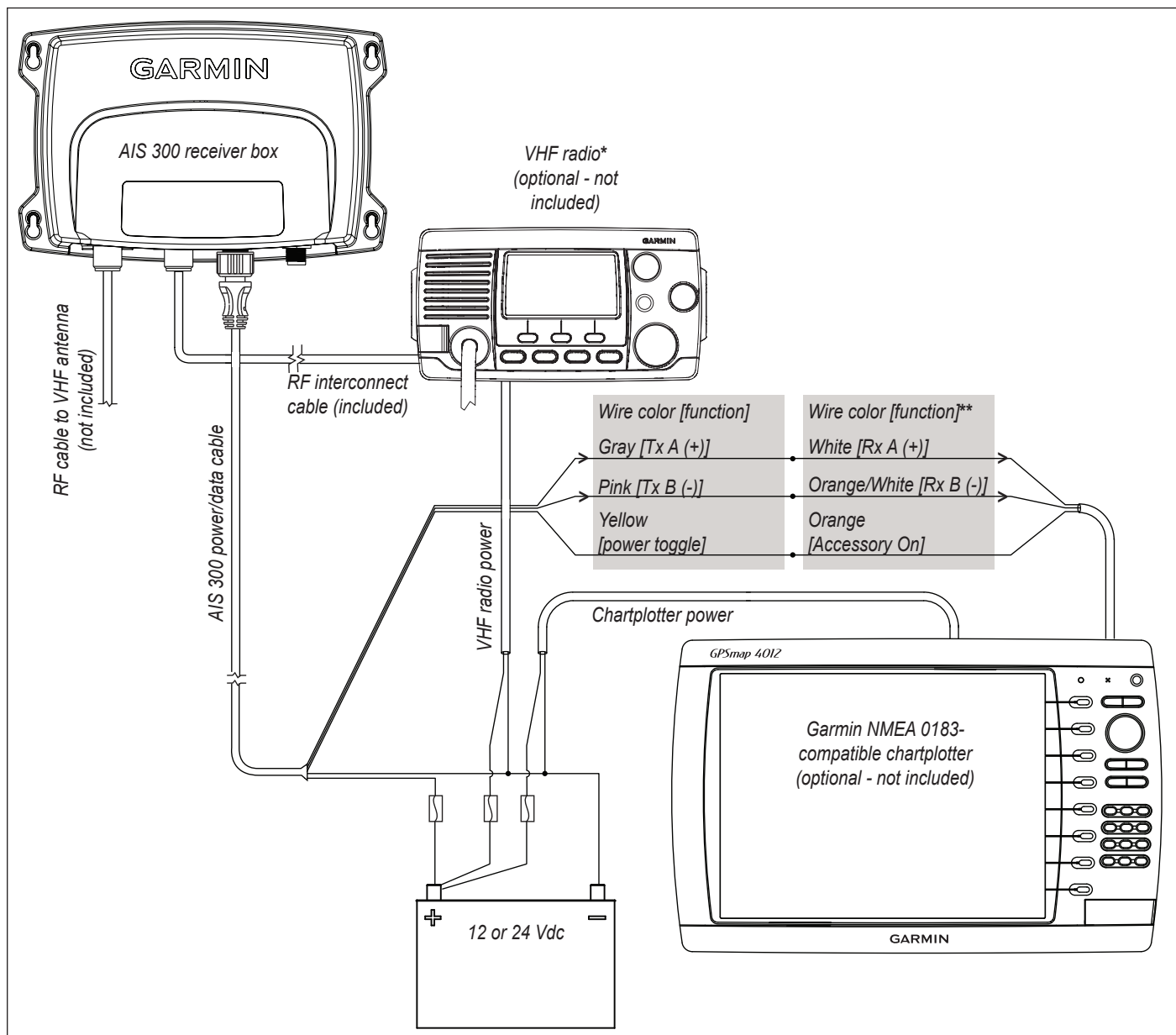
1. Ensure that the chosen location is dry, protected from washdown, and well-ventilated.
2. Use the receiver box as a template, and use a pencil to mark the holes in the four corners. Do not drill through the receiver box.
3. Drill four 1/8 in. (3 mm) pilot holes.
4. Mount the receiver box using the included 20 mm M 3.5 screws. You can also use bolts, washers, and nuts (not included) to mount the receiver box if the mounting surface is suitable.

AIS 300 Wiring Layout: AIS 300 Connected to a Garmin Chartplotter Through NMEA 2000



* The AIS 300 does not need to be installed alongside a VHF radio, but they can share the same VHF antenna if they are both installed on your boat.

AIS 300 Wiring Layout: AIS 300 Connected to a Garmin Chartplotter Through NMEA 0183



* The AIS 300 does not need to be installed alongside a VHF radio, but they can share the same VHF antenna if they are both installed on your boat.

** The listed wire colors are for the NMEA 0183 Port 1 input on a Garmin GPSMAP 4000/5000 or GPSMAP 6000/7000 series chartplotter. Refer to the installation instructions provided with your Garmin chartplotter if you want to connect the AIS 300 to a different model of Garmin chartplotter or to a different NMEA 0183 port on a GPSMAP 4000/5000 or GPSMAP 6000/7000 series chartplotter. If you are connecting the AIS 300 to a non-garmin chartplotter, see [page 5](#) for detailed wiring assignments.

Connecting the Receiver Box to Power

Use the AIS 300 power/data cable to connect the receiver box to a 12 or 24 Vdc battery.

Notes:

- Connect the red wire to the positive battery terminal, and connect the black wire to the negative battery terminal.
- The replacement fuse on the power/data wiring harness is a 5 A, fast-acting fuse.
- If it is necessary to extend the power wires, use 16 AWG or larger wire.
- If your boat has an electrical system, you can possibly connect the AIS 300 directly to an unused holder on your fuse block. If you connect the AIS 300 to the fuse block, remove the in-line fuse holder supplied with the power/data cable.

Installing the AIS 300 Power Toggle

The AIS 300 can be powered on and off in one of 3 ways:

- If the AIS 300 is connected to a NMEA 2000 network, it will turn on and off with the NMEA 2000 network.
NOTE: The AIS 300 is not powered by the NMEA 2000 network; however, it will turn on when it detects power on the NMEA 2000 network. You must connect the AIS 300 to power as well as to the NMEA 2000 network.
- If the AIS 300 is connected to a Garmin chartplotter using NMEA 0183, connect the yellow wire from the AIS 300 power/data cable to the Accessory On wire from the chartplotter. The AIS 300 will then turn on or off with the Garmin chartplotter.
- If the AIS 300 is connected to a non-Garmin NMEA 0183 chartplotter, or not connected to a chartplotter at all, then you must install a toggle switch to turn the device on and off.
 - Connect the yellow wire from the AIS 300 power/data cable to one terminal of a single-pole, single-throw switch (not included), and connect the other switch terminal to the negative (-) battery terminal.
 - When you close the switch, the AIS 300 powers on. When you open the switch, the AIS 300 powers off.

Connecting a VHF Antenna to the AIS 300

To transmit and receive AIS information, the AIS 300 must be connected to a VHF antenna (not included).

Connect a marine VHF antenna to the AIS 300 using the antenna port on the device. If you have a VHF radio on your boat, connect the VHF radio to the AIS 300 using the included RF interconnect cable according to the wiring layout diagrams starting on [page 2](#).

Mount the antenna according to the installation instructions provided with the antenna.

Connecting the AIS 300 to a NMEA 2000 Network (Optional)

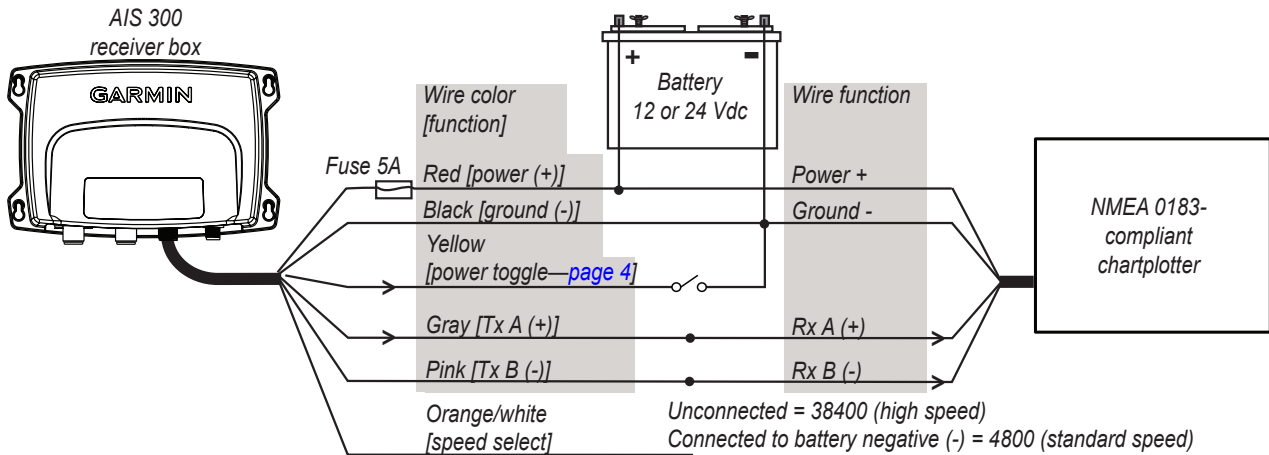
You can connect the AIS 300 to a NMEA 2000-compliant chartplotter using your existing NMEA 2000 network, or you can build a basic NMEA 2000 network if you do not have one on your boat. For more information on NMEA 2000, and to purchase required cables and connectors, go to www.garmin.com.

The AIS 300 wiring layout diagram on [page 2](#) contains an example of the AIS 300 connected to a Garmin chartplotter through a NMEA 2000 network.

NOTE: If you are unfamiliar with NMEA 2000, see the “NMEA 2000 Network Fundamentals” chapter in the *Technical Reference for Garmin NMEA 2000 Products* for more information. Visit www.garmin.com/products/AIS300/, and click on “Manuals” on the AIS 300 page.

Connecting the AIS 300 to a NMEA 0183 Device (Optional)

You can connect the AIS 300 to a NMEA 0183-compliant chartplotter using the bare wires on the AIS 300 power/data cable. Connect NMEA 0183 bare wires to a Garmin chartplotter as indicated in the wiring layout diagram on [page 3](#). Consult the diagram below to connect the AIS 300 to a non-Garmin chartplotter. Use 22 AWG wire for extended runs of NMEA 0183 wire, if needed. If it is necessary to extend the power wires, use 16 AWG or larger wire.



Connecting the AIS 300 to a Non-Garmin NMEA 0183 Device

Notes:

- Consult the installation instructions for your NMEA 0183-compliant device to identify the receiving (RX) A(+) and B(-) wires.
- If your NMEA 0183-compliant device has only one receiving wire (Rx), connect it to the gray wire [Tx A (+)] from the AIS 300, and leave the pink wire [Tx B (-)] wire unconnected.
- The AIS 300 can transmit NMEA 0183 data using either 38400 baud (default) or 4800 baud. Connect the orange/white wire from the AIS 300 power/data cable to the negative (-) battery terminal if you would like to limit the output speed to 4800 baud. Refer to the documentation provided with your chartplotter to determine the correct NMEA 0183 baud rate.

Using the AIS 300

If you connected the AIS 300 to a chartplotter using either NMEA 2000 or NMEA 0183, refer to the Owner's Manual provided with your chartplotter for information on using the AIS-specific features of the chartplotter.

If you did not connect the AIS 300 to a Garmin chartplotter, ensure that you connected a power toggle switch using the yellow wire on the AIS 300 power/data cable (see [page 4](#)). When you want to turn on the AIS 300, close the switch. When you want to turn off the AIS 300, open the switch.

Appendix

Specifications

Dimensions: W × H × D: 8 5/32 × 5 17/32 × 1 25/32 in. (207 × 140.6 × 45.7 mm)

Weight: 1 lb. 7.6 oz. (670 g)

Temperature Range: from -4°F to 158°F (from -20°C to 70°C)

Compass-safe Distance: 15 3/4 in. (40 cm)

Waterproof Rating: IEC 60529 IPX7 (Immersion in 1 meter of standing water for 30 minutes)

Power

Source: 9.6–31.2 Vdc (12 Vdc or 24 Vdc boat battery)

Usage: 2.5 W max

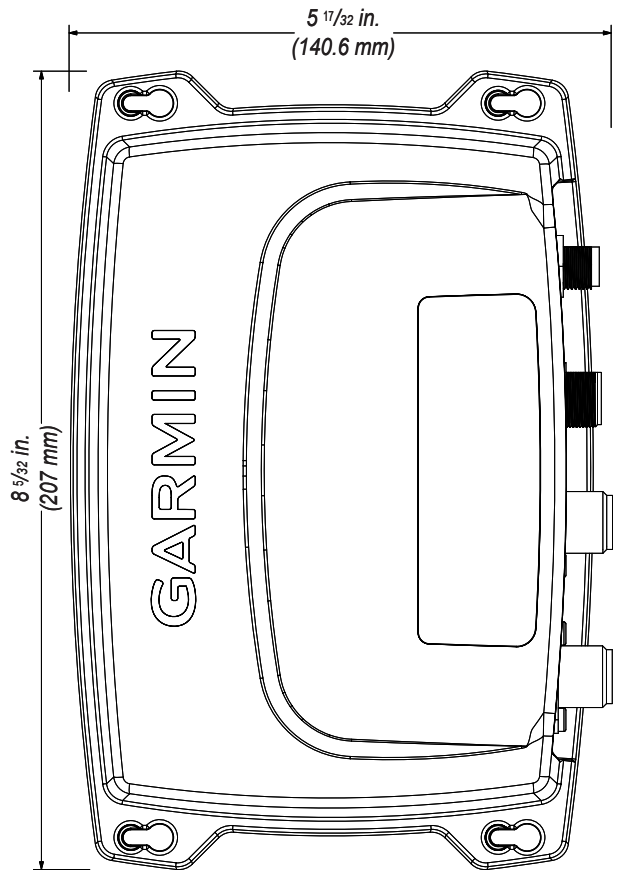
Fuse: 5 A fast-acting

NMEA 2000 Power Usage: LEN=2

Antenna

Antenna Connector: PL259

Antenna Port Impedance: 50 Ω



NMEA 2000 PGN Information

Receive		Transmit	
059392	ISO Acknowledgment	059392	ISO Acknowledgment
059904	ISO Request	060928	ISO Address Claim
060928	ISO Address Claim	126208	NMEA Request/Command/Acknowledge Group Function
126208	NMEA - Command/Request/Acknowledge Group Function	126464	PGN List
126992	System Time	126996	Product Information
		129038	AIS Class A Position Report
		129039	AIS Class B Position Report
		129040	AIS Class B Extended Position Report
		129794	AIS Class A Static and Voyage Related Data
		129798	AIS SAR Aircraft Position Report
		129802	AIS Safety Related Broadcast Message
		129809	AIS Class B "CS" Static Data Report, Part A
		129810	AIS Class B "CS" Static Data Report, Part B



The Garmin AIS 300 is NMEA 2000 certified.

NMEA 0183 Communication Information

When connected to a NMEA 0183 device, the AIS 300 transmits the VDM sentence.

Product Registration

Help us better support you by completing our online registration today. Go to <http://my.garmin.com>. Keep the original sales receipt, or a photocopy, in a safe place.

Contact Garmin

Contact Garmin Product Support if you have any questions while using the AIS 300. In the USA, go to www.garmin.com/support, or contact Garmin USA by phone at (913) 397.8200 or (800) 800.1020.

In the UK, contact Garmin (Europe) Ltd. by phone at 0808 2380000.

In Europe, go to www.garmin.com/support and click **Contact Support** for in-country support information, or contact Garmin (Europe) Ltd. by phone at +44 (0) 870.8501241.

Industry Canada Compliance

This device complies with Industry Canada Standard RSS-182 and ICES-003.

FCC Compliance

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and may cause harmful interference to radio communications if not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet that is on a different circuit from the GPS unit.
- Consult the dealer or an experienced radio/TV technician for help.

This product does not contain any user-serviceable parts. Repairs should only be made by an authorized Garmin service center. Unauthorized repairs or modifications could result in permanent damage to the equipment, and void your warranty and your authority to operate this device under Part 15 regulations.

Declaration of Conformity (DoC)

Hereby, Garmin, declares that the AIS 300 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

To view the full Declaration of Conformity, see the Garmin Web site for your Garmin product: www.garmin.com.



California Electronic Waste Recycling Act of 2003

The California Electronic Waste Recycling Act of 2003 requires the recycling of certain electronics. For more information on the applicability to this product, see www.ecycle.org.

Limited Warranty

This Garmin product is warranted to be free from defects in materials or workmanship for one year from the date of purchase. Within this period, Garmin will, at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost. This warranty does not apply to: (i) cosmetic damage, such as scratches, nicks and dents; (ii) consumable parts, such as batteries, unless product damage has occurred due to a defect in materials or workmanship; (iii) damage caused by accident, abuse, misuse, water, flood, fire, or other acts of nature or external causes; (iv) damage caused by service performed by anyone who is not an authorized service provider of Garmin; or (v) damage to a product that has been modified or altered without the written permission of Garmin. In addition, Garmin reserves the right to refuse warranty claims against products or services that are obtained and/or used in contravention of the laws of any country.

This product is intended to be used only as a travel aid and must not be used for any purpose requiring precise measurement of direction, distance, location or topography. Garmin makes no warranty as to the accuracy or completeness of map data in this product.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE.

IN NO EVENT SHALL GARMIN BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE, OR INABILITY TO USE THIS PRODUCT OR FROM DEFECTS IN THE PRODUCT. SOME STATES DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

Garmin retains the exclusive right to repair or replace (with a new or newly-overhauled replacement product) the device or software or offer a full refund of the purchase price at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY.

To obtain warranty service, contact your local Garmin authorized dealer or call Garmin Product Support for shipping instructions and an RMA tracking number. Securely pack the device and a copy of the original sales receipt, which is required as the proof of purchase for warranty repairs. Write the tracking number clearly on the outside of the package. Send the device, freight charges prepaid, to any Garmin warranty service station.

Online Auction Purchases: Products purchased through online auctions are not eligible for rebates or other special offers from Garmin warranty coverage. Online auction confirmations are not accepted for warranty verification. To obtain warranty service, an original or copy of the sales receipt from the original retailer is required. Garmin will not replace missing components from any package purchased through an online auction.

International Purchases: A separate warranty may be provided by international distributors for devices purchased outside the United States depending on the country. If applicable, this warranty is provided by the local in-country distributor and this distributor provides local service for your device. Distributor warranties are only valid in the area of intended distribution. Devices purchased in the United States or Canada must be returned to the Garmin service center in the United Kingdom, the United States, Canada, or Taiwan for service.

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