

FCC INFORMATION

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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.

CAUTION: Changes or modifications to this device, not expressly approved by Icom Inc., could void your authority to operate this device under FCC regulations.

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MarineCommander is a trademark of Icom Incorporated.

ABOUT CE AND DOC

CE Hereby, Icom Inc. declares that the versions of MXG-5000S which have the "CE" symbol on the product, comply with the essential requirements of the Radio Equipment Directive, 2014/53/EU, and the restriction of the use of certain hazardous substances in electrical and electronic equipment Directive, 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address:
<http://www.icom.co.jp/world/support/>

DISPOSAL



The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that in the European Union, all electrical and electronic products, batteries, and accumulators (rechargeable batteries) must be taken to designated collection locations at the end of their working life. Do not dispose of these products as unsorted municipal waste. Dispose of them according to the laws in your area.

Icom is not responsible for the destruction, or damage to, or performance of any Icom or non-Icom equipment, if the malfunction is because of:

- Force majeure, including, but not limited to, fires, earthquakes, storms, floods, lightning, other natural disasters, disturbances, riots, war, or radioactive contamination.
- The use of Icom products with any equipment that is not manufactured or approved by Icom.

ICOM INSTRUCTIONS

GPS RECEIVER

MXG-5000S

Thank you for choosing this Icom product.
READ ALL INSTRUCTIONS carefully and completely before using this product.

PRECAUTIONS

CAUTION: NEVER immerse the GPS receiver in water. The GPS receiver meets IPX6 requirements for high-pressure water jet resistance. However, once it has been dropped, high-pressure water jet resistance cannot be guaranteed because of possible damage to its case or the waterproof seal.

DO NOT use or place the GPS receiver in areas with temperatures below -20°C (-4°F) or above $+60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$).

DO NOT use harsh solvents such as Benzine or alcohol to clean the GPS receiver, as they will damage the receiver's surfaces.

The GPS receiver is only for the specified Icom equipment such as MarineCommander™ or MA-500TR! — Other manufacturer's equipment may have different pin assignments and can damage the equipment or GPS receiver if attached.

EXPLICIT DEFINITIONS

WORD	DEFINITION
CAUTION	Equipment damage may occur.
NOTE	Recommended for optimum use. No risk of personal injury, fire or electric shock.

SUPPLIED ACCESSORIES

Item	Quantity
① Hose clamp (HAS-40).....	2
② Extension pipe (2273 pipe).....	1



SPECIFICATIONS

- Power source voltage: 4.75 to 5.25 V DC (supplied from the connected equipment)
- Operating temp. range: -20°C to $+60^{\circ}\text{C}$, -4°F to $+140^{\circ}\text{F}$
- Relative humidity: Less than 95% (at $+35^{\circ}\text{C}$, $+95^{\circ}\text{F}$)
- Dimensions: 78(d) × 96.5(H) mm, 3.1(d) × 3.8(H) inch
- Weight (approximate): 460 g, 1 lb
- Cable length (approximate): 10 m, 32.8 ft.
- Receive frequency: 1575.42 MHz
- Receive channels: 66 channels
- Receive codes: L1, C/A-code, SPS
- Satellite differential type: WAAS, EGNOS, MSAS, GAGAN
- TTFF (Time to First Fix): 40 seconds (typical)

All stated specifications are subject to change without notice or obligation.

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Count on us!

A7149H-1EX-3 Printed in Japan
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MOUNTING

◇ Mounting locations

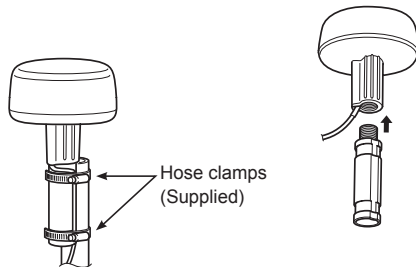
The GPS receiver should be mounted in a location that has a clear, unobstructed view in all directions and as far away from interference as possible, for the best reception. When selecting a mounting location, follow the guidelines below.

- The location should be at least 1 m (3.3 ft.) away from a VHF/UHF antenna, and 4 m (13.1 ft.) away from a MF/HF antenna.
- The location should be at least 5 m (16.4 ft.) away from an Inmarsat antenna.

- Be sure the location is out of the radar beam.
- Be sure the location will not be shaded by a random antenna or mast.
- Mount the GPS receiver as high as possible.

We recommend that you place the GPS receiver in the desired location temporarily, and see if it receives any interference.

◇ Installation



The supplied extension pipe is to be inserted firmly into the base of the GPS receiver and screwed in a clockwise direction. Using the supplied hose clamps, the GPS receiver can be stabilized to the mounting mast.

ATTENTION

About calculating position

The GPS receiver acquires signals from GPS satellites. It calculates its position by the orbit information of the GPS satellites and needs to measure the distance between itself and three or more GPS satellites to obtain a reliable position. The GPS receiver acquires all available satellites when it is powered up. Normally, it takes approximately 1 minute to determine a position.

In places where the GPS signals cannot reach the GPS receiver, such as around tall buildings, it may show position errors (misplacement) or no position reading at all. As the satellites are continuously moving, measurement of the position or time by the GPS receiver may take a while, and/or no position reading can be made in some instances. Even if the GPS receiver acquires signals from three or more GPS satellites, it may take a longer time to determine a position depending on the satellite locations.

Location precision

The GPS receiver automatically calculates its position when it acquires signals from three or more GPS satellites.

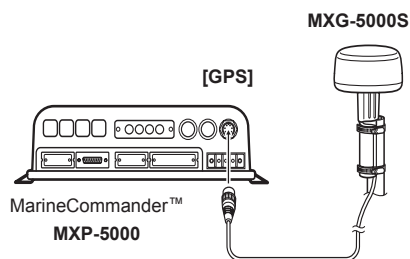
The GPS satellite's measurement error is about ± 10 meters. However, this can vary up to several hundred meters, depending on the surrounding environment.

The GPS information and its accuracy varies, depending on the GPS system being acquired, place and time.

About NMEA sentences

When the current position data cannot be received due to the GPS signal being blocked by something, the GPS receiver sends the last memorized NMEA sentence, but the sentence may include invalid data.

CONNECTION



(Example: Connect to the MarineCommander™)

Prior to any operation, it is important to make sure that all connections are made accurately. All connections should be made by only certified persons.

The output connector is to be connected from the GPS receiver to the GPS data input terminal of the MarineCommander™.