

ICOM INSTRUCTIONS

GPS RECEIVER

MXG-5000

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 chemical agents such as benzine or alcohol when cleaning, as they can damage the GPS 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.

SPECIFICATIONS

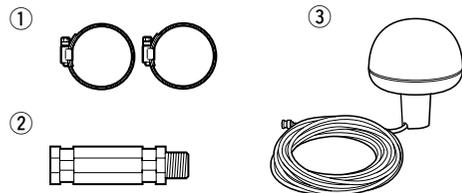
- Power supply voltage : 4.75 to 5.25 V DC (supplied from the connected equipment)
- Operating temp. range : -20°C to $+60^{\circ}\text{C}$; -4°F to $+140^{\circ}\text{F}$
- Relative humidity : Less than 95% (at $+35^{\circ}\text{C}$; $+95^{\circ}\text{F}$)
- Dimensions : 140(d) \times 157.2(H) mm; 5 $\frac{1}{2}$ (d) \times 6 $\frac{3}{16}$ (H) in.
- Weight (approx.) : 710 g; 1.57 oz
- Cable length (approx.) : 10 m; 32 ft. 9 $\frac{3}{4}$ in.
- Receiving frequency : 1575.42 MHz
- Receiving channels : 12
- Receiving codes : L1, C/A-code, SPS
- Satellite differential type : WAAS, EGNOS, MSAS
- TTFF (Time to First Fix) : 40 sec. (typical)

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

Thank you for purchasing the **MXG-5000** GPS RECEIVER. Please read these instructions thoroughly before installing and operating the GPS receiver.

SUPPLIED ACCESSORIES

Item	Qty.
① Hose clamp (HAS-40)	2
② Extension pipe (2273 pipe)	1
③ GPS receiver	1



FCC INFORMATION

For CLASS A UNINTENTIONAL RADIATORS

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 not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

ABOUT CE

CE CE Versions of the MXG-5000 which display the "CE" symbol on the serial number seal, comply with the essential requirements of the European Radio and Telecommunication Terminal Directive 1999/5/EC.

! This warning symbol indicates that this equipment operates in non-harmonised frequency bands and/or may be subject to licensing conditions in the country of use. Be sure to check that you have the correct version of this radio or the correct programming of this radio, to comply with national licensing requirement.



We Icom Inc. Japan
1-1-32, Kamiminami, Hirano-ku
Osaka 547-0003, Japan

Declare on our sole responsibility that this equipment complies with the essential requirements of the Radio and Telecommunications Terminal Equipment Directive, 1999/5/EC, and that any applicable Essential Test Suite measurements have been performed.

Kind of equipment: **GPS RECEIVER**

Type-designation: **MXG-5000**

Version (where applicable):

- This compliance is based on conformity with the following harmonised standards, specifications or documents:
- i) IEC 61108-1:2003
 - ii) EN 60945:2002
 - iii) EN 60950-1:2006 A11:2009
 - iv) _____
 - v) _____
 - vi) _____

DECLARATION OF CONFORMITY

CE 0560

Bad Soden 2nd Dec. 2010
Place and date of issue

Icom (Europe) GmbH
Communication Equipment
Auf der Krautweide 24
65812 Bad Soden am Taunus,
Germany

Authorized representative name

Y. Furukawa
General Manager

Y. Furukawa
Signature

Icom Inc.

MOUNTING

◇ Mounting locations

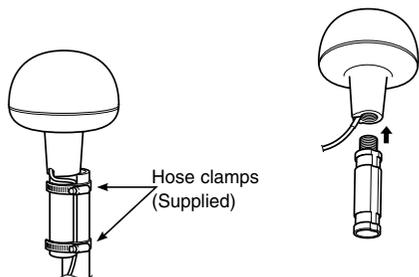
The GPS receiver should be mounted in a location that has a clear, unobstructed view in all directions and as far away from interference as possible, for the best reception. When selecting a mounting location, follow the guidelines below.

- The location should be at least 1 m (3.28 ft.) away from a VHF/UHF antenna, and 4 m (13.12 ft.) away from a MF/HF antenna.
- The location should be at least 5 m (16.40 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.

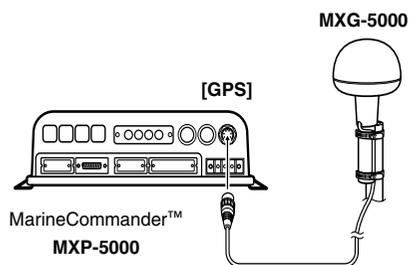
◇ Installation



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.

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 only by certified persons.

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

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 for determining 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 sentence

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.

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Count on us!

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