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GeoBeacon Customer FAQs

What is the GeoBeacon receiver?

The Trimble® GeoBeacon™ receiver is an integrated, belt-mounted differential correction receiver that tracks broadcasts from DGPS radio beacons, decodes the corrections, and sends them on to a GPS receiver. These differential corrections are used by the GPS receiver to eliminate errors in the GPS signals to give a more accurate position in real-time. The GeoBeacon receiver has Bluetooth® wireless technology enabling a cable-free connection with the GPS receiver.

What are the key features of the GeoBeacon receiver?

The GeoBeacon receiver offers the following features and benefits:

- Reliable Beacon differential corrections for Trimble GeoExplorer® series handhelds, GPS Pathfinder® ProXH™, and ProXT™ receivers, or any GPS receiver capable of receiving RTCM input.
- Fully integrated receiver, antenna, and battery in one small and lightweight unit. The all-in-one design makes set-up and operation completely hassle-free.
- Bluetooth wireless technology for cable-free connectivity to the GPS receiver. Eliminating cables makes it easier for you to traverse difficult terrain without snagging and breaking equipment.
- Advanced anti-jamming design ensures reliable beacon tracking, so you can have confidence that you're getting the accuracy you need.
- The ultra-rugged, waterproof GeoBeacon receiver will work in all of the difficult environments that you work in.
- A powerful but lightweight integrated lithium-ion battery that lasts all day. The battery is internally rechargeable for maximum convenience.
- The GeoBeacon receiver is ready to go, right out of the box. With zero configuration required, status LEDs provide the assurance that the receiver is tracking a beacon and providing corrections.
- Flexible mounting options, including a belt pouch and accessory interface, allowing you to mount the GeoBeacon receiver to suit the way you work.

Trimble Navigation Limited, 7401 Church Ranch Blvd, Westminster, CO 80021, USA

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How is the GeoBeacon receiver different from the BoB receiver?

The GeoBeacon receiver provides the same reliable real-time beacon differential corrections that you have come to expect from the BoB™ (Beacon-on-a-Belt) receiver. However, the GeoBeacon receiver also provides significant improvements. The key differences between the GeoBeacon and BoB receivers are:

- With Bluetooth wireless technology built-in, the GeoBeacon receiver provides cable-free operation with GeoExplorer series handhelds and the GPS Pathfinder ProXH and ProXT receivers.
- The GeoBeacon receiver weighs only 1.76 lb (0.80 kg) compared to the BoB receiver's 2.56 lb (1.16 kg).

What are the advantages of beacon corrections over other real-time correction sources?

Testing performed by Trimble in 2004 and published in the White Paper titled “[WAAS performance with Trimble GPS receivers](#)” (available on the Trimble website) shows that beacon and WAAS (Wide Area Augmentation System) corrections are both capable of delivering the accuracy specified for the GPS receiver. Beacon corrections are not subject to the same line-of-sight limitations that satellite-based correction sources have, so can offer a more reliable option in canopy or urban canyon areas. Satellite-broadcast OmniSTAR corrections provide a similar level of accuracy to beacon corrections. However OmniSTAR is a subscription-based service whereas beacon corrections are broadcast at no cost.

What GPS receivers does the GeoBeacon receiver work with?

The GeoBeacon receiver provides standard RTCM SC-104 corrections, and will therefore work with any GPS receiver that supports standard RTCM input. The GeoBeacon receiver is specifically designed to work over a Bluetooth connection with Trimble GPS Pathfinder ProXH and ProXT receivers and GeoExplorer series handhelds.

How does the GeoBeacon receiver choose which beacon to track?

The GeoBeacon receiver will automatically track the strongest beacon signal out-of-the-box, and can also be easily configured to track a specific beacon.

How can I find out if I have beacon coverage in my area?

The Trimble website at <http://www.trimble.com/findbeacon.asp> provides a list of currently operating beacon stations.

Does the GeoBeacon receiver support HANDGPS?

The GeoBeacon receiver tracks MSK beacon signals in a frequency band between 283.5 and 325 kHz. The High Accuracy Nationwide Differential Global Positioning System (HANDGPS), currently in the early stages of development, broadcasts carrier phase data in a different frequency band. The GeoBeacon receiver is not capable of receiving these corrections.

How do I configure the GeoBeacon receiver?

The GeoBeacon receiver comes ready to operate out-of-the-box with no configuration required. To select a specific station to track, use the simple two-button interface or the standard GeoBeacon Controller software.

What software supports the GeoBeacon receiver?

The GeoBeacon receiver works with any software that can configure the GPS receiver to accept RTCM corrections. When used with Trimble GPS receivers, the following software applications provide advanced GeoBeacon status reporting:

- TerraSync™ software version 2.53
- Trimble GPSCorrect™ extension for ESRI ArcPad software version 1.11
- Trimble GPS Controller software version 2.05
- Trimble GPS Analyst™ extension for ESRI ArcGIS software version 1.20

How do I connect to a GeoBeacon receiver?

The GeoBeacon receiver is designed to use a Bluetooth connection to a GPS receiver or field computer. The Bluetooth connection is easy to set up and manage from the field computer. Additionally, the GeoBeacon receiver has a standard DE-9 serial port connector and is provided with a null-modem cable for connection to a non-Bluetooth GPS receiver or field computer.

How can I activate or deactivate the Bluetooth wireless connection in the GeoBeacon receiver?

To ensure simple out-of-the-box operation, Bluetooth is activated by default in the GeoBeacon receiver when it is shipped from Trimble. The Bluetooth radio will power on as soon as the receiver is powered on.

The Bluetooth radio can be turned off with a simple button press. If you require that the Bluetooth radio is disabled so that it can not be accidentally turned on, a Bluetooth activation and deactivation utility will be provided on the User Guide and Software CD, and on the Trimble website at time of release.

What mounting options are available for GeoBeacon receiver?

The GeoBeacon receiver comes standard with a belt pouch and an accessory interface. The key advantage of the belt pouch is that it provides a “wearable” solution—there’s no additional equipment to carry. Alternatively, you can put the GeoBeacon receiver inside a backpack, or mount on the side of a range pole, using a range-pole bracket and the accessory interface.

Can the GeoBeacon receiver be used inside a vehicle?

The GeoBeacon receiver is recommended for on-foot use, and not for in-vehicle applications. Although the GeoBeacon receiver can be used inside a vehicle, RF noise from engine electronics inside the cab of most modern vehicles will degrade the GeoBeacon’s tracking performance.

How is the GeoBeacon receiver powered?

The GeoBeacon receiver comes standard with an internal lithium-ion battery that provides 10 hours of battery life in normal use. The battery is recharged in the unit using the international power supply that comes with the system.

What is standard out of the box?

The GeoBeacon receiver ships standard with:

- GeoBeacon receiver
- Power supply for charging the battery module
- Belt pouch
- Null modem cable
- User Guide and Software CD (Including GeoBeacon Controller and Bluetooth Activation Manager)

What optional accessories are available for the GeoBeacon receiver?

- Vehicle power cable
- Portable external power kit
- Hard carry case
- Range pole bracket

Where can I get more information?

Visit the Trimble website at www.trimble.com or contact your local Trimble Distributor.