



Excellence in Compliance Testing

Certification Exhibit

FCC ID: 2AAZL-GTCU-001

FCC Rule Part: 15.231

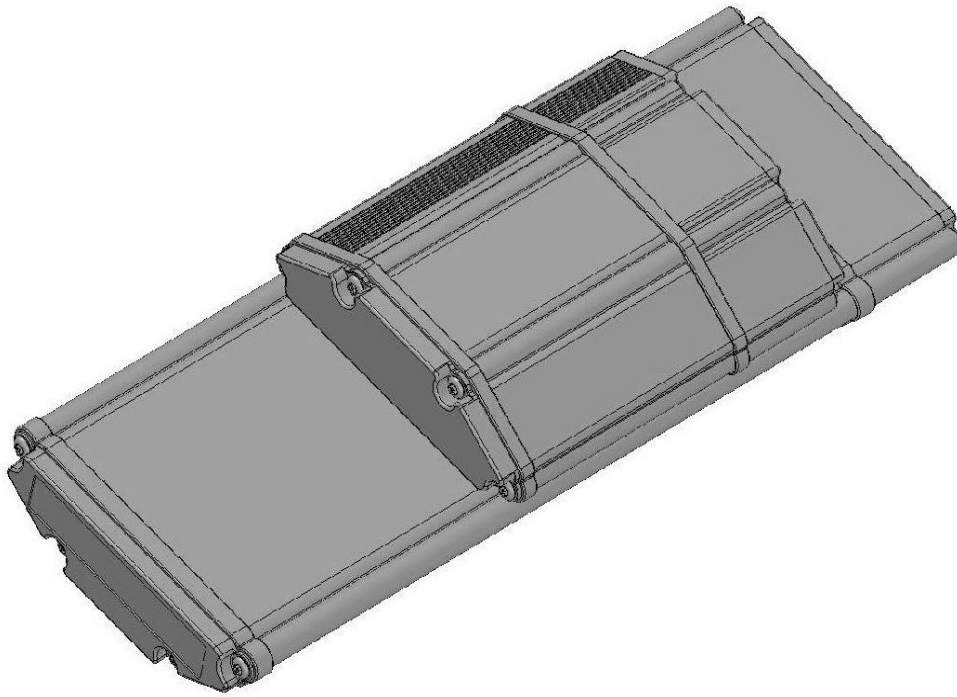
ACS Project: 13-2133

Manufacturer: Globe Tracker, Inc.
Model: GTCU-001

User Manual

Globe Tracker Communications Unit User Manual

February 2014



FCC Compliance Statement

"NOTE: 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, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. 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 or more of the following measures:

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

Warning: Changes or modifications to this device not expressly approved by Globe Tracker International, ApS could void the user's authority to operate the equipment.



RF Exposure Statements

“This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.”

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Scope and purpose

The globe tracker communication unit is designed to be permanently installed on the asset to be tracked: cargo containers, truck trailers, railway cars, ships, as well as in terminals and yards.

The purpose of the user's manual is to guide the end user through the installation of the globe tracker communication unit on the container or other asset to be tracked. It is assumed that the end-user does not have previous experience with the installation of Globe Tracker Communications Units.



Tools and other equipment required for installation

- Globe Tracker Communications Unit
- Globe Tracker Antenna Module
- Stixall
- Torx security screw bit: size: T20
- Torx security screw bit: size: T25
- Surface Cleaner
- Paper towels or cloth
- 4' Step-ladder
- Small utility knife
- Power drill
(*Metal-capable drill bit of size: 16mm (5/8")*)
- Latex gloves
- Ziploc bag
- Work light or flashlight

Helpful suggestions

Take care to ensure that you have a safe place to work. If working in diminished lighting, you must ensure that your work area has sufficient lighting. A flashlight that can attach by magnet to the side of the metal container is recommended.

Workflows

The box containing the Globe Tracker Communications Unit will contain a partially-assembled device that will require some final assembly before installation.

Installation Instructions – Carrier

1. If the reefer is powered on, switch it off at the Electric Box and unplug the power cable.
2. Remove the 4 x 10mm (3/8) Fan Plate bolts and Fan Cover. Remove the bolts at the top and bottom of the Electric Box and pull out the left side of the Electric Box out to access behind it. Unscrew the 2x Electric Box Door bolts and open Electric Box Door (if there are white panels behind the Electric Box Door, remove them). Remove the hinge pins and the Electric Box door.
3. Remove the plastic plug from the vacant exit hole at the back of the Electric Box. The plastic plug can be removed from behind the Electric Box and accessed from Fan side. Punch a 16mm (5/8") hole in the plastic insert and replace it. If no plastic insert is present, drill a 16mm (5/8") hole in the center of the referenced hole location.
4. Create a hole in the putty on the horizontal plate adjacent to the Electric Box and insert the cables through the hole and route the cables to the position where the AM will be located below the Electric Box.
5. From behind the Electric box, insert the antenna cable through the vacant hole in Electric Box. Punch a hole in a second 16mm (5/8") plastic cap and push the Antenna Cables through the back of it.
6. From the front of the Electric Box, pull enough Cable into the Electric Box to route the Cables along existing wires within the Electric Box to the compartment on the right side of the Electric Box where the CM will be located. Secure the Cable with black cable ties.
7. **(Antenna Module (AM) Installation)**
Remove the adhesive liner and apply "loop" side of the 50.8mm (2") x 152mm (6") Velcro Strip to the narrow surface of the AM (opposite the plastic window) approximately centered on surface. Apply the "hook" side of the Velcro Strips to

the "loop" side but DO NOT remove the adhesive liner at this time.

Note: LOOP SIDE ON THE ANTENNA AND HOOK SIDE ON THE REEFER.

8. Clean the area with Metal Cleaner or similar where the AM is to be installed.
 9. Removed the adhesive liner from the Velcro and apply 4 x dollops near the corners of the Velcro on the of the AM. Be sure the height of the dollops is approximately 15 mm high and exceed the height of the Velcro. Attach the AM to the container in a vertical orientation with the cable compartment upward (Double check orientation of the antenna module).
 10. **(Communication Module (CM) Installation)**
Check the compartment on the right side of the Electric Box to see if the rear wall is flat or "z" shaped.
 11. If "z" shaped, apply the "loop" side of a 2"(50.8mm) x 6" (152mm) Velcro Strip on the right portion of the wide side of the CM.
 12. If flat, apply the "loop" side of a 50.8mm (2") x 152mm (6") Velcro Strip approximately centered on surface on the wide side of the CM.
 13. Apply the "loop" side of the 25.4mm (1") x2" (50.8mm) Velcro Strip to the wide side of the CM Cable Compartment.
 14. Apply the "hook" side of the Velcro Strips to the "loop" side but DO NOT remove the adhesive liner at this time.
- Note: LOOP SIDE ON THE CM UNIT AND HOOK SIDE ON THE REEFER.*
15. Punch a hole in the 19 mm (3/4") Plastic Cap with a Philips screw driver, push the antenna cable through it. Insert the ends of the cable through the hole in the sloped wall of the CM Cable Compartment and connect to the various

connectors on the Mid Plate (NOTE: Cables and Mid Plate are labeled with signal names) WIFI to WIFI, GSM to GSM, GPS to GPS, SUBG to 433 "1".

16. Connect the End Cap Antenna cable to the CM midplate connector labeled "433" "2".
17. Insert the 9-Pin D-Shell Jumper into the connector on the Mid Plate and secure with the Jumper screws.
18. Check for blinking yellow LED, then wait for blinking green LED to confirm power connection and receipt of customer address.
19. Align and Insert the Mid Plate Gasket then the Cable Compartment over the Metal Rods extending from the CM enclosure.
20. Apply Clear Stixall around the edge of the 19 mm (3/4") Plastic Cap and insert it into the hole on the sloped wall of the Cable Compartment.
21. Align the End Plate Gasket and End Cap with Antenna with the Rods on the CM Enclosure and secure with M5 x 30 mm Screws. Torque the M5 Screws to 1.5 N-m (13.25 kgf-cm) (11.5 in-lbs).
22. Clean the area with the Metal Cleaner where the CM is to be installed.
23. Removed the adhesive liners from the Velcro and attach the CM to the wall of the Electric Box being

carefull to install under the ribbon cable in the top portion of the Electric Box. DO NOT attach the CM to the wall of the Electric Box with Stixall.

24. Align and secure the Electric Box.
25. From within the Electric Box. Apply Clear StixAll inside the 5/8" Plastic Cap installed in Step 4 of the Cable Routing Instructions.
26. Check the cable route and secure with black cable ties as required.
27. Re-install the white or clear plastic covers on the back of the Electric Box Door.
28. Re-install the hinge pins and close the Electric Box door and re-secure with the 2x bolts.
29. Check Cable routing for minimum visibility of the cable and secure with black cable ties as required.
30. Re-install the Fan Cover with the 4x10mm bolts.
31. Remove the loose CM System Serial Number Label from the plastic bag with the Communication Module and attach it to towards the top of the Antenna Module.
32. If the reefer was powered on prior to the installation, plug the power cord back in and switch the reefer back on.

Glossary of terms

Globe Tracker Communication Unit (GTCU)

As pictured on the front cover, the Globe Tracker Communications Unit consists of the Globe Tracker Communications Module and the Globe Tracker Antenna Module.

Globe Tracker Antenna Module (GTAM)

One of the two component items that makes up

the Globe Tracker Communications Unit, the Globe Tracker Antenna Module is recognizable as the smaller of the two component items.

LED – Light Emitting Diode

Torx – Type of security screw head

RF – Radio Frequency

Globe Tracker Communications Unit Technical Specifications

GSM (Asset Monitoring)

Band	Quad-Band EGSM 850/900/ 1800/1900 Mhz
GPRS Data	

GPS (Asset Tracking)

Positional Accuracy	3.0 m (67%) typical Horizontal 5.0 m (67%) typical Vertical
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Accelerometer (Motion/shock detection)

Main Functions	Shock Detection (up to 16G) Motion Detection Free Fall Detection Orientation Detection
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Data Logging

Capacity	48 Days
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Environmental Specification

Operating Temperature	-40 °C < T < 75 °C
Storage Temperature	-40 °C < T < 85 °C
Shock	16G Operating 50G Non-operating
Vibration	Random (20Hz to 2Khz)

Wi-Fi (Asset Monitoring)

Compatibility	IEEE 802.11b
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433 MHz Communication (Local sensor and container network)

Protocol	Open and soon to be published
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Power Supply

External DC Supply	10V – 48V
Internal Battery	Lithium Metal Battery Pack (not chargeable)

Communication Port

RS/232	3 Wire
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Dimensions

	Communication Module	Antennae Module
Length	295 mm	165 mm
Width	135 mm	125 mm
Height	32 mm	32 mm
Weight	1252 g	288 g

* Autonomous means that the network is built into the asset

Contact information

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For more information on Globe Tracker,
International, its products and services,
etc., please visit www.globetracker.com

