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User Manual for Track-Solar Ultra

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1. Introduction

The purpose of this document is to provide technical instructions for workshops on the installation of “Track-Solar Ultra” locating modules on freight wagons. The Track-Solar product family consists of several variants. These instructions assume that the “Track-Solar Ultra” with safety nuts is mounted on a metal plate.

The suggested work steps in this document may not fulfill all occupational health and safety requirements. The responsibility for compliance lies solely with the installing personnel and companies. Giesecke+Devrient IoT Solutions GmbH (hereinafter referred to as GDIOTMS) guarantees faultless operation and support only if the tracking modules have been professionally installed on the freight wagons in accordance with these instructions and tested for proper functioning.

Immediately before and after installation, the proper functioning of the modules must be checked using the GDIOTMS pairing app “mecPAIR” for Android smartphones (separate coordination and operating instructions available upon request) or in consultation with GDIOTMS support (+49-89-374085-22). After installation, it is essential that GDIOTMS receives the identification number of the freight wagon. Without a correct identification number, logical assignment (“pairing”) of the telematics unit with the freight wagon on the “trackFLEET” tracking platform cannot be performed. Without this correct logical assignment, it is not possible to determine on which freight wagon the “track-SOLAR” module has been installed.



2. Overview of individual parts & required tool installation

Required Tool:

- Drill (appropriate cable reel and power) or powerful cordless drill/screwdriver
- Steel drill bit for 7 mm rivet hole
- Riveting pliers for blind rivets (7 mm shank pin)
- Cleaning cloth

Overview of individual parts:

- Track-Solar Ultra pre-assembled on metal bracket
- 2 x 6.4 mm blind rivets
- Riveting pliers for blind rivets (7 mm shank pin)

3. General installation instructions

The module must always be installed in such a way that sufficient sunlight is available to recharge the Track-Solar buffer batteries. Depending on the duration of sunshine, this may vary from region to region.

If such a position is not observed, no warranty is given for the function.

The recommended mounting position for Track-Solar is vertically on the front or side surfaces of freight wagons. Horizontal mounting on the roof of freight wagons is not intended. The mounting position should be as high as possible on the freight wagon.

“Track-Solar Ultra” must be installed in the correct position on the freight wagon:

- The solar panel of “Track-Solar Ultra” is inclined
- The inclination of the solar panel should point to the sky
- A small arrow on the tracking module indicates the direction to the sky (see picture)



Figure 1: Correctly positioned installation of Track-Solar Ultra on freight wagons



4. Installation description

Steps	Description of the installation step
1	Pair the device using the GDIOTMS mobile pairing tool.
2	Shake the unit before installation. Function test via the GDIOTMS mobile pairing tool.
3	Position Track-Solar at the point on the freight wagon where the telematics unit is to be attached.
4	Clean chips and dirt from the contact area of the telematics unit. There must be no parts, particles or chips between the Track-Solar metal plate and the installation surface.
5	The metal plate has six holes - three on each side of the metal plate. At least one hole must be used on both sides. The Track-Solar is typically attached to the freight wagon via the holes
6	Drill a 7 mm hole at both positions.
7	Deburr all drill holes.
8	Insert blind rivets through the bracket into the holes.
9	Riveting: Fasten the "Track-Solar Ultra" in the intended position using riveting pliers.
10	Check all rivet heads and locating module for firm hold. Check solar panel for cleanliness and clean if necessary



5 International Regulatory Compliance

5.1 United States (FCC)

1. Part 15 Clause 15.105 [EMC Class B statement, please write Class A below instead of class B if device is a Class A device]:

“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.”

2. Part 15 Clause 15.21 [Do not Modify warning]

“Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment”

3. FCC Part 15.19(a) [interference compliance statement], unless the following statement is already provided on the device label:-

“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.”

4. RF Exposure guidance to the user on what separation distance to the body/limbs the device must be operated in order to comply with FCC RF Exposure requirements.

FCC Radiation Exposure Statement:

EN: “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 & your body.”

FR: Cet équipement est conforme aux limites d'exposition aux radiations FCC définies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.



5.2 Canada (ISED / ICES-003 / RSS-Gen)

1. If the device is within the scope of ICES-003 and complies, then the following can be included in the user manual or on the device label:-

“CAN ICES-3 (B)/NMB-3(B)“

2. If the device is a license-exempt radio, then the manual should show this interference statement in both English and French (from RSS-Gen Clause 8.4):-

“This device complies with Industry Canada’s license-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.”

3. RF Exposure guidance to the user on what separation distance to the body/limbs the device must be operated in order to comply with ISED RF Exposure requirements. The information should be provided in English and French.

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