

## Telepass SAT **K1**

Technology ETOLLKITL

Highway e-toll payment device

### Installation manual

### Recipients and obligations

This manual is intended for authorized installers of the device (garage). It contains all the instructions to install the device safely and must be kept and accessible for the entire life of the device.

For information on device use, please see the enclosed User manual.

### Manual data

Device: K1 Telepass SAT - model ETOLLKITL

Title: Installation manual

Code or edition: v. 1.1

Month and year of publication: JUNE 2024

Manual type: translation of the original instructions

### Customer service

In the event of malfunctions or faults, directly contact the service provider. To check that the device has been installed correctly, see "Check the installation with the Self Test Tool".

### Warranty

For further information on the warranty, please see the service contract and contact the service provider.

### Limitations

Telepass SpA cannot be held liable for the following.

- Reimbursements for interventions under warranty, repairs or other claims related to the product if the inspection by Telepass SpA confirms that the parts have not been correctly used, stored, installed and maintained, or that the said parts have been subject to contamination, abuse, improper use, modifications or makeshift repairs.
- Reimbursements for direct or indirect personal or property damages due to product use in conditions other than those described in this manual or due to manual, print and spelling errors or omissions.

## SAFETY INFORMATION

Always read this section to work with the unit safely.

### Safety messages

Warnings related to safety as envisaged in this document are provided below:



**CAUTION!** Indicates a hazardous situation which, if not avoided, may cause slight injury.

**NOTICE:** indicates obligations that, if not observed, may cause damage to the product.

### Important warnings

**This device complies with current safety regulations. If improperly used or installed, it can cause personal and/or property damages. Those who work on this device must follow good working practices for electricians.**

**Keep out of reach of children.**

**The use of the device is permitted only in the presence of electrical protections on the vehicle.**

### Installation, use and maintenance warnings

#### Electric shock risk



**The vehicle battery is live even when the vehicle is not running!**

Observe the voltage limits indicated in the technical specifications, the vehicle manufacturer's indications and power cable specifications.

Do not submerge in liquids. Protect the device from rain and/or spray.

Do not allow unqualified and unauthorized personnel to open or tamper with the device. Only contact customer service in the event of malfunctions.

#### Fire risk



**A damaged device can emit smoke and/or catch fire.**

Do not use the device if it appears damaged.

Keep away from heat sources, flames and magnetic fields.

If smoke comes from the device, remove it, move it away from the vehicle, and contact customer service immediately to return it to the service provider.

#### Risk of contact with irritants



**Irritant liquid may leak from a damaged device.**

Do not use the device if it appears damaged.

If liquid leaks from the device, do not handle it with your bare hands. Contact customer service immediately to return it to the service provider.

## Intended use

The device was designed, manufactured and tested to detect road passages through a radio and satellite system. It meets the safety standards required by current regulations if installed according to the instructions provided in this manual and used according to the instructions in User manual.

### NOTICE

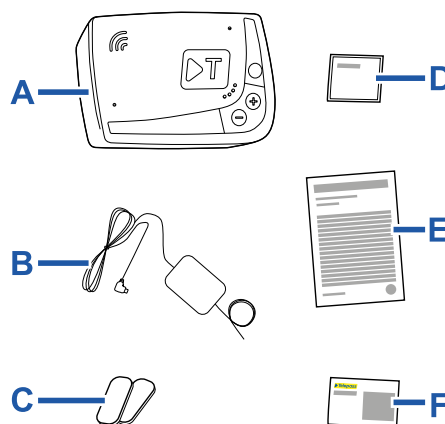
- Install only one device per vehicle. Several units can cause interferences, malfunctions and double toll charges. In this case, Telepass SpA cannot reimburse the extra amount paid.
- Only install the device in the position indicated. Incorrect positioning may cause malfunctions.
- Only install the device on the vehicle for which it was supplied. In the event of license plate change, contact customer service.

## PRODUCT KNOWLEDGE

### Receipt

Upon receipt of the device, check that the packaging and all components are in perfect condition. Contact the shipping agent in the event of damages.

### Box contents



A - K1 Telepass SAT device

B - Power cable

C - Two Velcro strips

D - Cleaning wipes

E - Vehicle declaration

F - Safety notices

A Quick Guide for using the device is found on the inside of the packaging. Keep the packaging to be able to consult it at any time.

### Operations

This device performs e-toll payment through a radio or satellite reading system. Where the radio system is used, the passage is detected by antennas placed in dedicated lanes, or on gates positioned in various points of the road network, where the *free-flow* service is available. Where satellite service is used, passage is detected by the GNSS system.

**NOTICE:** never disconnect the power cable. The device only works if powered. **Traveling on toll roads when the device is not operative may result in fines.**

The device communicates with the user by voice and acoustic messages.

The device must be connected to the vehicle's electrical system according to the instructions in this manual.

## The Self Test Tool

The Self Test Tool ([self-test-tool.telepass.com](http://self-test-tool.telepass.com)) is an online resource that Telepass offers installers and allows the following activities to be performed:

- Download this manual.
- Watch a video that shows how to install the device.
- Start the test procedure.

To use this tool, you must register with your cell phone number.

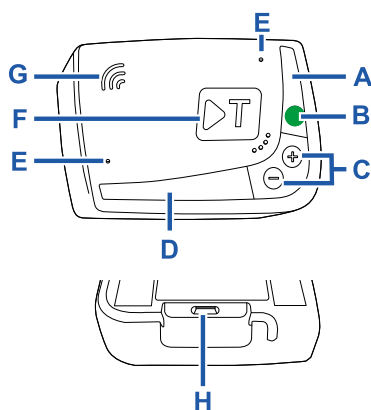
The installation wizard includes the following operations:

- entering the ID code for the device (OBU ID) and the plate number for the vehicle on which it is installed
- execution of the electric connections to the vehicle and positioning of the device in the passenger cabin

**It is suggested that you run the wizard on the Self Test Tool before leaving.**

**If the installation has been done correctly, the Self-Test Tool gives a positive outcome. Otherwise, the Self-Test Tool gives a negative outcome. If the installation has not been completed correctly, it will not be possible to transit on any toll road network.**

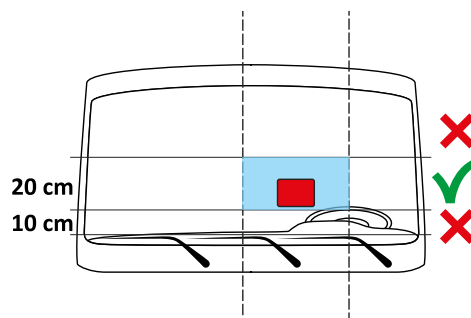
## Device structure



- A** - Status LED (red/green)
- B** - Function/confirmation button
- C** - Adjustment buttons (+/-)
- D** - Communication LED (red/yellow/green/blue)
- E** - Microphone (not used)
- F** - Multifunction button
- G** - Speaker
- H** - Power inlet

## DEVICE INSTALLATION

### Position on the windshield



Install in the windshield area as indicated below:

- within a 20 cm band, 10 cm over the idle windshield wiper line
- between the windshield median line and center of the steering wheel.

To identify the shielded windshield zones, please refer to the vehicle documentation.

**NOTICE:** make sure that the device does not interfere with the driver's field of vision when driving and that it is not within the airbag's range of action.

### Installation warnings

#### NOTICE:

- The fixed installation of the device can only be performed at authorized workshops by suitably qualified personnel.
- Comply with the power cable specifications, the device power limits and the vehicle manufacturer's instructions.
- To ensure the Velcro strip adhesion, install the unit when the ambient temperature is between 20 °C and 40 °C.
- Before installing the device, check that all data included in the vehicle declaration are correct. Otherwise, ask the vehicle's owner for an updated declaration.
- Make sure that device installation does not inhibit the correct operations of the vehicle and electrical devices connected to the electrical system (e.g. tachographs, etc.)
- Make sure that the power cable is not subject to mechanical, heat or chemical stress and does not hinder the driver when driving.

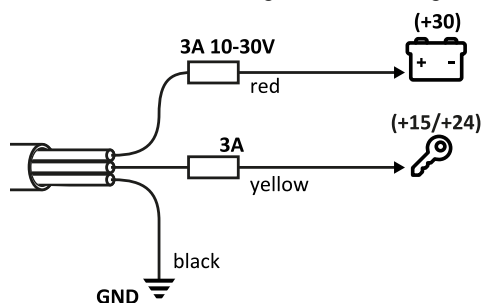
### Required material



Two 3 A fuses and relevant fuse boxes.

## Connect the device to the electrical system

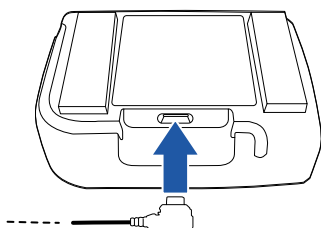
Connect the three wires according to the following diagram.



### CAUTION!

Only use the cable supplied. DO NOT use third-party cables or adapters.  
Do not make any other connections (e.g., 1- or 2-wire connections). This would compromise the operation of the device and can cause fines.  
DO NOT short-circuit the three wires.  
Comply with the cable specifications and the vehicle manufacturer's instructions.  
Make sure that the fuses are easy to access and replaceable.  
DO NOT connect the device to the electronic control units (ECU).

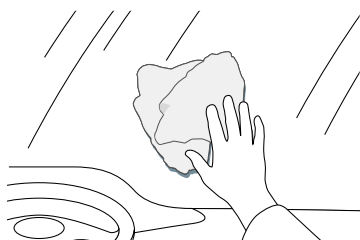
## Check the connections



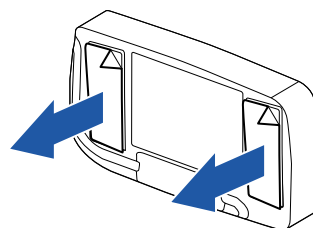
1. Check that the connector is firmly inserted in the power supply socket.
2. Switch on the panel: the green LED status light will switch on. If there is a fault, the red LED status light will flash or remain on.
3. Switch off the panel: the green LED status light flashes three times and then switches off.

For further information on the LEDs, see the User manual enclosed.

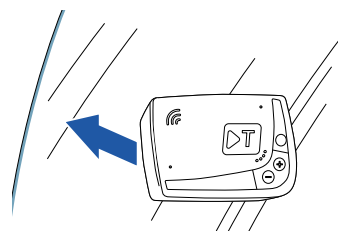
## Position the device on the windshield



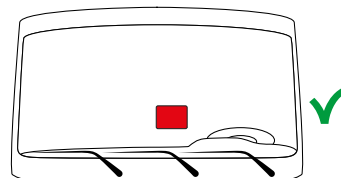
1. Clean the application area on the windshield carefully, using a multipurpose detergent.



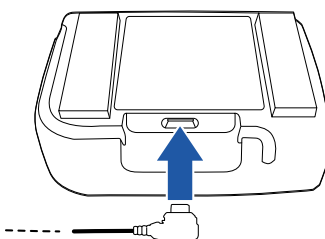
2. Remove the protective film from the sticker.



3. Place the device horizontally on the clean windshield.



4. Check for air bubbles in the adhesive area. Press firmly the device against the windshield.



5. Press the connector fully into the power socket.

**NOTICE:** make sure that the power cable is not subject to mechanical, thermal or chemical stress.

## Check the installation with the Self Test Tool

Before using the device to travel, you can check that it has been properly installed.

**NOTICE:** start the Self Test Tool procedure with the vehicle turned off.

Proceed as follows:

1. Log on to the [self-test-tool-telepass.com](https://self-test-tool-telepass.com) link.
2. If you are already registered, enter your phone number and PIN.
3. If you have not yet registered, enter your phone number and follow the wizard.
4. If helpful, download the manual and watch the video describing how to install the device.
5. Follow the wizard to install the device. In this procedure, you need to enter the device ID (OBU ID) and the license plate for the vehicle on which it is installed.

## MAINTENANCE AND DISPOSAL

### Cleaning



Use a soft cloth, dampened with a multipurpose detergent to clean the unit.

### NOTICE:

- Do not spray detergent directly on the device.
- Do not use solvents or abrasive materials.

### Disposal liability



Never dispose of the device as standard urban waste.

Dispose of at a local WEEE recycling center or return to your local contact company or to Telepass SpA.

### Batteries and accumulators



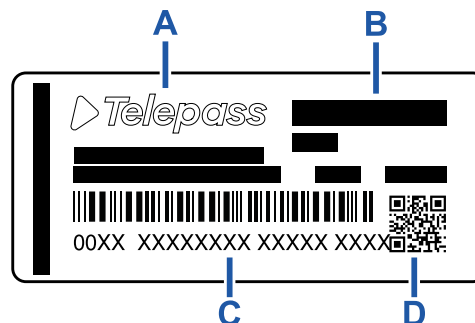
**CAUTION!** Toxic substances in the Li-Ion battery. Intoxication, pollution and environmental damages. DO NOT remove and dispose of the battery. Return the entire device as indicated in the operating instructions.



**CAUTION!** Risk of explosion. DO NOT expose the device to high temperatures.

## TECHNICAL SPECIFICATIONS

### Back label



**A** – Manufacturer's name and information

**B** – Model name and technical data (IP rating and power supply)

**C** – Device serial number and bar code for DSRC module information

**D** – QR code to access the Telepass website

### Other markings



Device subject to the WEEE Directive (2012/19/EU).



Device not subject to the RoHS Directive (2011/65/EU).



CE marking

### Technical characteristics

Dimensions	95 x 66 x 27 mm
Weight	120 g
External material	Recyclable plastic (ABS)
Protection grade	IP 41
Working temperature	-30 °C to +70 °C
Storage temperature	5 °C to +40 °C
Power from vehicle	5 V DC - 2 A (min.)
Internal battery	Rechargeable battery (supercap) 3.9 V DC/155 mAh (@3.67 V) - 311 mAh (@3.90 V)
Residual voltage (DSRC only)	3.0 V DC - 225 mAh (cr2032)
Radio-frequency band	2G (GSM): 900/1800 MHz 3G (WDCSMA): 900 MHz LTE (FDD): 700/800/900/1800/2600 MHz GNSS: 1151-1214/1215.6-1350/1559-1610 MHz DSRC: 5.785-5.815 GHz
Output power	2G (GSM): Class 1 (30 dBm ±2 dB), Class E2 (26 dBm ±3 dB), Class 4 (33 dBm ±2 dB), Class E2 (27 dBm ±3 dB) 3G (WDCSMA): Class 3 (24 dBm +1/-3 dB) LTE (FDD): Class 3 (23 dBm ±2 dB) DSRC: -14 dBm
GNSS standards	GPS, Galileo, GLONASS

### **Safety and approval conformity**

Hereby, the manufacturer Telepass SpA declares that the ETOLLKITL type radio equipment is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following Internet address:  
<https://www.telepass.com/it/truck/supporto>

**CE** 0051-RED-0118

**Approval** NSAI as per UNECE R10 regulation