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REVISION OF THE MANUAL

This document is **revision 04** of the **RDC Tool technical manual**.

Issue date: 30/10/2017

INTRODUCTION

Dear Customer,

thank you for choosing this product for your workshop.

We are certain that you will get the greatest satisfaction from it and receive a great deal of help in your work.

Please read through the instructions in this manual carefully and keep it for future reference.

Reading and understanding the following manual will help you avoid damaging things and injuring people due to an improper use of the product it refers to.

We reserve ourselves the right to make any changes deemed necessary to improve the manual for any technical or marketing requirement; the company may do so at any time without prior notice.

This product is intended to be used exclusively by technicians specialised in the Automotive industry. Reading and understanding the information in this manual cannot replace adequate specialised training in this field.

The sole purpose of the manual is to illustrate the functioning of the product sold. It is not intended to offer technical training of any kind and technicians will therefore carry out any interventions under their own responsibility and will be accountable for any damage or personal injury caused by negligence, carelessness, or inexperience, regardless of the fact that this tool has been used following the information contained in this manual.

Any additions to this manual, useful in describing the new versions of the program and the new functions associated to it, may be sent to you through the technical bulletin service.

This manual is to be considered an essential part of the product to which it refers to. If it is resold, the original buyer is therefore required to forward the manual to the new owner.

Reproduction, whole or in part, of this manual in any form without written authorisation by the manufacturer is strictly forbidden.

The original manual was written in Italian, every other language is a translation of the original manual.

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1 LEGEND OF THE SYMBOLS USED

The symbols used in the manual are described in this chapter.

	Asphyxiation Risk
	Explosion Risk
	High Voltage Hazard
	Fire / Burn risk
	Poisoning Hazard
	Corrosive Substances Risk
	Noise Hazard
	Moving Parts Risk
	Crushing Risk
	General Risk
	Important information

2 GENERAL SAFETY REGULATIONS

2.1 Glossary

- **Operator:** *qualified individual, in charge of using the device / tool.*
- **Machine / device / tool:** *the product purchased.*
- **Workplace:** *the place where the operator must carry out her/his work.*

2.2 Operator Safety Regulations

2.2.1 General Safety Regulations

- *The operator must be completely clear-headed and sober when using the device; taking drugs or alcohol before or when operating the device is strictly forbidden.*
- *The operator must not smoke during device operation.*
- *The operator must carefully read all the information and instructions in the technical documents provided with the device.*
- *The operator must follow all the instructions provided in the technical documents.*
- *The operator must always watch over the device during the various operating phases.*
- *The operator must make sure she/he is working in environment which is suitable for the operations that must be carried out.*
- *The operator must report any faults or potentially hazardous situation in connection with the workplace or the device.*
- *The operator must carefully follow the safety regulations required for the workplace in which she/he is working and required by the operations she/he has been asked to carry out.*

2.2.2 Risk of Asphyxiation

	Exhaust gas from internal combustion engines, whether they may be petrol or diesel, are hazardous to your health and can cause serious harm to your body.
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Safety Precautions:

- *The workplace must be equipped with an adequate ventilation and air extraction system and must be in compliance with standards according to current national laws.*
- *Always activate the air extraction system when working in closed environments.*

2.2.3 Risk of Impact and Crushing

	The vehicles which are undergoing A/C system recharging operations and the devices must be properly blocked using the specific mechanical brakes/blocks while being service.
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Safety Precautions:

- *Always make sure that the vehicle is in neutral gear (or that it is set in parking position in case of a vehicle equipped with automatic transmission).*
- *Always activate the hand brake or parking brake on the vehicle.*
- *Always block the wheels on the vehicle with the specific mechanical blocks.*
- *Make sure the device is stable, on a flat surface and the wheels are locked with the specific brakes.*

2.2.4 Hazards Caused by Moving Parts

	Vehicle engines include parts that move, both while running and not running (eg: the cooling fan is controlled by a thermal switch in connection with the coolant temperature and become activated even when the vehicle is off), that can injure the operator.
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Safety Precautions:

- *Keep hands away from moving parts.*
- *Disconnect the engine cooling fan each time the engine you are working on is still hot. This will avoid the fan from becoming activated unexpectedly even when the engine is off.*
- *Do not wear ties, loose clothes, wrist jewellery or watches when working on a vehicle.*
- *Keep connection cables, probes and similar devices away from the moving parts of the engine.*

2.2.5 Risk of Burning or Scalding

 	The parts that are exposed to high temperatures in engines that are moving or have just stopped could burn the operator. Remember that catalytic mufflers reach very high temperatures, able to cause serious burns or even start fires. Acid in the vehicle batteries is another potential hazard.
--	--

Safety Precautions:

- *Protect your face, hands, and feet by using suitable protection.*
- *Avoid contact with hot surfaces, such as spark plugs, exhaust pipes, radiators and connections within the cooling system.*
- *Make sure there are no oil stains, rags, paper or other inflammable material near the muffler.*
- *Avoid splashing electrolyte onto your skin, eyes and clothes, as it is a corrosive and highly toxic compound.*

2.2.6 Fire and Explosion Hazard

	The following are potential fires and / or explosion hazards: • <i>The types of fuel used by the vehicle and the vapours released by these fuels.</i> • <i>The refrigerants used by the A / C system.</i> • <i>The acid in the vehicle batteries.</i>
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Safety Precautions:

- *Let the engine cool.*
- *Do NOT smoke near the vehicle.*
- *Do NOT expose the vehicle to open flames.*
- *Make sure that the electrical connections are all well insulated and firmly in place.*
- *Collect any fuel that might have spilled.*
- *Collect any refrigerant that might have spilled.*
- *Make sure you are always working in an environment equipped with a good ventilation and air extraction system.*
- *Always activate the air extraction system when working in closed environments.*
- *Cover the openings of the batteries with a wet cloth in order to stifle the explosive gases before proceeding in testing or recharging.*
- *Avoid causing sparks when connecting cables to the battery.*

2.2.7 Noise Hazard

	Loud noises that may occur within the workplace, especially during service operations may damage the operator's hearing.
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Safety Precautions:

- *Protect your ears with suitable protective ear wear.*

2.2.8 High Voltage Hazard

	The voltage supply from the mains that powers the devices in the workplace and the voltage within the vehicle starter system is a potential shock hazard to the operator.
---	--

Safety Precautions:

- *Make sure the electrical system in the workplace is compliant to current national standards.*
- *Make sure the device being used is connected to ground.*
- *Cut off the power supply voltage before connecting or disconnecting cables.*
- *Do NOT touch the high voltage cables when the engine is on.*

- *Make sure you are well insulated from the ground when handling/operating the tools.*
- *Work with dry hands only.*
- *Keep conductive liquids away from the engine while working.*
- *Never leave tools on the battery in order to avoid accidental contacts.*

2.2.9 Poisoning Hazard

	The hoses used to extract the refrigerants can release toxic gases, dangerous to the operator if exposed to temperatures higher than 250 °C or in case of a fire.
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Safety Precautions:

- *Contact a doctor immediately should you inhale these gases.*
- *Use neoprene or PVC gloves when eliminating combustion deposits.*

2.3 General User and Maintenance Warnings

When using the device or carrying out scheduled maintenance (eg. fuse replacement) on the device, carefully follow the information provided below.

- *Do not remove or damage the labels/tags and the warnings on the device; do NOT in any case make them illegible.*
- *Do not remove, or block, any safety devices the device is equipped with.*
- *Only use original spare parts or spare parts approved by the manufacturer.*
- *Contact your retailer for any non-scheduled maintenance.*
- *Periodically check the electrical connections of the device, making sure they are in good condition and replacing any damaged cables.*
- *Check parts that are subject to wear periodically and replace if necessary.*
- *Do not open or disassemble the device.*

3 SPECIFIC USER SAFETY RULES FOR RDC Tool

The technology used for the design and manufacturing control of the RDC Tool makes it a reliable, simple and safe device to use.

The personnel in charge of using the diagnostic tools is required to follow the general safety rules and to use the RDC Tool tool for its intended use only. Furthermore, they are required to carry out the maintenance as described in this manual.

3.1 Glossary

Operator: a qualified person responsible for using the diagnostic tool.

Tool/device: any RDC Tool device.

3.2 General Rules

- *The operator must have basic knowledge of mechanics, automotive engineering, car repair and of the potential dangers that may arise during self-diagnosis operations.*
- *The operator must have carefully read all the information and instructions in the technical documents provided with the tool.*

3.3 Operator Safety

	The communication between the device and the sensor of the TPMS system may require you to work close to the tyre. Distraction and carelessness could cause personal injury.
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Safety Measures:

- *Make sure the vehicle's parking brake is engaged.*
- *Use the necessary safety equipment.*

3.4 Tool Safety

	The tool was designed to be used in specific environmental conditions. Using the tool in environments with temperature and humidity values that differ from those specified, may impair its efficiency.
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Safety Measures:

- *Put the tool in a dry area.*
- *Do not expose or use the tool near heat sources.*
- *Do not use corrosive chemicals, solvents or harsh detergents to clean the tool.*



The tool was designed to be mechanically sturdy and suitable for use in the workshop.
Careless use and excessive mechanical strain may impair its efficiency.

Safety Measures:

- *Do not drop, shake or bump the tool.*
- *Do not perform any kind of intervention that may damage the tool.*
- *Do not open or disassemble the tool.*



The tool was designed to be electrically safe and to work with specific supply voltage levels.
Failure to comply with the specifications related to the power supply may impair the tool's efficiency.

Safety Measures:

- *Do not wet the tool with water or other liquids.*
- *The tool's power supply must always be connected following the procedures described in this manual.*
- *Do not use external batteries to power the tool.*
- *When charging from the mains, use the battery charger provided with the tool, if included.*



The electromagnetic compatibility tests on the tool ensure that it can be adapted to technologies normally used on vehicles (e.g.: engine check, ABS, etc.). Nevertheless, if malfunctions occur, contact the dealer of the vehicle.

4 NORMATIVE INFORMATION

Simplified EU Declaration of Conformity

	The manufacturer, TEXA S.p.A, declares that the type of radio equipment RDC Tool is compliant with the RED 2014/53/EU directive. The complete text of the EU declaration of conformity is available at the following Internet address http://www.texa.it/download.
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FCC warnings

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

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.

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.

NCC warnings

Article 12

Without permission, any company, firm or user shall not alter the frequency, increase the power, or change the characteristics and functions of the original design of the certified lower power frequency electric machinery.

Article 14

The application of low power frequency electric machineries shall not affect the navigation safety nor interfere a legal communication, if an interference is found, the service will be suspended until improvement is made and the interference no longer exists.

Certificações

Certificação ANATEL

“Este produto está homologado pela ANATEL, de acordo com os procedimentos regulamentados pela Resolução 242/2000, e atende aos requisitos técnicos aplicados”.

Para maiores informações, consulte o site da ANATEL www.anatel.gov.br

Modelo: XXXXX



XXXXXX-XX-XXXXXX

Este equipamento opera em caráter secundário, isto é, não tem direito à proteção contra interferência prejudicial, mesmo de estações do mesmo tipo e não pode causar interferência a sistemas operando em caráter primário.

South Africa Requirements



ICASA issued licence number

5 RDC Tool

RDC Tool is a device designed and manufactured specifically for the diagnosis of sensors installed on the wheels of cars and bikes.

More specifically, RDC Tool allows carrying out 3 main functions:

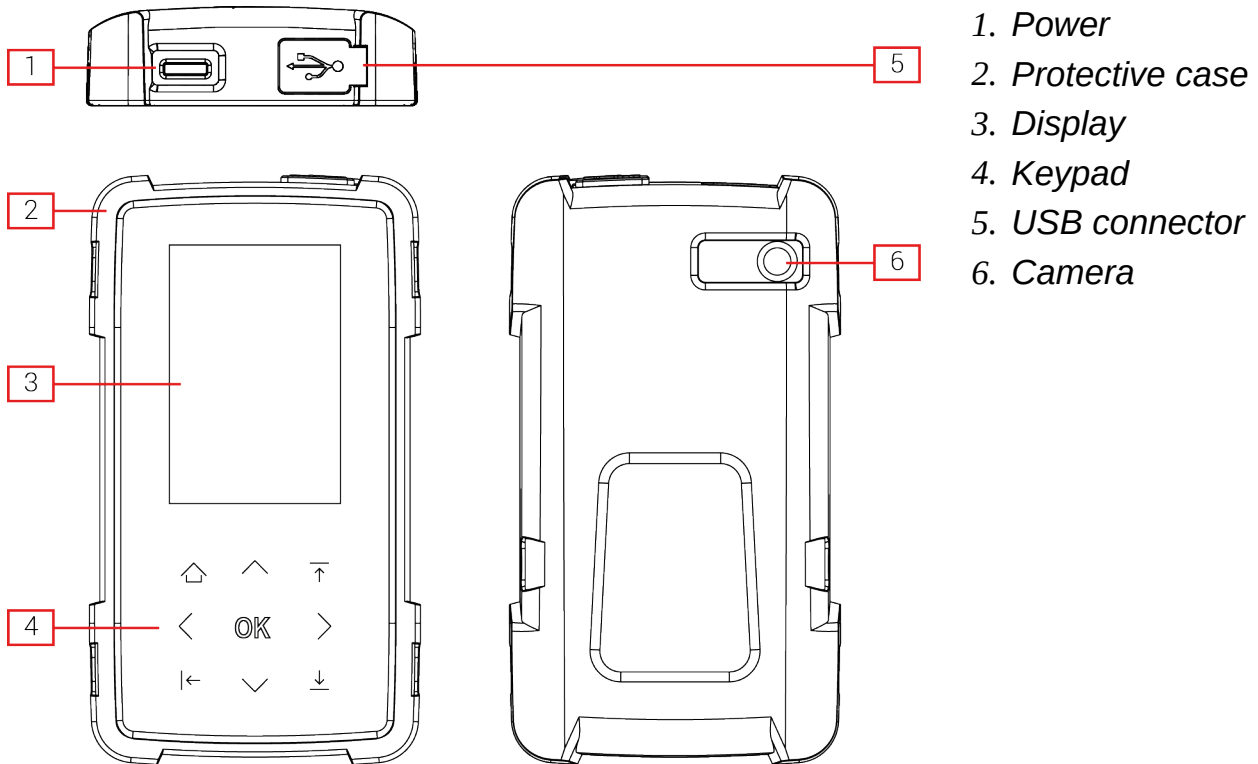
1. *reading the QR codes on the tyres*
2. *reading the data stored in the sensor memory*
3. *programming the sensors through 2 different modes:*
 - a) *by selecting the data from specific menus provided by the software*
 - b) *by scanning the QR code on the vehicle tyres*



The device is also equipped with:

- *integrated camera*
- *high-brightness display*
- *Li-ion rechargeable battery and multi-plug power supply*

6 DESCRIPTION

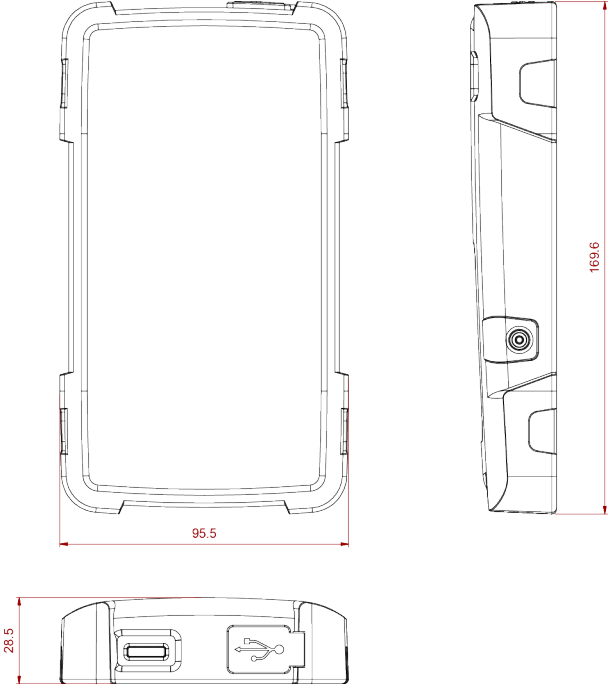


BUTTONS

ICON	NAME	FUNCTION
	HOME	It allows you to return to the software's initial screen.
	ESC	It allows you to exit the menu / function you are in and to return the immediately preceding level.
	Menu Start	It allows you to position yourself on the first item of the menu you are in
	Menu End	It allows you to position yourself on the last item of the menu you are in
	OK	It allows you to confirm the selection made / start a test.
	Directional arrows	It allows you to move inside the menus and to enter any data requested.

7 TECHNICAL FEATURES

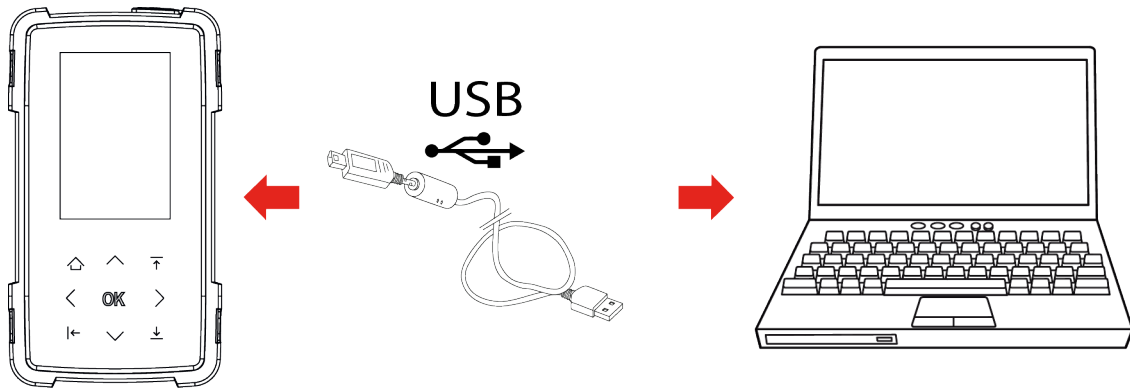
Manufacturer:	TEXA S.p.A.
Product name:	RDC Tool
Item code:	83 30 2 456 858
Processor:	Cortex M7
Memory:	RAM 8 MB Flash 4 GB
Display:	LCD IPS 3,5" 480x320
Camera:	5 MP autofocus; flash LED
Transmission frequency:	125 kHz
Reception frequencies:	315 MHz - 433 MHz
Cable communication:	USB
Battery:	Li-ion 2500 mAh - 3,7 V
Autonomy:	Approximately 10 hours
Consumption:	USB connector 500 mA max
Charge:	Approximately 5 hours with the device switched off
External charger (optional):	Model SMI10-5 • <i>Input: 100 ÷ 240 V - 50 ÷ 60 Hz - 0.3 A</i> • <i>Output: 5 Vdc - 2.0 A</i>
Operating temperature:	- 10 °C ÷ 45 °C
Storage temperature:	- 20 °C ÷ 60 °C
Temperature while charging:	0 °C ÷ 45 °C
Storage and operation moisture:	10% ÷ 80% without condensation

Dimensions [mm]:	 Technical drawings of a rugged device showing front, side, and bottom views with dimensions: 95.5 mm width, 169.6 mm height, and 28.5 mm thickness.
Weight:	280 g
Protection level:	IP 54
Directives:	RED 2014/53/EU ROHS 2011/65/UE LVD 2014/35/UE EMC 2014/30/UE
Electrical Safety:	EN 60950-1:2006 + A11:2009 +A1:2010 + A12:2011 + AC:2011 + A2:2013
Electromagnetic Compatibility:	ETSI EN 301-489-1:2017 ETSI EN 301-489-3:2017
Radio Systems:	ETSI EN 300 330:2017 ETSI EN300 220-2:2017 EN 62311:2008

8 CONNECTIVITY

The USB port allows you to connect the device to a PC in order to update the software or carry out assistance operations.

! Do not connect keyboards or other peripheral devices to the tool through the USB port.



For further information consult the software's Operating Manual.

9 User Instructions

RDC Tool must be used by qualified personnel.

9.1 Power supply

The device is powered by an internal rechargeable battery that allows it to be used without a mains power supply.

The battery charge status is indicated through a specific icon.

ICON	MEANING	WHEN IT APPEARS
	Charge level below 26%. Charge as soon as possible.	While in use.
	Charge level between 26% and 50%.	While in use.
	Charge level between 50% and 75%.	While in use.
	Charge level between 75% and 100%.	While in use.
	Charge complete	At the end of the recharge.
	Battery charging.	While the tool on or off, while charging.

9.2 Charge

The internal battery can be charged:

- *from the mains using the power adapter supplied;*
- *from a PC using a USB connection.*

The device is powered and can be regularly used while charging.

A **complete charge** normally takes **approximately 5 hours** when connected to the mains continuously.



Do not charge the tool in environments with a temperature lower than 0 °C or higher than 45 °C.



Charge the internal battery completely when activating the device for the first time.



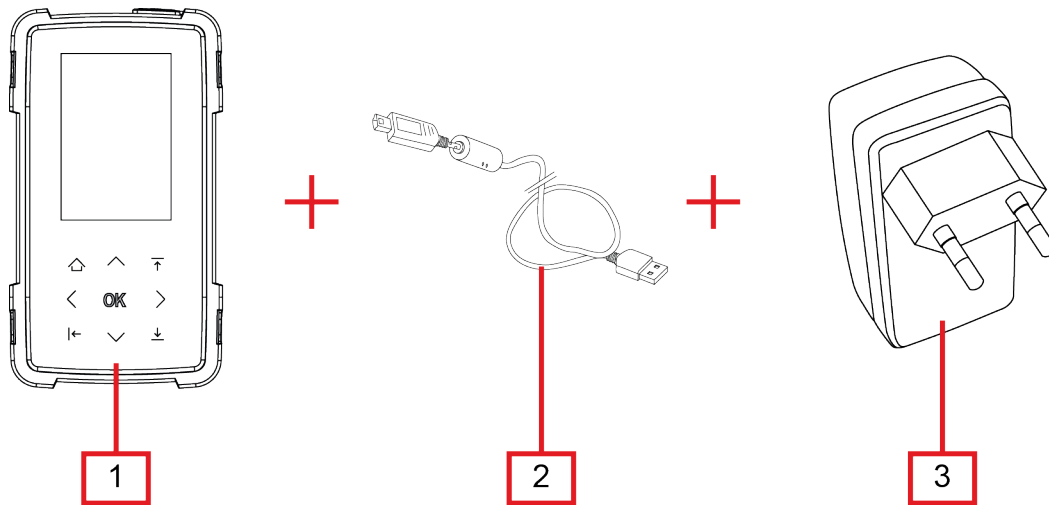
Keep the device powered using a mains power adapter while updating the software.



Always charge the device after using it.

9.2.1 Charging from the Mains

The device can be powered directly from the mains.



1. Device
2. USB cable
3. SMI10-5 charger (optional)

Proceed as follows:

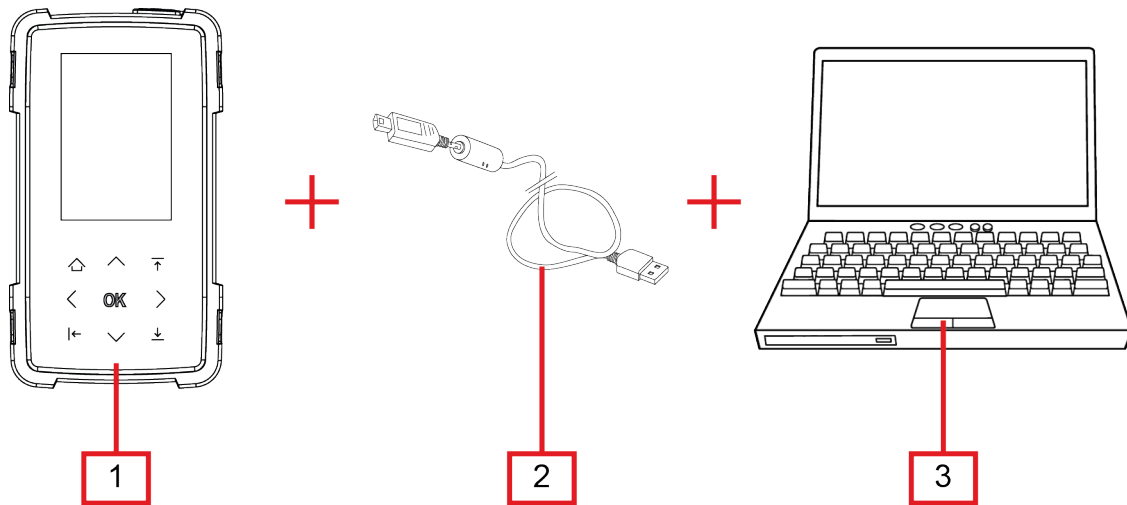
1. Connect the **USB cable** to the device.
2. Connect the **power adapter** to the **USB cable**.
3. Connect the **power adapter** to the mains.



Only use the supplied cable and power adapter or, if not possible, authorised spare parts.

9.2.2 Charging from a PC

The device can be charged from a PC using a USB connection.



1. Device
2. USB cable
3. PC

Proceed as follows:

1. Turn on the PC.
2. Connect the USB cable to the device.
3. Connect the USB cable to a USB socket in the PC.

The following icon will appear indicating that the tool is charging: .

A battery that is completely low takes **approximately 5 hours** to charge fully.

9.3 Power On, Standby, Power off

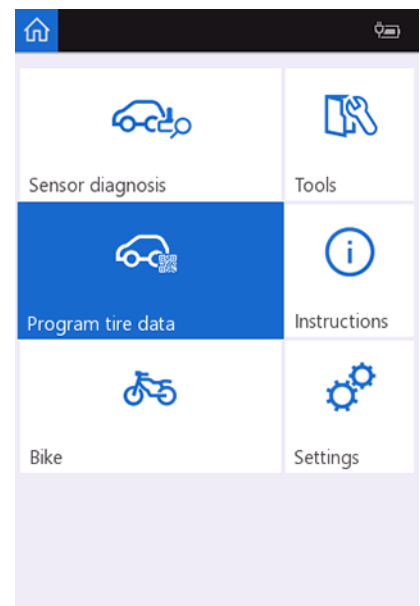
The device can be turned on and off by pressing the **POWER** button.

To **turn on** the device, keep the **POWER** button pressed for more than 1 second.

The device emits a sound when you turn it on and the initial screen with the logo will appear.



Then the first selection screen, called **HOME**, is displayed.



The device turns off the display and goes into **standby** after 5 minutes of inactivity (no interaction with the keypad, no operations).

The device turns off automatically after another 5 minutes of inactivity.

Press any button to interrupt the standby status.

To **turn off** the device manually, keep the **POWER** button pressed for more than 3 seconds.

9.4 Camera

The camera the device is provided with has autofocus.

You can activate the camera by pressing the button **OK** when you are positioned on the icon of the specific function.

By pressing on the button a second time, the device is forced to autofocus again.

The camera is used by specific software functions also.

For further information consult the Software's Operating Manual.

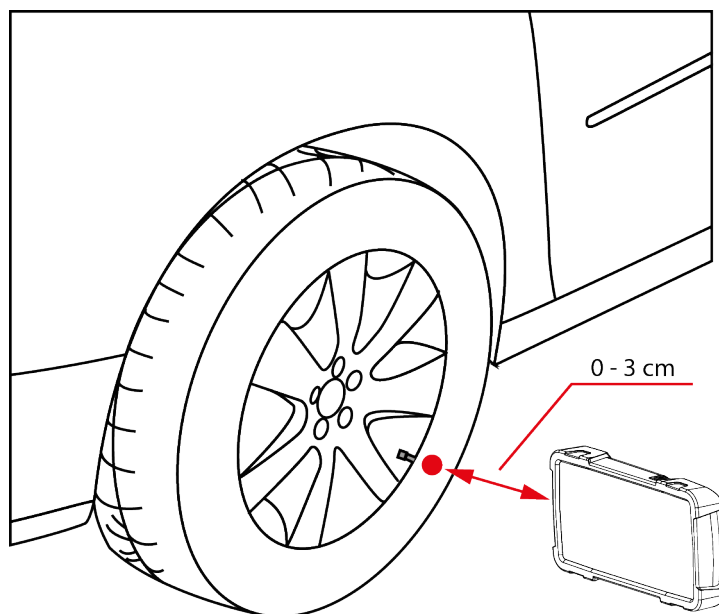
9.5 Positioning the Device with Respect to the Sensor

You must place the device at the proper distance and position from the sensor in order to optimise the communication between them.

 **The distance may vary sensibly based on the type of sensor and on the wheel rim it is installed on.**

Proceed as follows:

1. Put the device close to the tyre's valve as indicated in the figure, without touching the wheel rim.



The average distance you should keep to perform the test is **approximately 0 - 3 cm**.

10 MAINTENANCE

This product does not require special maintenance.

For a longer tool life, keep the product clean and follow the instructions detailed in this manual carefully.



For further help, contact your Retailer or the Technical Assistance Service.

11 TROUBLESHOOTING

For any technical problems contact our technical assistance service.

Below you will find a list of simple instructions that the operator can carry out without having to ask for technical assistance.

PROBLEM	PROBABLE CAUSE	POSSIBLE SOLUTION
The device is not communicating with the sensor.	The distance between the device and the sensor is excessive.	Place the device closer to the sensor. If needed, lay the device's antenna on the tyre in correspondence of the sensor; eventually change the inclination of the device with respect to the sensor.
	The positioning of the device is wrong.	Position the device correctly. If needed, lay the device's antenna on the tyre in correspondence of the sensor; eventually change the inclination of the device with respect to the sensor.
The device is not switching on.	The battery is low.	Charge the device.
The device is not charging from the PC.	The USB port it is connected to is not supplying enough current.	Use the supplied power adapter.

12 LEGAL NOTICES

TEXA S.p.A.

Via 1 Maggio, 9 - 31050 Monastier di Treviso - ITALY

Cod. Fisc. - No. of Companies' Register of Treviso - Part. IVA: 02413550266

Single member company and subject to management and co-ordination of Opera Holding S.r.l.

Share capital of 1.000.000 € i.v. - R.E.A. N. 208102

Legal Representative Bruno Vianello

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www.texa.com

For information regarding the legal notices, please refer to **International Warranty Booklet** provided with the product in your possession.