NAVIGATOR NANO S 2

TEXA

Rev. 03

en

SUMMARY

NAVIGATOR NANO S 2 TECHNICAL MANUAL

1 REVISION OF THE MANUAL

This document is the technical manual for the product: NAVIGATOR NANO S 2

Document Review Number: 03

Date of Issue: 18/10/2024

INFORMATION 	*This manual is an essential part of the product and accompanies it from its birth up to its discontinuation.* *Read this manual before using the product.* *See the user instructions whenever the general risk symbol is shown in the product, so to understand the source of the danger and carry out the actions required to eliminate or mitigate the risk.*

2 INTRODUCTION

Dear Customer,

We would like to thank you for choosing a TEXA 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 to avoid damage or personal injury caused by improper use of the product to which it refers.

TEXA S.p.A reserves 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 for use by technicians specialised in the automotive field only. 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 operation 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 a TEXA S.p.A. tool has been used based on the information within this manual.

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

This manual should be considered an integral part of the product to which it refers. In the case it is resold the original buyer is therefore required to forward the manual to the new owner.

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

3 LEGEND OF THE SYMBOLS USED

Some of the symbols indicated below may not be used in the manual.

	Toxic material hazard		Laser beam hazard
	Explosive material hazard		Low temperature danger - freezing
	Electric shock hazard		General Risk
	Electromagnetic field hazard		Obligation to read the instructions
	Flammable material hazard		Safety glasses required
	Hot surface hazard		Protective gloves required
	Corrosive substance hazard		Protective clothing required
	Risk of noise level above 80 dB(A)		Respiratory protection required
	Moving Parts Risk		Disconnect mains plug from electrical outlet
	Risk of crushing hands		Do not wet the device
	Floor level obstacle warning		

DANGER	This is not a safety symbol. It indicates a hazardous situation which, if not avoided, will result in serious permanent injury or death.
WARNING	This is not a safety symbol. It indicates a hazardous situation which, if not avoided, may result in serious permanent injury or death.
CAUTION	This is not a safety symbol. It indicates a hazardous situation which, if not avoided, may result in minor injury.

NOTICE	This is not a safety symbol. It indicates a hazardous situation which, if not avoided, may result in material damage.
INFORMATION	This is not a safety symbol. It indicates important information.

4 SAFETY RULES

The technology used for the design and manufacturing control of the **NAVIGATOR NANO S 2** diagnostic tools makes them reliable, simple and safe devices to use.

The personnel in charge of using the diagnostic tools must follow the general safety rules, use the **NAVIGATOR NANO S 2** devices for their intended use only and carry out the maintenance correctly as described in this manual.

All the safety requirements issued by the following must be assessed and applied:

- *Labour inspectorate*
- *Trade associations*
- *Vehicle manufacturers*
- *Anti-pollution regulations*

in force in the country where the product is used.

INFORMATION

In no way shall the manufacturer be held liable for accidents or damages caused by the use of the product by personnel who is not adequately informed and trained pursuant to the safety regulations in force in the country where the product is used, nor who misused or failed to comply, even in part, with the safety regulations and procedures described in this manual.

4.1 Intended Use

Product	Intended Use
NAVIGATOR NANO S 2	Multi-brand diagnosis on: • *cars* • *light commercial vehicles*

4.2 Glossary

Operator: qualified person responsible for using the diagnostic tool / device.

Tool / Device:NAVIGATOR NANO S 2

INFORMATION

The definition of "operator" cannot be applied to minors or to people with reduced physical, sensory or mental capabilities or without any experience or knowledge required.

4.3 General Rules

The operator must carefully read and understand the information and instructions in the technical documents provided with the device. If the operator cannot read this manual, it is responsibility of the owner of the device/employer/ person in charge of the safety to illustrate the contents of this document, inform and adequately train the operator to use the device, in accordance with the safety regulations in force in the country where the product is used.

- *The operator that works on vehicles must have basic qualifications and knowledge of mechanics, automotive engineering, vehicle repairing and of the potential dangers that may arise during self-diagnosis operations.*
- *The operator must be completely clear-headed and sober and not take drugs nor drink alcohol before or when using the device.*
- *The operator must follow all the instructions provided in the technical documents.*
- *The operator is required to wear adequate personal protective equipment (PPE) at all times when using the device.*
- *The operator must monitor the device during the operating phases wherever this is possible in compliance with the safety measures indicated below.*
- *The operator must periodically check the electrical connections of the device, making sure they are in good condition and immediately replacing any damaged cables.*
- *The operator must periodically check the parts that are subject to wear and replace them if necessary, using only original spare parts or spare parts approved by the manufacturer.*
- *The operator must stop using the device immediately should any failure occur, and promptly contact the technical assistance.*
- *Contact your retailer for extraordinary maintenance operations.*
- *Do not remove or damage the labels and the warnings on the device; do not in any case make them illegible.*
- *Do not remove or tamper with any safety devices the device is equipped with.*

NOTICE

If the device is not used as specified by the manufacturer, the safety guaranteed by the device itself may be compromised.

WARNING

The airbags inflate with great force.

In case of explosion, a device located in the airbag's expansion area will be thrown with force causing severe damages and injuries.

Safety Measures:

- *Do not place the device in the airbag expansion areas.*

WARNING

Some self-diagnosis operations allow you to activate/ deactivate certain actuators and safety systems on the vehicle.

Failure to reactivate the actuators and safety systems properly or at all may be a safety risk for the vehicle user.

Safety Measures:

- *In order to avoid injuring people and/or damaging the device itself or the electronic systems of the vehicle connected to the device, do not allow unqualified personnel to use it.*
- *Follow the instructions supplied by the software thoroughly.*

CAUTION

The device was manufactured to be electrically safe and to work with specific supply voltage levels.

Improper use may expose the operator to the risk of electric shock, even though of low intensity.

Safety Measures:

- *Wear adequate personal protective equipment during all the operating phases.*
- *Do not handle or touch the device or any accessories (e.g. cables) with wet hands.*

4.5 Device safety

NOTICE

The device was designed to be used in specific environmental conditions.

Using the device in environments with temperatures and humidity that differ from those specified may impair its efficiency.

Safety Measures:

- *Always place the device in a dry area.*
- *Do not expose or use the device close to heat sources.*
- *Position the device in order to guarantee its proper ventilation.*
- *Do not use corrosive chemicals, solvents or harsh detergents to clean the device.*

NOTICE

The device was designed to be mechanically tough and suitable for use in a workshop.

Careless use and excessive mechanical strain may impair its efficiency.

Safety Measures:

- *Do not drop, shake or knock the device.*
- *Do not place the device where it could fall into water. Avoid any contact with water.*
- *Do not place objects over the cables nor bend them.*
- *Do not carry out any type of intervention that may damage the device.*
- *Do not open or disassemble the device.*

NOTICE

The device was manufactured 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 device's efficiency.

Safety Measures:

- *Do not wet the device with water or other liquids.*
- *If not otherwise specified, use the device on vehicles with a 12 V DC power supply and chassis connected to the negative pole.*
- *The connection for the device's power supply must always be with the battery-operated system of the vehicle being tested.*
- *Do not use external batteries to power the device unless explicitly requested to do so by the software.*
- *Pay the utmost attention to battery terminals and cables when setting up the connection to the vehicle. This will avoid false contacts and/or accidentally connecting the cables to metallic parts of the vehicle being tested.*
- *Use the supplied rubber plugs to protect the unused terminals.*

WARNING

The electromagnetic compatibility tests carried out on the device guarantee that it can be adapted to the technologies normally used on vehicles (e.g. engine control, ABS, airbag, etc.). Nevertheless, if malfunctions occur, contact the vehicle's dealer.

4.6 *Intervention Required for Low-Radiation Devices*

This device does not need to be shielded to avoid the emission of harmful interference.
The device does not emit interference that may alter the operation of duly certified systems.

5 ENVIRONMENTAL INFORMATION

	Do not dispose of this product with other undifferentiated solid waste. For information regarding the disposal of this product please see the pamphlet supplied.

6 FUNCTIONING OF THE RADIO DEVICES

Wireless connection with Bluetooth®technology

The wireless connectivity with Bluetooth technology is a technology that supplies a standard and reliable method to exchange information between different devices, using radio waves. Other than TEXA products, even products such as cellular phones, portable devices, computers, printers, cameras, pocket PCs etc. use this type of technology.

The Bluetooth interface searches for compatible electronic devices according to the radio signal they generate and establishes a connection between them. TEXA tools operate a selection suggesting only TEXA compatible devices. This does not exclude the presence of other sources of communication or disturbance.

THE EFFICIENCY AND THE QUALITY OF THE BLUETOOTH COMMUNICATION MAY BE INFLUENCED BY THE PRESENCE OF RADIO DISTURBANCE SOURCES. THE COMMUNICATION PROTOCOL HAS BEEN DEVELOPED TO MANAGE THESE TYPES OF ERRORS; HOWEVER, IN THESE CASES COMMUNICATION MAY BECOME DIFFICULT AND CONNECTION MAY REQUIRE SEVERAL ATTEMPTS.

SHOULD THE WIRELESS CONNECTION ENCOUNTER SERIOUS PROBLEMS THAT MAY COMPROMISE A REGULAR COMMUNICATION, THE SOURCE OF THE ENVIRONMENTAL ELECTROMAGNETIC DISTURBANCE MUST BE IDENTIFIED AND ITS INTENSITY REDUCED.

Position the product in order to gaurantee the correct funtioning of its radio devices. In particular, do not cover it with any shielding or metallic materials in general.

7 NORMATIVE INFORMATION

CE	The manufacturer, TEXA S.p.A., declares that the radio equipment type **NAVIGATOR NANO S 2** is compliant with the following directives: • *RED 2014/53/EU* • *RoHS 2011/65/EU and Delegated Directive 2015/863/EU* The complete text of the EU declaration of conformity is available at the following Internet address **http://www.texa.it/download**.

UK CA	The manufacturer, TEXA S.p.A., declares that the radio equipment type **NAVIGATOR NANO S 2** is compliant with the following regulations: • *Radio Equipment Regulation 2017 No. 1206* • *RoHS Regulation 2012 No. 3032* The complete text of the UK declaration of conformity is available at the following Internet address **http://www.texa.it/download**.

USE RESTRICTIONS AND WARNINGS (FCC / ISED)

Modification statement

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

Les changements ou modifications non expressément approuvés par la partie responsable de la conformité peuvent annuler le droit de l'utilisateur à utiliser l'équipement.

Labeling information

Device model: **NAVIGATOR NANO S 2**

- *Contains FCC ID:* **WAP3026**
- *Contains IC:* **7922A-3026**

FCC Compliance

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.

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.*

Cet appareil est conforme à la partie 15 des règlements de la FCC. L'utilisation est soumise aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Remarque: Cet équipement a été testé et déclaré conforme aux limites d'un appareil numérique de classe B, conformément à la partie 15 des règlements de la FCC. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle.

Ce produit génère, utilise et peut émettre des ondes radio qui peuvent causer des interférences nuisibles s'il n'est pas installé et utilisé conformément aux instructions. Si néanmoins ce produit cause des interférences nuisibles à la réception de la radio ou de la télévision, ce qui peut être déterminé en éteignant et en rallumant l'appareil, l'utilisateur est encouragé à essayer de corriger l'interférence par une ou plusieurs des mesures suivantes:

- *Réorienter ou déplacer l'antenne de réception.*
- *Augmenter la distance entre le produit et le récepteur.*
- *Brancher l'appareil sur une prise de courant différente de celle à laquelle le récepteur est raccordé.*
- *Consulter le revendeur ou un technicien radio/TV expérimenté pour obtenir de l'aide.*

ISED compliance

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license exempt RSS(s). Operation is subject to the following two conditions: (1) This device may not cause interference. (2) This device must accept any interference, including interference that may cause undesired operation of the device.

This radio transmitter has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

L'emetteur/recepteur exempt de licence contenu dans le present appareil est conforme aux CNR d'Innovation, Sciences et Developpement economique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisee aux deux conditions suivantes : (1) L'appareil ne doit pas produire de brouillage; (2) L'appareil doit accepter tout brouillage radioelectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

Le présent émetteur radio a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

ICES-003 Class B Notice -Avis NMB-003 Classe B: This Class B digital device complies with Canadian ICES-003

Cet appareil numérique classe B est conforme à la norme canadienne NMB-003. CAN ICES-3(B) / NMB-3(B)

RF Radiation Exposure statement

This product complies with FCC and ISED radiation exposure limits set forth for an uncontrolled environment. The antenna should be installed and operated with minimum distance of 20 cm between the radiator and your body.

This device complies with Health Canada's Safety Code. The installer of this device should ensure that RF radiation is not emitted in excess of the Health Canada's requirement.

Cet appareil est conforme aux limites d'exposition aux rayonnements de l'ISED pour un environnement non contrôlé. L'antenne doit être installé de façon à garder une distance minimale de 20 centimètres entre la source de rayonnements et votre corps.

Cet appareil est conforme avec Santé Canada Code de sécurité 6. Le programme d'installation de cet appareil doit s'assurer que les rayonnements RF n'est pas émis au-delà de l'exigence de Santé Canada.

Responsible party's contact located in Canada:

Company Name:	Canadian Certification Consulting, Inc.
ISED Company No:	10842A
Contact Name:	Jon Hughes, President
Street Address:	2210 Horizon Drive, Suite 17
City/Province/Zip:	West Kelowna - BC V1Z 3L4 - Canada
Phone No:	1-250-575-1719
Email:	info@can-cert.com

Responsible party's contact located in U.S.:

Company Name:	TEXA USA Inc.
Contact Name:	Fabio Mazzon, Technical Manager
Street Address:	292 Fernwood Avenue
City/Province/Zip:	Edison, NJ 8837 - United States
Phone No:	(732) 325-8617
Email:	fabio.mazzon@texa.com
FRN:	0033570946

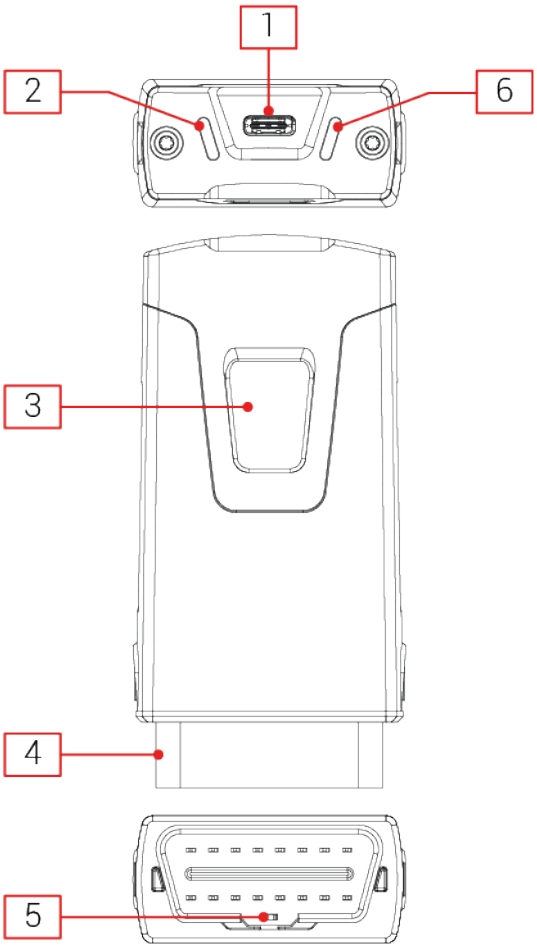
8 NAVIGATOR NANO S 2

NAVIGATOR NANO S 2 is the most advanced self-diagnostic device for cars and light commercial vehicles equipped with an OBD socket.

NAVIGATOR NANO S 2 was developed following "two-unit diagnosis" (diagnostic device used in combination with a display unit) approach, in order to optimise the practicality and versatility of portable wireless solutions.

NAVIGATOR NANO S 2 was designed to be connected directly to the vehicle's OBD socket; however, thanks to special cables and adapters, it can be connected to other types of sockets as well (non-OBD).

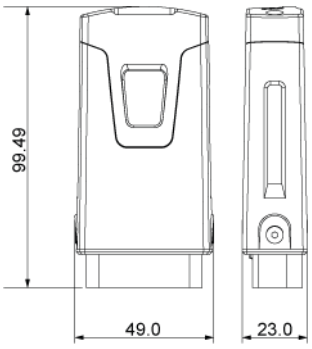
9 DESCRIPTION



1. *USB C connector*
2. *LED*
3. *LED light ON button*
4. *Diagnostic connector*
5. *LED light*
6. *LED*

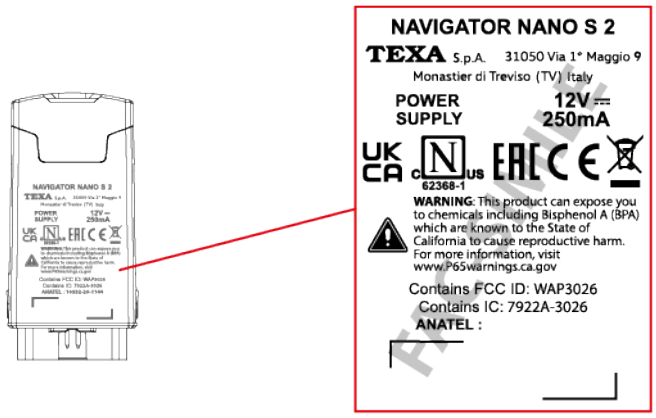
10 TECHNICAL FEATURES

Manufacturer:	TEXA S.p.A.
Model:	NAVIGATOR NANO S 2
Processor:	CORTEX M7 STM32H735AGI6 up to 550 MHz, 1MB FLASH, 564KB RAM
SRAM:	16 MBits organized in 1024K x 16 bits
eMMC:	8 GByte on an 8-bit bus
External Flash memory:	16 Mbit flash NOR organized as 1M x 16bit
Internal battery:	Lithium polymer, single cell 3.7 V 130 mA/h LP401429-PCM-LD
Vehicle Battery:	12 Vdc system management
Nominal power supply voltage:	OBD: 12 V⎓*
Wireless communication:	Bluetooth 5.0 class1
Operating frequency band:	2402 ... 2480 MHz
Maximum radio frequency power transmitted:	10 dBm
Wired connection:	• *Virtual COM Via USB Full Speed* • *USB C: 5 V⎓**
Electronic switch:	2-way, 13 independent positions
Diagnostic connector:	OBD
Supported protocols:	• *Blink codes* • *K, L (with 60 mA current protection) ISO9141-2, ISO14230* • *CAN_FD 11898-2:2016 3 channels* • *CAN ISO 11898-3* • *CAN SAE J2411 Single Wire* • *SAE J1850 PWM e VPW* • *Ethernet DoIP ISO13400-3*
Power supply connector:	OBD
User interface:	• *LED RGB x4* • *Buzzer*
Consumption:	12 V⎓* , 250 mA
Operating temperature:	0 °C ... 40 °C
Storing temperature:	-20 °C ... 60 °C
Battery charging temperature:	0 °C ... 45 °C
Operating moisture:	10% ... 80% without condensation

Dimensions:	
Weight:	72 g
Environmental conditions:	• *Use: internal and external* • *Altitude: < 2000 m* • *Supply voltage fluctuations: ±10%* • *Overvoltage category: II* • *Pollution degree: 2* • *Maximum relative humidity 80% for temperatures up to 31 °C, linearly decreasing to 50% at 40 °C*
Directives:	RED 2014/53/EU RoHS 2011/65/EU and delegated Directive 2015/863/EU
Regulations:	Radio Equipment Regulation 2017 No. 1206 RoHS Regulation 2012 No. 3032
Electromagnetic compatibility:	ETSI EN 301 489-1 ETSI EN 301 489-17
Radio systems:	ETSI EN 300 328
Electrical safety:	EN 62368-1 EN 62368-3 EN 62311

(*) The symbol "⎓ indicates direct voltage.

10.1 *Data Plate and Markings*



Symbol	Meaning
TEXA S.p.A. 31050 Via 1° Maggio 9 Monastier di Treviso (TV) - Italy	Indication of the manufacturer as required by the current directives.
⎓	Symbol indicating the direct current power supply.
CE	Symbol of the CE marking.
UKCA	Symbol of the UKCA marking.
EAC	Symbol of the compliance mark for placing products on the Eurasian Economic Union (EEU) markets.
C N US	Symbol of the Nemko electrical safety mark for USA and Canada.
	WEEE symbol indicating the waste of electric and electronic equipment.

11 POWER SUPPLY

The device is designed and manufactured to be powered directly from the battery in the vehicle being tested.

The internal battery in the device powers the LED light only; make sure the device is powered correctly during diagnosis.

Power is taken from the battery in the vehicle being tested via:

- *OBD socket;*
- *battery cable;*
- *power supply cable;*
- *cigar lighter cable.*

This type of power supply requires using specific wirings.

The **green LED** remains on (does not flash) if the device is being powered properly.

NOTICE

The use of different power sources other than the ones indicated in this manual can damage the device.

The device cannot be powered via its USB port.

Do not power the device using external batteries that are not electrically connected to the vehicle you are working on.

NOTICE

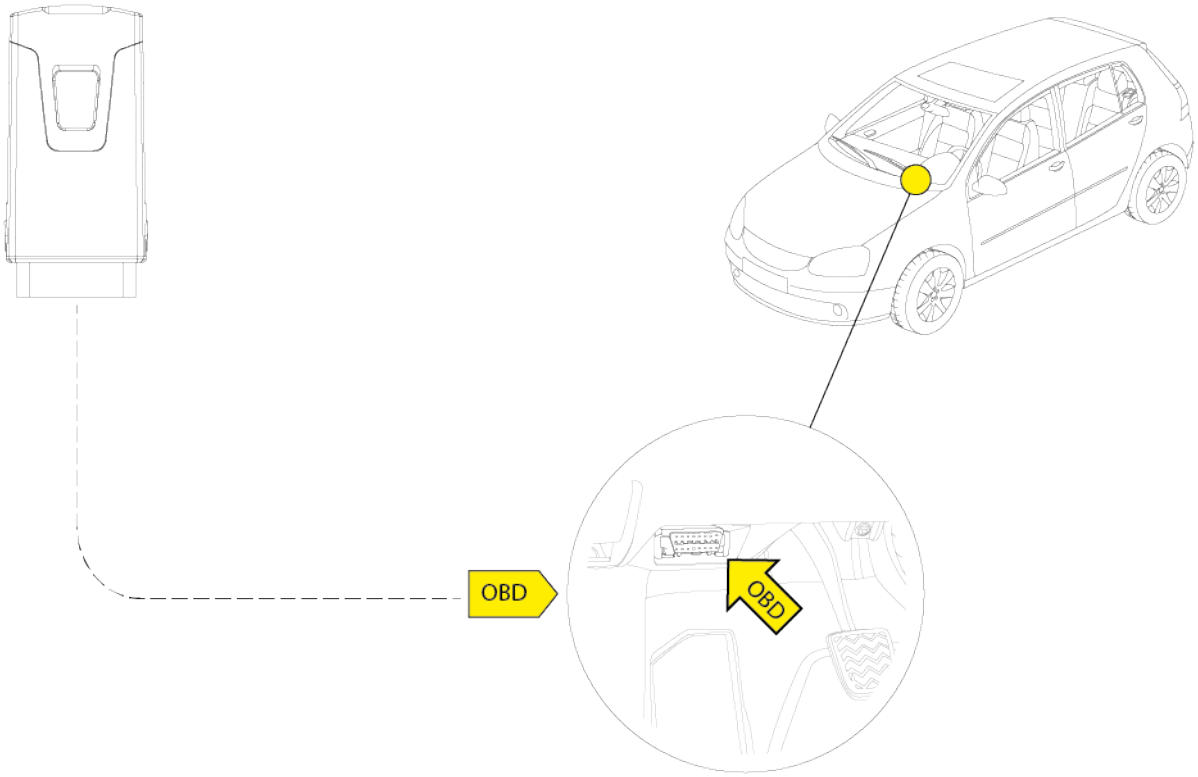
The images below are only examples: the position of the diagnostic socket and the type of diagnostic cable may change based on the vehicle being tested.

Always refer to the documentation supplied by the vehicle manufacturer for the positioning and correct access to the diagnostic socket.

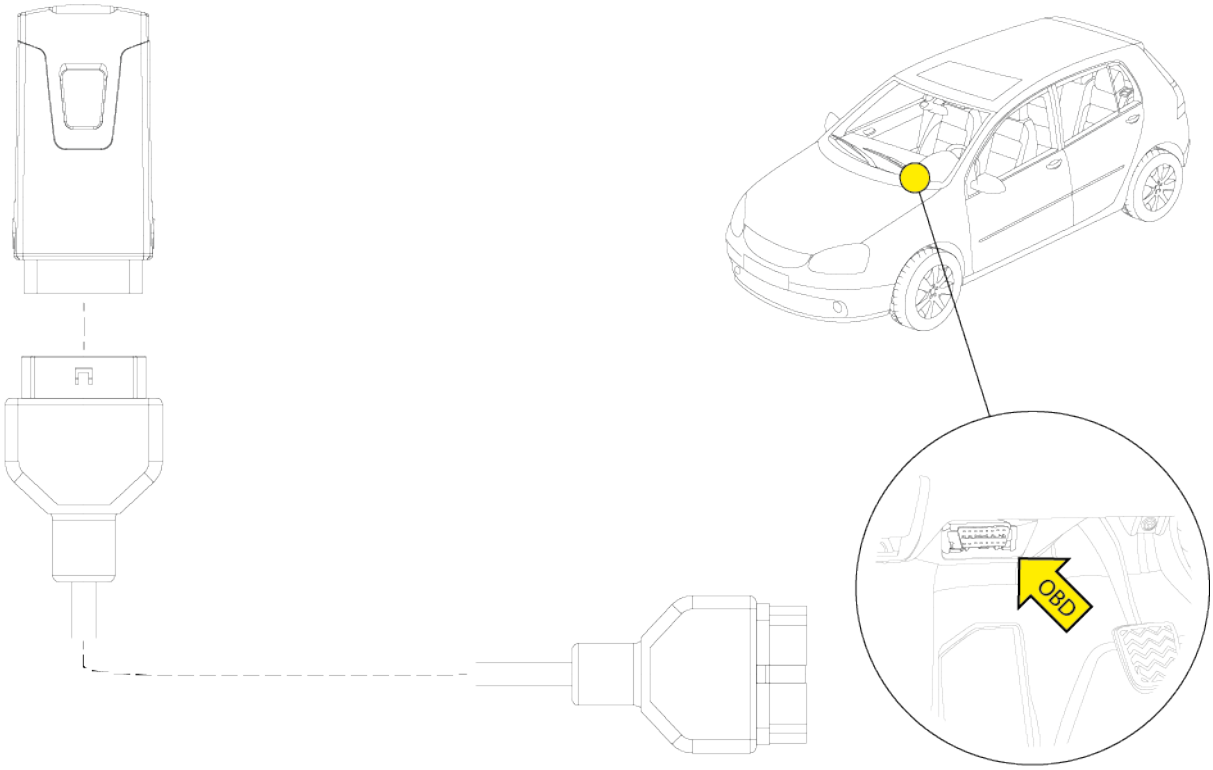
Always refer to the indications provided by the diagnostic software for the selection of the diagnostic cable to use.

11.1 *OBD socket*

The device can be powered via the diagnostic socket of the vehicle being tested.



In some cases, you may have to use a specific OBD extension cable so the connection between the device and the diagnostic socket is more comfortable and stable.



Proceed as follows:

1. *Locate the vehicle's diagnostic socket.*
2. *Remove any protective panels from the diagnostic socket.*
3. *Connect the device to the vehicle's diagnostic socket; use the specific OBD extension cable if needed.*

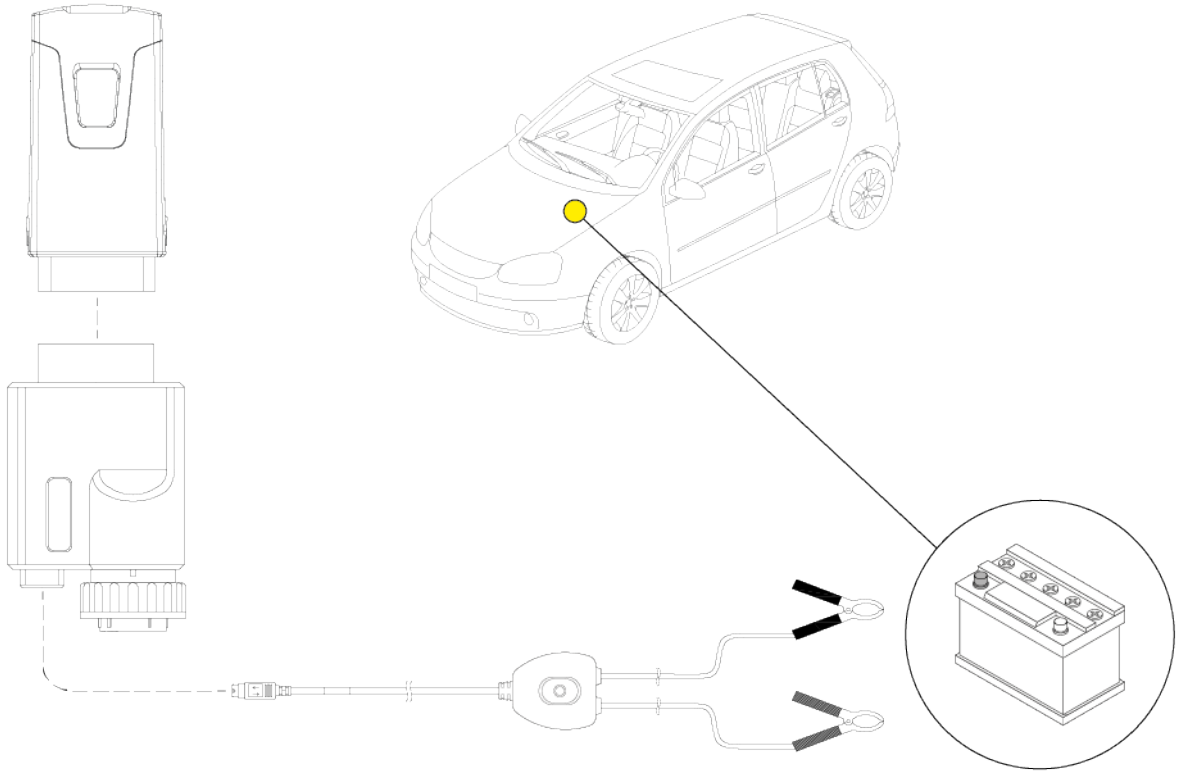
The **green LED** remains on (does not flash) if the device is being powered properly.

For further information on the positioning and correct access to the diagnostic socket, refer to the documentation made available by the vehicle manufacturer.

For further information on how to connect the device to the vehicle's diagnostic socket, see the DIAGNOSIS chapter.

11.2 Battery Cable

The device can be powered using a specific cable to connect to the battery, that can be connected directly to the vehicle adapter.



NOTICE

If the battery is in the rear part of the vehicle, we recommend connecting the device directly to the battery supply terminals, available near the area in which you are operating.

Use the battery power only when specifically requested by the diagnostic software.

Be careful to respect the polarities indicated on the cables when connecting to the battery terminals.

Proceed as follows:

1. *Connect the adapter to the device.*
2. *Connect the battery cable to the adapter.*
3. *Connect the cable clamps to the battery terminals.*

⚠ CAUTION

Incautious operations may expose the operator to the risk of electric shock, even though of low intensity.

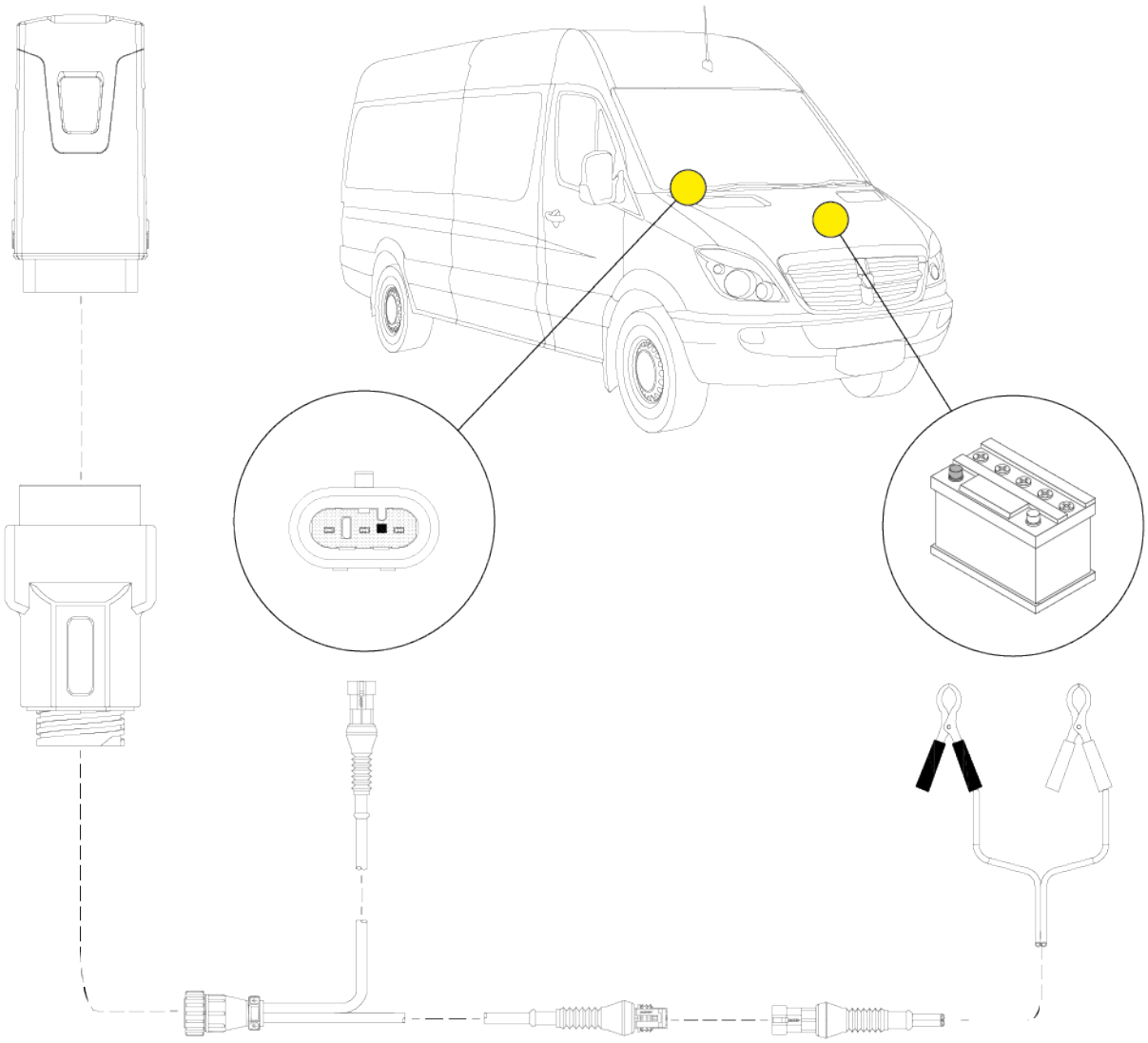
Be very careful when connecting the clamps to the battery terminals.

The **green LED** remains on (does not flash) if the device is being powered properly.

In this case, the **green LED** on the **junction box** of the clamps will also turn on.

11.3 *Power supply cable*

The device can be powered through a power supply cable connected to specific diagnostic cables.



Proceed as follows:

1. *Connect the adapter to the device.*
2. *Connect the diagnostic cable to the adapter.*
3. *Connect the power supply cable to the diagnostic cable.*
4. *Connect the power supply cable clamps to the battery terminals.*

⚠ CAUTION

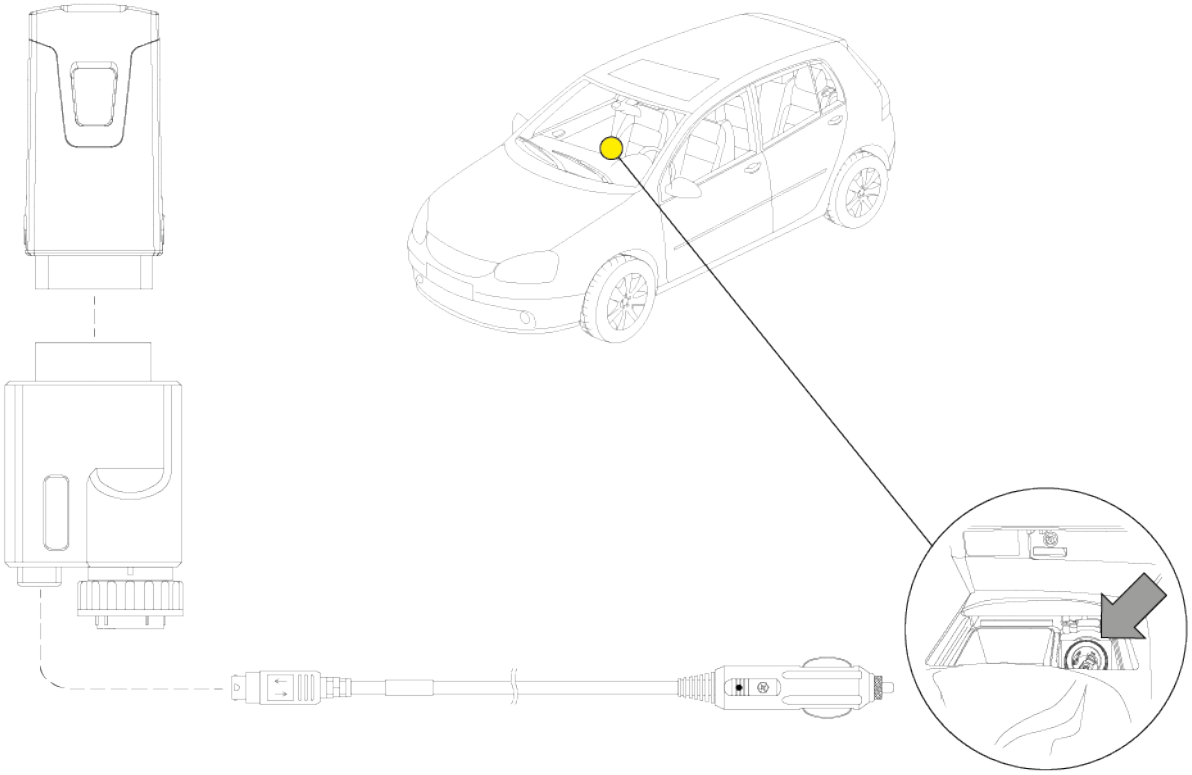
Incautious operations may expose the operator to the risk of electric shock, even though of low intensity.

Be very careful when connecting the clamps to the battery terminals.

11.4 Cigar Lighter Cable

The device may also be powered by the battery of the vehicle being tested, thanks to a specific cable which can be connected to the adapter for cars through a jack.

The connection through the lighter socket (if available) is possible only by using a specific cable.



Proceed as follows:

1. *Connect the adapter to the device.*
2. *Connect the connection cable for the lighter socket to the adapter.*
3. *Connect the cable to the lighter socket.*

The **green LED** remains on (does not flash) if the device is being powered properly.

In this case, the **green LED** on the **connector for the lighter socket** will also turn on.

NOTICE

The image is only an example: the position of the cigar lighter socket may change based on the vehicle being tested.

Always refer to the documentation supplied by the vehicle manufacturer for the positioning and correct access to the cigar lighter socket.

NOTICE

Make sure the cigar lighter socket is powered even when the ignition key is on OFF (instrument panel off).

NOTICE

Use the vehicle's external battery only if indicated. In any case, connect the negative pole of this external battery to the ground of the vehicle being tested.

Always refer to the documentation supplied by the vehicle manufacturer for the positioning and correct access to the cigar lighter socket.

11.5 *Recharging the Internal Battery*

The device is equipped with an internal battery that powers the LED light only.

To charge the internal battery simply power the device using the vehicle's battery or connect the display unit via USB.

We suggest powering the display unit using the mains when charging the device via USB.

12 POWER ON/OFF

CAUTION

In all the power source connection and disconnection operations, please refer to the safety indications in the POWER SUPPLY and DIAGNOSIS chapters in order to reduce the risk of electric shock.

12.1 Power on

The device turns on automatically once it is connected to one of the power sources described previously.

For further information see the POWER SUPPLY chapter.

12.2 Boot down

To turn off the device, you must disconnect it from the power source.

INFORMATION

Generally, if the tool is powered via OBD connector, just turn off the vehicle by turning the ignition key to the OFF position (ignition off).

For further information, please refer to the technical documentation provided by the manufacturer.

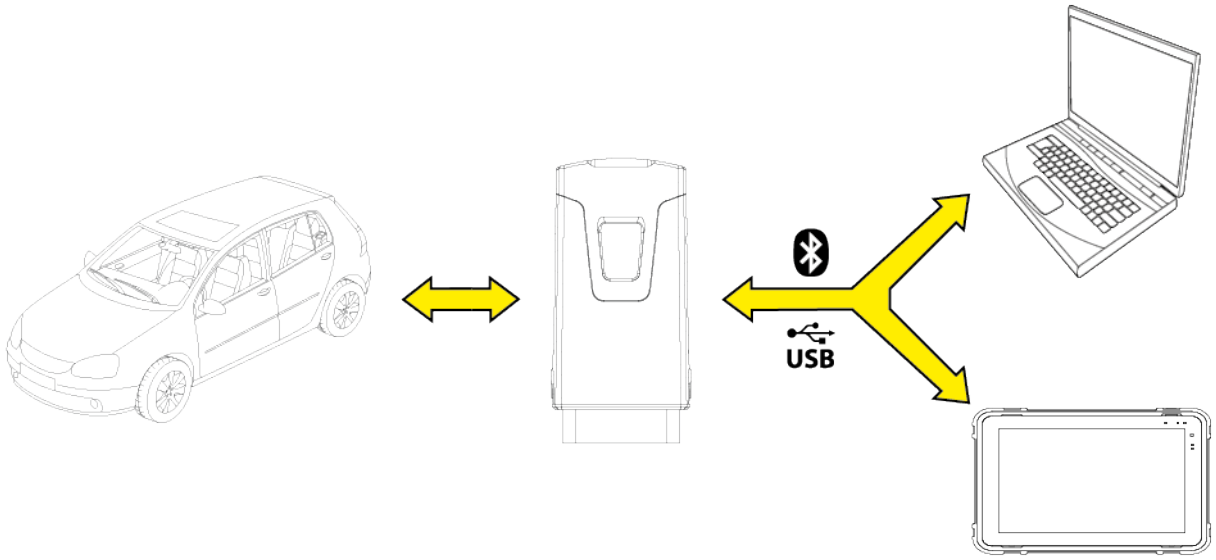
NOTICE

Turning off the device during specific diagnostic operations (e.g.: control unit reprogramming) may cause the operations to fail.

Make sure all diagnostic operations have been completed before turning off the device.

13 COMMUNICATION

The device communicates with the control units in the vehicle being tested via connection to the vehicle's diagnostic socket through the specific diagnostic cable indicated by the software.



The device has various communication modes, some of which are reserved for specific types of diagnosis:

- *Bluetooth*
- *USB*

The communication between the device and the display unit must be configured through the specific software function before any type of operation on the vehicle.

This function allows configuring all communication modes at once.

Proceed as follows:

1. Power the device through the vehicle's diagnostic socket, as described in this manual.
2. Turn on the display unit.
3. Start the diagnostic software.
4. Start the device's configuration function.
5. Follow on screen instructions.

While the device is turning on, it automatically detects the communication mode through which it is connected to the display unit.

INFORMATION

The Bluetooth communication mode is active by default.

To change the communication mode between the device and the display unit you must first turn the device off and then choose the mode you prefer.

For further information, see the software operating manual.

13.1 *Bluetooth*

Wireless connection eliminates the communication cable with the display unit, making the device easier to move and more practical to use.

The Bluetooth communication mode is active by default.

INFORMATION *The Bluetooth communication is only possible with display units with Bluetooth 4 or higher.*

INFORMATION *To configure the communication properly you must use the serial number indicated on the data plate on the device.*

The **blue LED** flashes:

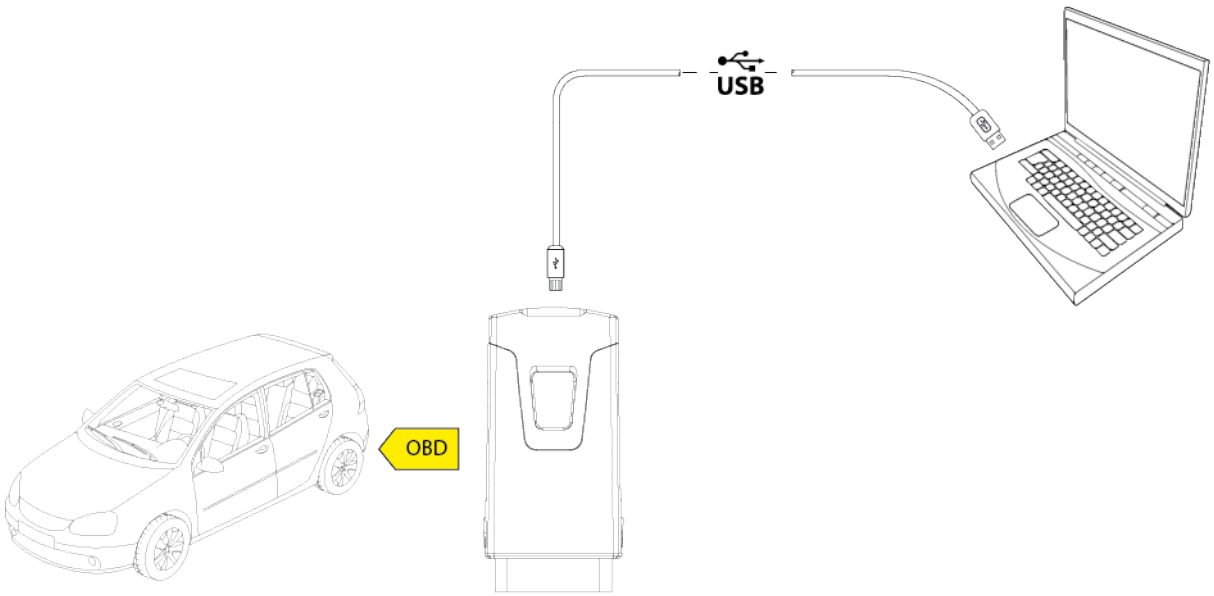
- *during the configuration phase of the Bluetooth communication;*
- *during communication between the device and the display unit, during data transmission.*

For further information, see the software operating manual.

13.2 *USB*

In order to connect via USB, you must use the specific cable provided or, if necessary, cables on which "USB HIGH SPEED" is specifically indicated.

INFORMATION *The internal battery of the device will be charged when the display unit is connected via USB.*



The **yellow LED** flashes:

- *during communication between the device and the display unit, during data transmission.*

NOTICE

The device cannot be powered using the USB port.

Any voltages at the USB port inlet may damage the device.

Do not connect battery chargers, power adapters nor apply any voltage at the USB port inlet.

For further information, see the software operating manual.

14 DIAGNOSIS

The protocols supported by the device allow it to perform various types of diagnoses.

The type of diagnosis that can be carried out depends on the vehicle being tested and its compliance with specific protocols for communication with the control units.

Where possible, the selection of the type of diagnosis is carried out through specific functions in the diagnostic software.

INFORMATION

Carrying out diagnostic tests using the functions made available by the software requires you to read and accept specific disclaimers.

Such disclaimers contain important safety indications that you must have read and fully understood before carrying out the tests.

INFORMATION

To carry out diagnostic tests, you must have previously configured the communication between the device and the display unit.

Some types of diagnostic operations require specific communication modes.

NOTICE

If not otherwise specified, power the device directly from the connection with the vehicle diagnostic socket.

Follow the instructions provided by the software carefully.

For further information, see the software operating manual.

For further information on the positioning and correct access to the diagnostic socket, refer to the documentation made available by the vehicle manufacturer.

INFORMATION

In some cases, specific adapters may be required.

NOTICE

Using a wrong diagnostic cable or a cable not specifically designed for this device may prevent a correct diagnosis and/or damage the device and the vehicle.

Only use the diagnostic cables indicated by the diagnostic software.

Do not use third-party diagnostic cables that have not been specifically approved by the device's manufacturer.

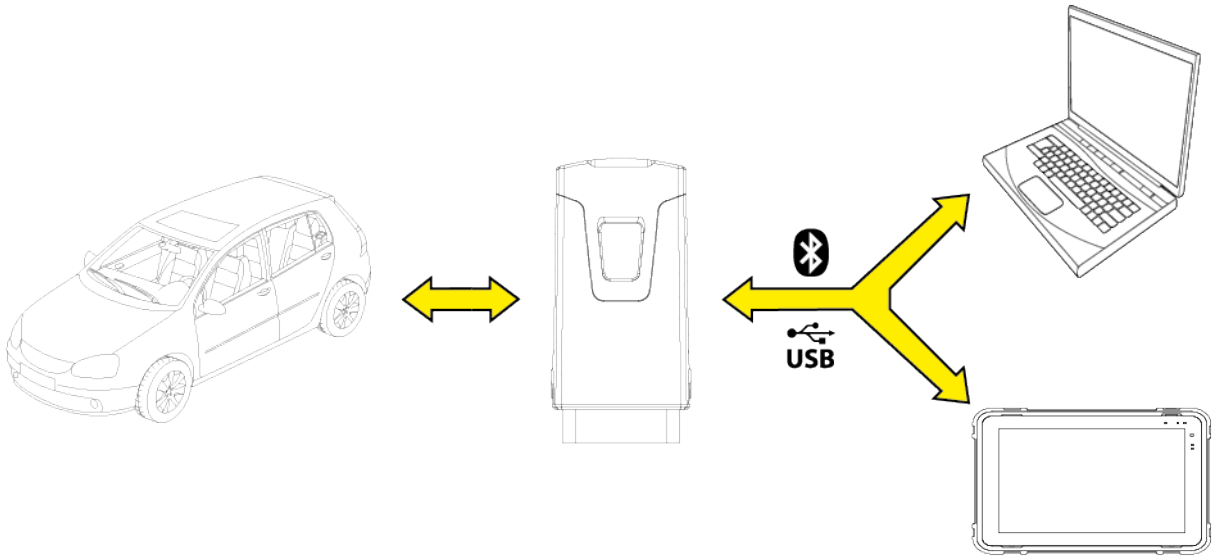
The device also allows carrying out diagnostic tests with the vehicle on road / vessel running.

This mode of use is called **REC** (*Recording*) and allows checking the vehicle's behaviour during its normal use.

For further information see the DYNAMIC TESTS chapter in the software's Operation Manual.

14.1 *STANDARD diagnosis*

STANDARD diagnosis stand for a type of diagnosis based on the diagnostic protocols indicated in the TECHNICAL FEATURES chapter.



The following communication modes are available for this type of diagnosis:

- *Bluetooth*
- *USB*

For further information see the COMMUNICATION chapter.

Proceed as follows:

1. *Start the diagnostic software.*
2. *Select the vehicle you wish to work on.*
3. *Select the system you wish to diagnose.*
4. *Select the desired variant.*
5. *Connect the device to the vehicle following the support information provided by the software.*
6. *Select the STANDARD diagnosis.*

For further information, see the software operating manual.

14.2 Dynamic Tests

The device's **REC** mode allows checking the vehicle's behaviour during its normal use.

The device can acquire and store data relating to the tests through the OBD connector of the vehicle to which it is connected.

The data that can be stored includes the following:

- *Engineering Parameters*
- *Errors*
- *states*

The data to be stored will be selected by the operator through a specific function in the diagnostic software.

INFORMATION

Some information may not be acquirable or have a delayed recording during a dynamic test due to the operating strategy of the control unit.

The operating strategy is defined by the vehicle manufacturer.

Using the device in this mode requires different phases that must be carried out correctly and in the order described:

As an example, below you will find the device's operating procedure in case of a test carried out with the following specifications:

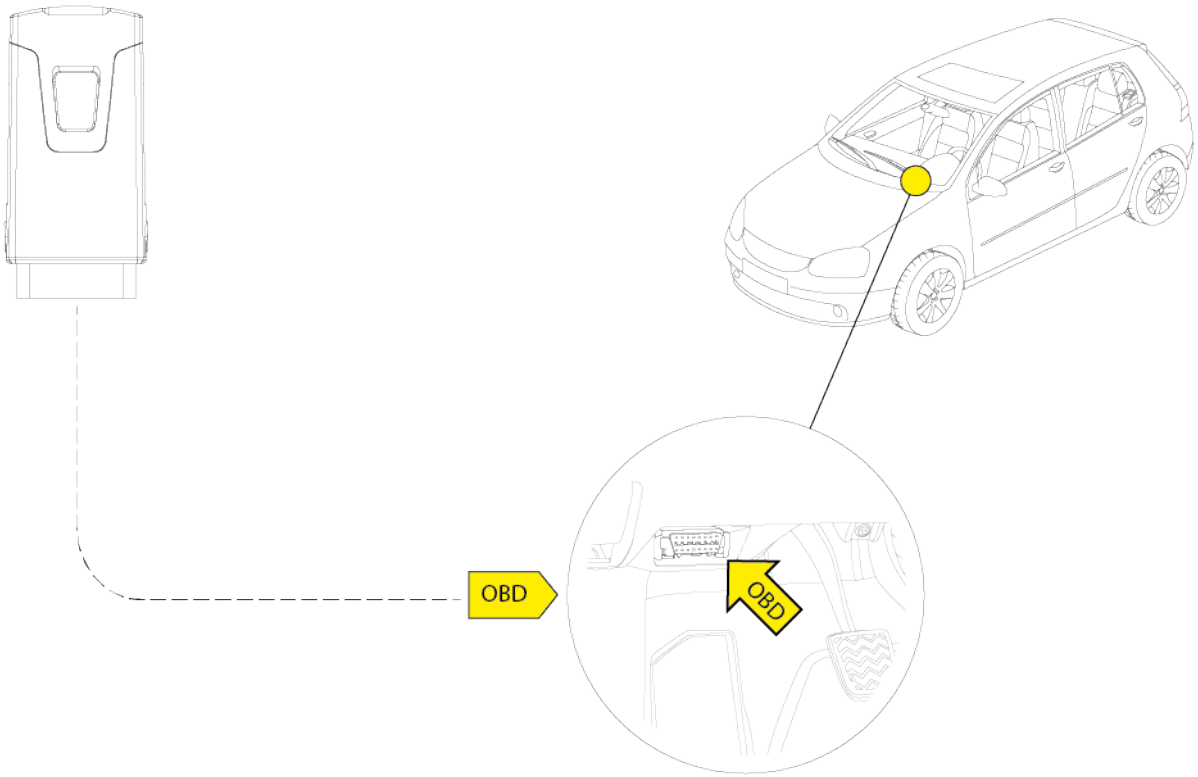
- *car;*
- *Bluetooth communication between device and display unit already configured.*

NOTICE

The safety indications below must be adapted based on the type of vehicle you wish to test.

In particular, refer to the contents in the chapter SAFETY RULES and in the DISCLAIMER.

I. INSTALLATION



1. Turn off the vehicle (instrument panel off).
2. Locate the OBD connector.
3. Carefully remove any panels protecting the OBD connector.

For further information, please refer to the documentation provided by the vehicle manufacturer.

4. Connect the device to the vehicle's OBD connector using, when required, the specific cables and adapters indicated by the software.
5. Make sure the device and/or diagnostic cable are firmly secured to the OBD connector in order to avoid any accidental disconnection during use.
6. Position the device and the diagnostic cable properly.

⚠ WARNING

An improper positioning of the device and/or diagnostic cable may expose to the risk of hindrance to driving, and in particular to the activation of safety devices.

Position the device and the diagnostic cable so that they do not compromise driving or the proper operation of safety devices.

Make sure the electric cables, the wiring in general, the fuel hydraulic pipes and the safety pneumatic devices of the vehicle are not damaged during the installation.

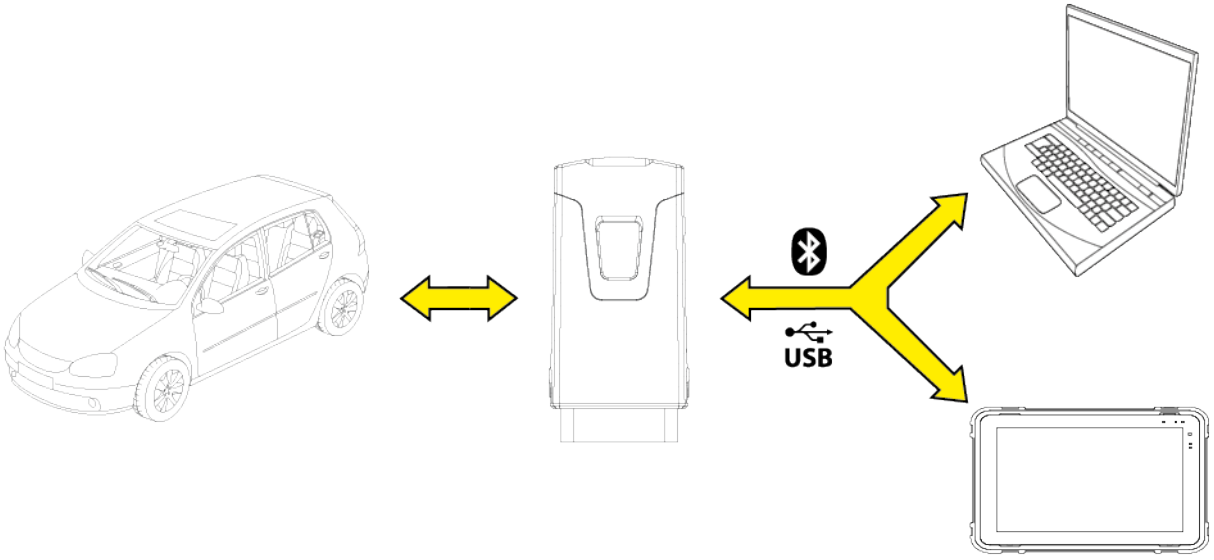
8. Fasten the device, with or without diagnostic cable, properly.

⚠ WARNING

Improperly fastening the VCI and diagnostic cable may cause the VCI itself or the diagnostic cable to fall, which may be a hindrance to vehicle driving and to the proper operation of safety devices.

Secure the VCI and the diagnostic cable so as to minimise their risk of falling.

II.CONFIGURATION



9. Turn on the vehicle (instrument panel on).
10. Start the diagnostic software.
11. Connect the device to the display unit via Bluetooth or USB.
12. Select the vehicle on which you wish to operate.
13. Select the control unit you wish to monitor.
14. Start the diagnosis.
15. Create or select a group of favourite parameters that you wish to record.
16. Press the dynamic tests icon.

    The software provides the sequence of operations required to complete the procedure in order to configure the device.
17. Follow the information that appear on screen.
18. Close the diagnostic software.
19. If connected via USB, disconnect the device from the display unit.

INFORMATION

The device starts recording only after the diagnostic software has been closed or after being turned off and back on.

The actual time required for the recording to start is proportional to the number of selected parameters.

The recording mode must remain active for at least one minute in order for the device to store valid diagnostic data.

III. DYNAMIC TESTS

The sampling of the parameters generally takes place every second.

Any errors that occur during the period the tests are carried out are stored within the memory of the device.

NOTICE **Do not act on the device in any way.**

IV.ANALYSIS OF THE COLLECTED DATA

The analysis of the collected data is performed by the specific software.

In order to analyse the results of the dynamic tests you must connect the device to the display unit and download the data stored.

The software allows you to view specific reports for the data stored.

20. Keep the device connected to the OBD socket.
21. Connect the device to the display unit via Bluetooth or USB.
22. Start the diagnostic software.

For further information, see the software operating manual.

14.3 DoIP diagnosis

The following communication modes are available for this type of diagnosis:

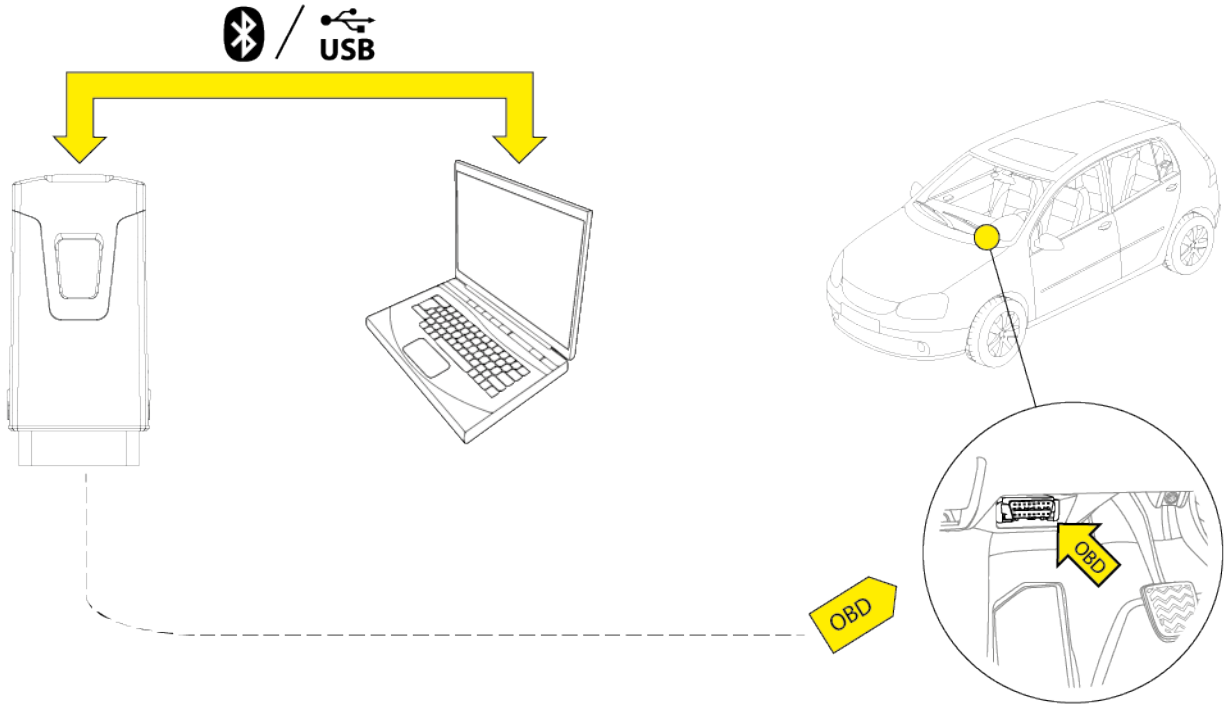
- *USB*
- *Bluetooth*

INFORMATION

The diagnosis via network cable is reserved for use of the VCI in combination with the vehicle manufacturer's proprietary diagnostic software.

Its use is reserved to particular cases, such as when reprogramming some control units, or specific cases indicated by the vehicle manufacturer.

For further information see the COMMUNICATION chapter.



Proceed as follows:

1. *Start the diagnostic software.*
2. *Select the vehicle you wish to work on.*
3. *Select the system you wish to diagnose.*
4. *Select the desired variant.*
5. *Connect the VCI to the vehicle following the support information provided by the software.*
6. *Select the DoIP diagnosis.*

INFORMATION

The DoIP diagnosis can be carried out even when the VCI is directly connected to the display unit, that is in hotspot mode; however, in this mode it is impossible to access the Internet, therefore the functions that are available are limited.

For further information, see the software operating manual.

14.4 *Disconnection at the End of a Diagnosis*

Once the diagnostic operations are complete, disconnect the device and restore the initial vehicle conditions.

Proceed as follows:

1. *Close the diagnostic software.*
2. *Turn off the vehicle (instrument panel off).*
3. *Disconnect the diagnostic cable or device from the vehicle's diagnostic connector.*
4. *Reposition any panels protecting the OBD connector.*

⚠ WARNING

The unexpected unfastening of any panels protecting the OBD connector may expose to the risk of hindrance to driving, and in particular to the activation of safety devices.

Make sure any panels protecting the OBD connector that were previously removed and then reinstalled are secured in place, so that they do not fall off while driving.

15 FIRMWARE UPDATE

The firmware in the device is updated through a specific software function and requires being connected to the display unit.

Connection to the display unit may be established via:

- *Bluetooth*
- *USB*

INFORMATION

The available connection modes depend on the display unit used; however, the Bluetooth connection cannot be used to update the firmware.

INFORMATION

Regardless of the communication mode, during the update:

- *do not switch off the device;*
- *do not turn off the display unit;*
- *do not interrupt the connection between the device and the display unit.*

The procedure is the same for all connection modes.

Proceed as follows:

1. *Power the device.*
2. *Turn on the display unit.*
3. *Start the diagnostic software.*
4. *Start the device's firmware update.*
5. *Follow on screen instructions.*

Wait for the update procedure to complete.

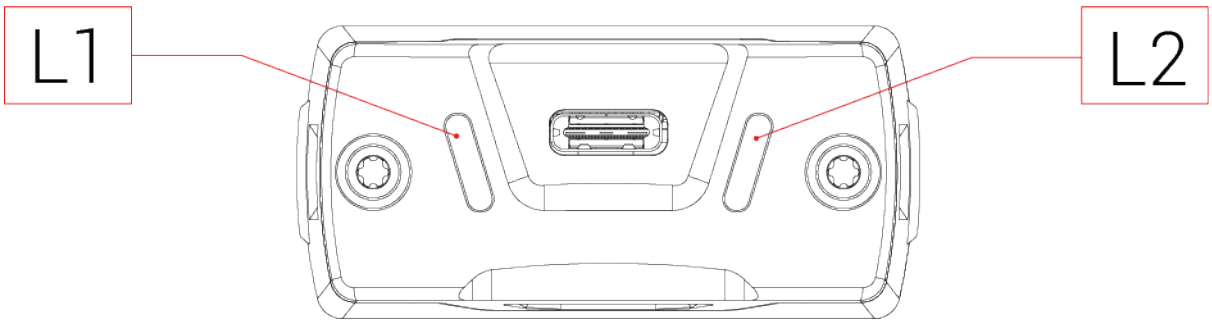
All the LEDs flash green simultaneously during the update.

All the LEDs flash red simultaneously if the update fails.

For further information, see the software operating manual.

16 BLINK CODES

The VCI uses LEDs to indicate its status both while connected to the vehicle and to the display unit.



-	LED		VCI STATUS:
	COLOUR	STATUS	
L1	red	blinking	Errors detected.
	blue	slow blinking	Bluetooth connection established.
		quick blinking	Bluetooth communication in progress.
		OFF	No Bluetooth connection.
	yellow	slow blinking	USB connection established.
		quick blinking	USB communication in progress.
		OFF	No USB connection.
L2	green	ON	On, working, awaiting commands.
		blinking	COMMUNICATION WITH THE VEHICLE IN PROGRESS.
		OFF	Off.
	orange	blinking	If L1 is off:blocked via software (warranty not activated).

DYNAMIC TESTS - REC MODE

When set in **REC** mode to run the dynamic tests, the LEDs flash alternatively to indicate the status of the VCI.

-	LED		VCI STATUS:
	COLOUR	STATUS	
L1 - L2	orange	alternated blinking	REC mode active. Searching for connection with vehicle.
	green	alternated blinking	REC mode active. Communication with the vehicle established. Data storage in progress.

FIRMWARE UPDATE

The LEDs flash simultaneously to indicate the status of the VCI firmware update.

-	LED		VCI STATUS:
	COLOUR	STATUS	
L1 - L2	green	simultaneous flashing	Firmware update in progress.
	red	simultaneous flashing	Firmware update failed.

17 MAINTENANCE

This product does not require special maintenance. However, we recommend the following:

- *carefully follow the instructions provided in this manual;*
- *keep the product clean;*
- *periodically inspect the electrical connections making sure they are in good conditions;*
- *immediately replace any damaged cables;*
- *only use original spare parts or spare parts approved by the manufacturer;*
- *contact your retailer for extraordinary maintenance operations;*

INFORMATION

For further help, contact your retailer or the technical assistance service.

*You can see the list of authorised retailers at the following address:***https://www.texa.com/sales-network**

18 TROUBLESHOOTING

For any technical problem contact your retailer/distributor.

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

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
The device is not communicating with the control unit.	The device / diagnostic cable is not connected properly.	Connect the device / diagnostic cable properly.
	The adapter being used is not correct.	Use the correct adapter.
	The diagnostic cable is damaged.	Change the diagnostic cable.
	The diagnostic connector is damaged.	Contact Technical Assistance.
	The vehicle is off.	Turn on the vehicle.
The device is not communicating with the display unit/Bluetooth peripheral devices.	The Bluetooth peripheral device/display unit is turned off.	Turn on the Bluetooth peripheral device/display unit.
	The Bluetooth peripheral device/display unit is not within the device's range.	Move the Bluetooth peripheral device/display unit into the device's range.
		Move the device into the range of the Bluetooth peripheral device/display unit.
	The device has not been properly configured.	Perform the configuration through the special function in the software.
	The device was placed close to shielding materials.	Place the device away from shielding materials.
	Other wireless communications are disturbing the signal.	Move away from possible sources of interference.
		If possible, switch off the devices causing the interference.
		Wait and try to communicate again.

19 LEGAL NOTICES

TEXA S.p.A.

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

Tax Code - Company Register of Treviso ID No. - VAT No.: 02413550266

Single-shareholder company subject to the direction and coordination activities of Opera Holding S.r.l.

Paid-up share capital 10.000.000 € - R.E.A. (Economic Administrative Index) No. 208102

Phone: +39 0422.791.311

E-Mail: info.it@texa.com

www.texa.com

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