

DRAFT

TPMS PAD USER MANUAL



Important information

Do not discard. Retain for future reference

Model / FCC ID: SX8TPMS-PAD

IC: 5736A-TPMSPAD

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). 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.

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.

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

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their expense.

WARNING: This product emits electronically generated electromagnetic waves that may interfere with the safe operation of pacemakers.

Individuals that have pacemakers should never use this product.

READ THESE INSTRUCTIONS BEFORE USING

1. Read All Instructions

All warnings in this manual should be adhered to.
All operating and use instructions should be followed.

2. Retain Instructions

The safety and operating instructions should be retained for future use.

3. Follow Instructions

All operating and use instructions should be followed.
In particular, the TPMS-PAD is not intended to be used to diagnose TPMS still fitted inside a tyre. The TPM must be removed from the wheel before it can be tested on the TPMS-PAD.

4. Cleaning

Clean with a soft dry cloth, or if necessary, a soft damp cloth. Do not use any harsh chemical solvents such as acetone, paint thinner, brake cleaner, alcohol, etc as this may damage the plastic surface.

5. Water & Moisture

Do not use this unit where contact or immersion in water is a possibility.
Never spill liquid of any kind onto the tool.

6. Storage

Do not use or store the tool in an area where it is exposed to direct sunlight or excessive moisture.

7. Use

To reduce the risk of fire, do not operate the unit in the vicinity of open containers or flammable liquids. Do not use where the potential for explosive gas or vapours exist. Keep the tool away from heat generating sources. Do not attempt to open the unit. There are no user serviceable parts inside.

Introduction

The TPMS PAD is a small electronic device which allows a user to test TPMs and also program the Schrader EZSensor. The PAD can only test TPMs which have been removed from a wheel.

TPM sensors work by transmitting radio signals from the individual wheels to the vehicle with information about the pressure and temperature of the wheel. This is normally done on a regular basis every few minutes and, on some sensors, more often when the vehicle is moving or if the TPM detects a pressure leak. So that the vehicle only picks up its own signals, the TPM has a serial number which is known by the vehicle. This serial number is programmed into the vehicle at manufacture time and (on most vehicles) when a TPM is replaced. This programming is normally referred to a 're-learn' procedure and often requires the use of a TPM tool such as Bartec's Tech 400.

The Schrader EZSensor is a programmable TPM which can be programmed to exactly emulate the operation of the sensors originally fitted to the car. This means that only two types of EZSensors (315MHz and 433MHz) are needed to replace one of the over 140 TPM sensor types in the market. Another advantage of the EZSensor is that it can be programmed with the same serial number as the broken sensor which means the vehicle does not need to re-learn a new sensor. In addition, copies of existing TPM sensors can be made for winter tyre sets which do not need any user intervention of the vehicle to make them work.

The PAD connects to a PC using USB. The pad takes its power from the USB and does not require batteries. A program needs to be installed on the PC which enables the pad to be used. It's not necessary to install any separate USB driver software to use the PAD.

The PAD has a flat surface on the top surrounded by a rim upon which a TPM can be placed. There is a marked area on the top surface where the body of the TPM should be placed. The PAD is not guaranteed to work if the TPM is not placed in this area. A TPM is tested by placing it on the pad, and the PAD generates a magnetic field which causes the TPM to transmit at UHF. If the TPM is non-functional, then the test process will fail.

There are no controls on the PAD. The only indicator on the PAD is a multicolour LED which can illuminate in any combination of red, green and blue light.

When the PC runs the PAD program and the PAD is connected, it gets a list of supported vehicles from the PAD. The available vehicles can be selected by using the mouse to click on the desired make, model and year. Note that it is the PAD has the list of vehicles contained in an internal database in its firmware. Firmware is like software but is stored on the PAD in flash memory unlike software which is stored on a CD ROM or a disk drive. This means that when updates become available, the firmware on the PAD has to be updated. This is done using the USB cable and is carried out automatically when the PAD is registered and new software and firmware has been downloaded to the PC from Bartec's website.

Contents of the package

- TPMS-PAD
- CDROM
- USB cable
- Instruction manual
- Quick start guide

Ensure that all the items above are present. If not, contact your supplier.

PC Requirements

A Windows PC with CD/DVD reader, mouse, a spare USB port and 100Mbytes of free disk space.

Operating system: Windows XP, Windows Vista or Windows 7

An internet connection and suitable browser is necessary for getting software updates.

Getting started

The CDROM contains PC software which must be loaded on to the PC before the TPMS-PAD can be used. Insert the disk into the CD drive. The installation process should start automatically. The install program will ask where you want the software installing, but normally the default settings will be appropriate. Once installation is complete, an icon will appear on the desktop and the program "TPMS-PAD" will be in the start menu under "All programs". Double clicking on either of these with the mouse will launch the program. Connect the supplied USB cable to the PC and the PAD, and the PAD will be detected by the software and the PC will display all the makes of vehicles that the PAD supports.

If the vehicle you want is not listed, then it's likely the software or PAD firmware will be out of date and you will need a software update. This can be obtained by visiting:

www.bartecusa.com

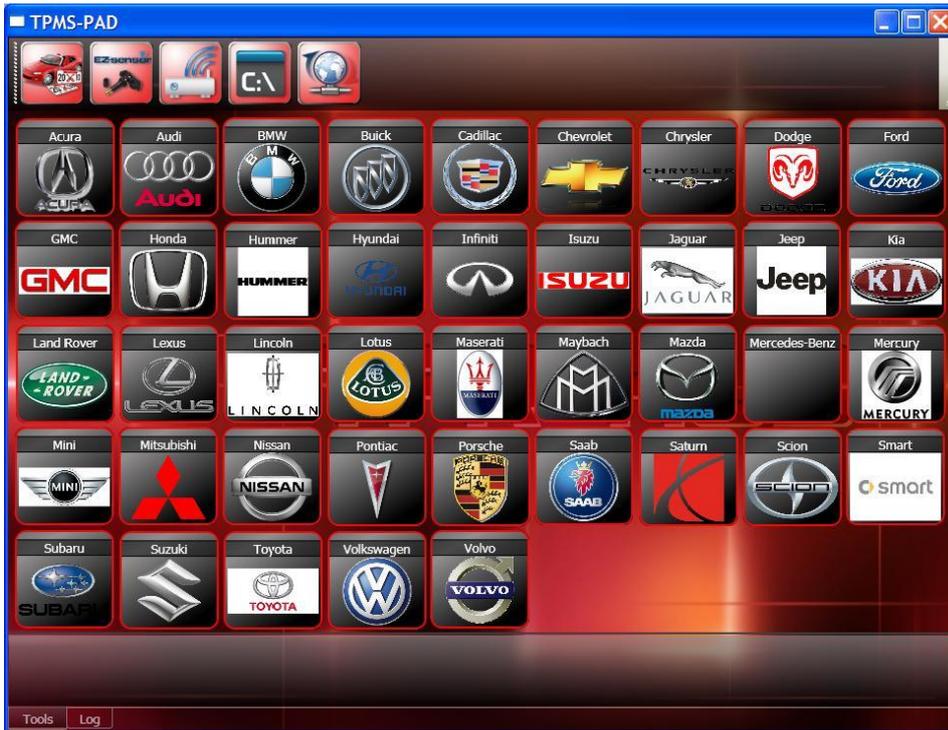
In order to obtain updates, the tool must be registered. This can be don't easily on the website. The reason for the registration process is to ensure the correct firmware version for your TPMS-PAD is made available for you.

Operation

The PAD is connected to the PC using a standard USB cable. If all is well with the PAD, the LED on the PAD will illuminate steady blue.



When the PC program starts, it sends a command via USB to the PAD which responds with the available vehicle makes, models and years that the PAD has in its internal data tables. The program then displays all the available vehicle makes.



The user can then choose a make, model and year of vehicle which then selects the appropriate TPM sensor type. The following screen shot shows the selection process for a Ford E150. First you need to click on the Ford symbol. This then brings up a list of all the Ford models supported by the PAD. Note that it's the PAD which has the list of available vehicles rather than the PC software. By registering the PAD via Bartec's website, updates to the PAD's vehicle support can be obtained.

List of Ford models supported by this version of PAD firmware:



Now the E150 model is selected by clicking on the E150 button. If you make a mistake, you can click on the back button (the left arrow on the left of the screen just above the vehicle model list). In this case there are two models from different years (2007-2009 and 2010 onwards) which have different TPM sensors fitted. You will only be asked for the year if it's necessary to correctly identify the TPM fitted.



By clicking on the year, the selection is complete.



The user can then choose to test the sensor normally fitted to that vehicle by placing the sensor on the PAD and clicking on the Read Sensor button. It is important to place the sensor in the correct place on the PAD. On this vehicle, the part is a banded type and is strapped to the wheel using a steel band.



When the test process starts, the LED changes colour to indicate testing is in progress. During testing or programming, the microprocessor generates a suitable 125KHz magnetic field in order to communicate with the TPM. If the TPM is working, it responds with a radio signal which is picked up by the PAD.

The operation can take up to one or two minutes depending on the TPM type. If the test is successful, the LED illuminates green. If not, the LED illuminates red. At the same time, the PAD sends the TPM data via USB to the PC which displays the results on the screen.

At this stage, If the sensor is working but damaged in some other way or has a low battery, it can be exactly copied by programming a Schrader EZSensor. With an exact copy, this means that the vehicle does not need to “re-learn” the TPM which is the normal procedure if a normal replacement sensor is fitted. Once the EZSensor is programmed it can be fitted in the wheel and the job is complete. Depending on the vehicle type, a TPM or scan tool may be needed to turn off the TPM warning lamp. An EZSensor part can be identified by the loo on the bottom of the sensor:



The sensor pictured above has a black body and this is a 315MHz EZSensor. The 433MHz EZSensor is grey. If the wrong part is used, the programming process will fail immediately as the PAD will identify that the wrong EZSensor is present.

To copy or clone a working sensor, the sensor is placed on the PAD and tested as above, and then the sensor is removed and an EZSensor placed on the PAD. By clicking on the ‘copy sensor’ button on the PC program, the sensor will be programmed appropriately for the vehicle. Note that the original sensor must be removed from the PAD and placed a short distance away to avoid problems with interference. On no account must two sensors be placed on the PAD at the same time.

The EZSensor must be placed on the pad with the sensor body inside the marked area of the PAD.



When the EZSensor program process starts, the LED changes colour to indicate programming is in progress. Programming can take up to two minutes depending on the TPM type. If the copy is successful, the LED illuminates green. If not, the LED illuminates red.

The most likely cause of a failure to program an EZSensor is that the sensor is incorrectly positioned. It must be placed on the pad such that the body of the sensor is in the marked area of the pad, with the stem towards the front of the PAD.

If the TPM does not pass the test, then an EZSensor can still be produced. Most TPMs have the serial number printed on the TPM or on a label on the TPM. This number can be manually entered into the PC program using the 'Enter serial number' button. If the serial number cannot be entered for any reason, a TPM can still be made, but it will not have the same serial number as the existing sensor. A

suitable serial number will be generated, but this will mean that a re-learn procedure will be needed on the vehicle as if a standard replacement part had been fitted. The procedure outlined above is followed exactly the same, but the 'copy sensor' will not actually copy the sensor, but effectively create a new one.

Sensor positioning

The following pictures show correct sensor positioning for different sensor types.

