BRT–DBL4

BRT-DBL4

TPMS Diagnostic Tool

Charging

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BARTEC USA

TPMS Diagnostics Tool

NOTES:

TABLE OF CONTENTS

INCLUDED IN THIS KIT:

- ✓ BRT-DBL4 TPMS tool w/ boot
- ✓ 9.6 Volt Rechargeable Battery
- ✓ Mini SD Card w/software
- ✓ Power Supply
- ✓ USB Cable
- ✓ User Guide

IMPORTANT NOTICES

Copyright
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Disclaimer
All specifications, illustrations and information contained within this manual are based on the most current information available at the time of publication. Bartec USA, LLC reserves the right to makes changes at any time without obligation to notify any person or organization. Bartec USA, LLC will do its best to keep you the customer informed of any changes that might affect the tools performance.

Warning: Changes or modifications not expressively approved by the party responsible for compliance could void the user's authority to operate the equipment. The term "IC:" before the radio certification number only signifies that Industry Canada technical specifications were met.

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.

FCC Compliance   Model: DBL4
FCC ID: SX8-DBL4   IC: 5736A-DBL4
This device complies with part 15 of the FCC rules and with RSS-210 of Industry Canada. 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.

APPENDIX C – ACCESSORIES

Part Number	Description	Appearance
BRT-DBL4-02	Rechargeable Battery	
BRT-DBL4-03	Mini SD Card	
BRT-DBL4-04	USB Cable	
BRT-DBL4-05	Printer Kit	
BRT-DBL4-06	Power Supply	
BRT-DBL4-06	User Guide	

APPENDIX B – MAGNET SENSORS

When a vehicle using Magnet activated sensors is selected on the BRT-DBL4, these particular vehicles will show the **MAG** TPM type AND the ⟩▭⟨ icon at the bottom of the tool display.

To check the sensor:
1. Setup tool for the vehicle you are working on (i.e. 2004 Chevrolet Corvette)
2. Place tool against wheel and tire just below the sensor stem.
3. As you place the magnet over the stem, press the test button.
4. The tool should respond with a tone and collect the data from the sensor – the data (pressure and ID) will be visible on the display

QUICK START

Tool Charging

NOTICE: Only used the power supply that is included in the BRT-DBL4 TPMS Activation tool kit to charge this tool. Use of any other type charger may damage your tool.

The BRT-DBL4 TPMS tool comes with the rechargeable battery already installed. If removed, make certain to insert the battery properly, pay close attention to polarity.

For optimum performance, always keep your BRT-DBL4 sufficiently charged.

The tool was fully charged at the factory; however, it is recommended that you charge the tool overnight (6-8 hours) before first use.

The charge port is located on the bottom of the tool and is the ROUND opening
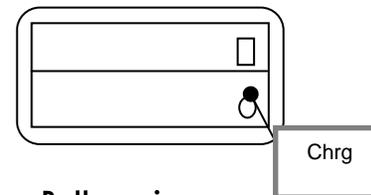
Bottom view of tool

Tool Overview
Functional Description
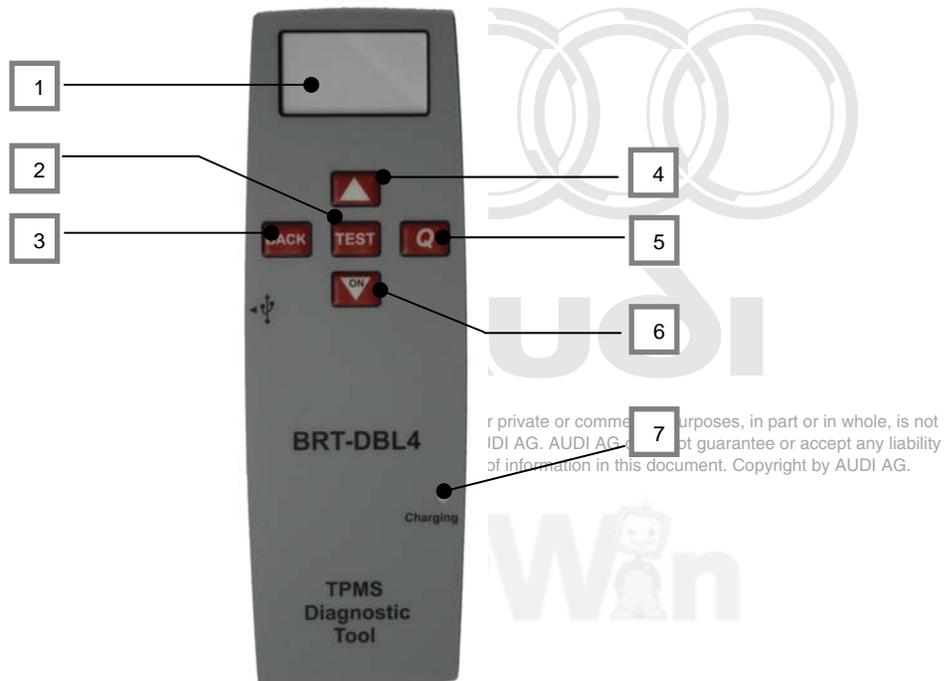
1	Display
2	Test Button
3	Back / Directional Left Button
4	Alternate ON / Directional Up Button
5	Q / Directional Right Button
6	ON / Directional Down Button
7	Battery Charging Indicator

BRT-DBL4

TPMS
Diagnostic
Tool

APPENDIX A – OTHER CARS
*Disclaimer – not responable for cars other than Audi

To use Other Cars, select the feature and press the Q button. You will now navigate based on Make, Model, and Year.

You will need to refer to a data source for the TPMS procedures for these vehicles.

The OE part number for these vehicles is on the tool as well.

Update using the Mini SD Card (alternate method)

The BRT-DBL4 comes with a unique and easy to use update system. Using a mini SD card that has the update file stored on it, you can keep the BRT-DBL4 tool up to date with the latest TPMS protocols and features.

1. Make sure that the battery is fully charged.
2. Remove the protective boot that surrounds the tool.
3. Insert the mini SD card as shown.

4. Press and hold the ENTER key.
5. Press and release the ON key.
6. The program mode will come up, press the test key to begin

7. The percentage complete will display as the update progresses.
8. A double beep indicates the update is complete.
9. The BRT-DBL4 is now ready to use.
10.

Upon completion of the update, the tool will power up and be ready to use.

Power On/Off

The BRT-DBL4 can be powered ON by pressing the ON Button (Arrow Down) or the Alternate ON (Arrow Up) Button.

The unit boots up with a Splash Screen that indicates the current version of software. When the unit powers up it will load all of the Data it previously saved (see below).

Powering the BRT-DBL4 Off can be achieved in two ways:

1. The BRT-DBL4 will automatically power off after 60 seconds of inactivity.
2. Selecting the "Off" command from the Main Menu.

When the unit is powered off, it will save all of its TPM Data, the last TPM Type that was read and the last selected Item within the Select by Make Menu.
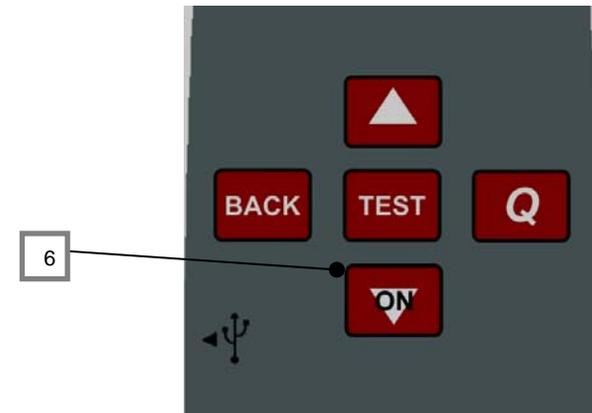
Tool Box Menu (for Audi vehicles)

Under the Main Menu, you will find the option for Tool Box. To enter the tool box, simple select and press the Q button.

Siemens Read Mode

Will allow you to read a Siemens sensor with force frame to determine the current mode the sensor is in. This function will not change the mode.

Siemens Transport Off

This feature will allow the user to put a Siemens sensor into Park Mode.

Check Sensor Type

Allows the user to test a given Audi wheel to determine the sensor type within that Audi wheel.

UPDATING THE BRT-DBL4

Update using the Audi Service and Volkswagen Service Network and PC (preferred method)

To update the tool by using your PC, hold down the enter button and turn unit on. The tool should look as shown here.

```
MSD BSL V1
APP.V0.2.33

NO UPDATE FILES
FOUND.
```

You will then plug the USB cable into the PC and the tool. A window will then open on your PC. Do not delete any of the files in the window.
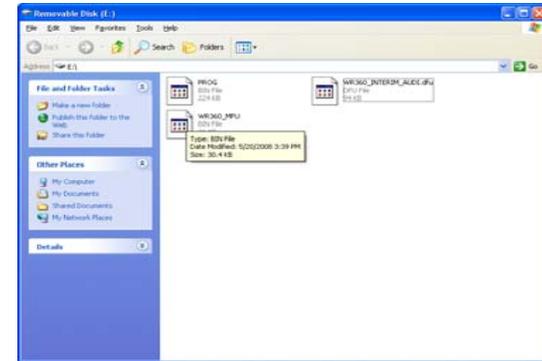
Take the update file provided by the Audi Service and Volkswagen Service Network and copy and paste (drag and drop) into that window. Once file has been transferred, disconnect the tool from the USB cable, and press the test button, the tool will then update.

The tool is now ready to use.

TOOL CONNECTIONS
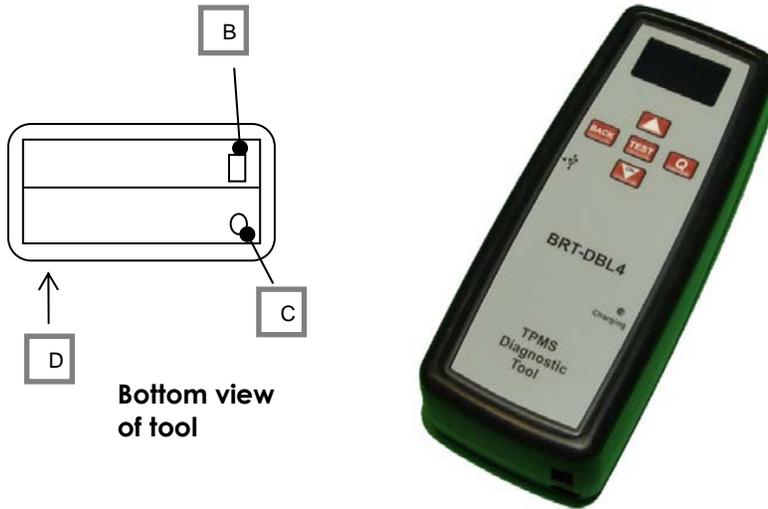
**Bottom view
of tool**

Connection Description

A - Mini USB Port

B - Micro-Mini Printer port (for optional printer)

C - Power Supply Port (12 VDC / 500 mA max)

D - Mini SD Slot (back of tool)

DISPLAY/MENU

1	Current Menu Page	5	Menu Item Indicator
2	Current Item	6	Battery Indicator
3	Selected TPM	7	Test Indicator
4	USB Indicator	8	Data Available Indicator

DISPLAY AREA (continued)

9   Magnet Activated Sensor Indicator (see appx B)

10   Delta P (change in pressure) Activation Indicator

1 Current Menu Page

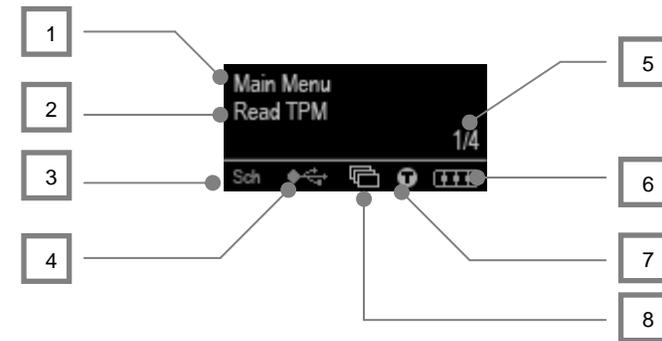This indicates what menu page the user is currently in. Menu pages contain a number of items in which actions can be carried out or other menus can be navigated to.

2 Current Item

This displays the current item that is selected. The action taken when the Enter / Right Button is pressed is determined by the current item selected.

3 Selected TPM

The Selected TPM indicates what type of TPM will be tested if the user presses the Test Button. If the Test Indicator is not visible, this will be the TPM that was last tested. If the Test Indicator is visible then this will indicate the new TPM Type that will be tested (see the Test Indicator for more details).

BER = Beru   PAC = Pacific
FOR = Ford Banded   SCH = Schrader Electronics
LEA = Lear   SIE = Siemens
MAG = Magnet Activated Sensor   TRW = TRW (Entire)

The following is an example of a complete audit of a vehicle's tires:

Audi v2.31

Test Performed On: Thursday, February 05, 2009 1:32:24 PM

VIN:
MILEAGE:
RO#:
MODEL:
YEAR:

Comments:

TPM Type	Reads	OEM Part #	ID Hex	ID Dec	Battery Condition	Battery Life	Pressure	Temperature	Acceleration	Transport Off	Sensor Status
Siemens Inv. Manchester 315 MHz FSK	1	1K0907253D	82FB13F1	2197492721	Pass	N\A	0.3 PSI\0.02 Bar	64°F\18°C	0.5G	N\A	OK
Siemens Inv. Manchester 315 MHz FSK	1	1K0907253D	C8218D01	3357641985	Pass	N\A	0.3 PSI\0.02 Bar	62°F\17°C	0.5G	COMPLETED	OK

Test Performed On: Thursday, February 05, 2009 12:50:48 PM

VIN:
MILEAGE:
RO#:
MODEL:
YEAR:

Comments:

The BRT-DBL4 will produce a single file for each type of TPM Part that has been read, and a separate record within that file for each unique TPM of that type.

While the BRT-DBL4 is in its MSD mode, menu functions are disabled.

Viewing the Audit Files
To begin using the Auditing System ensure that the tool has some data available, indicated by the Data Indicator icon, and then connect the BRT-DBL4 to a PC via its USB lead.

The PC will begin communicating with the BRT-DBL4. Once communication is established the BRT-DBL4 will act as a MSD. If the MSD does not automatically open its explorer window on the PC, then the user may browse for the newly connected device manually.

Once the explorer window is open, you may view a file by right clicking on the file and selecting Open from the pop-up menu.

Audit File Presentation
The Data presented is in a HTML form format that displays not only information regarding the TPMs but also publishes the Date of the Test and allows for the Tester's name to be entered.

Saving the Audit File:
To save the audit file, select "file' "saveas" and save the file as a TXT file. This will allow you to recall the data later.

DISPLAY AREA (continued)

4 USB Indicator
The USB indicator becomes visible when it detects 5 volts on the USB port, i.e. connecting the BRT-DBL4 to your computer via the supplied USB lead. The indicator has two different states:

1. Initialization state

This is the first state that the BRT-DBL4 enters when the USB lead is connected. This indicates that the BRT-DBL4 is trying to establish communications with the PC. If this indicator remains on for a prolonged amount of time, then remove the USB lead and check the connections.

2. Communication state

This indicates that the BRT-DBL4 has established communication with the PC and can now be viewed as a Mass Storage Device.

When the USB lead is removed the USB icon will disappear.

5 Menu Item Indicator
The Menu Item Indicator is provided to allow the user to determine where he currently is within a menu page.

The indicator is divided into two parts. The first number, before the forward slash (/), indicates what Item number is currently selected in the Menu Page, and the second number, the one following the slash, indicates the total number of Items in the Menu Page.

DISPLAY AREA (continued)

6 Battery Indicator

The Battery Indicator provides an estimate of the remaining power of the battery in the tool.

(battery icon - full)	There is plenty of power in the Battery
(battery icon - moderate)	There is a moderate amount of power in the battery
(battery icon - low)	There is little power left in the battery
(battery icon - empty)	The battery has almost run out

When there is an insufficient amount of power remaining in the battery then the Bartec BRT-DBL4 will flash its battery icon for two seconds, save all of the TPM Data and then power itself down.

7 Test Indicator

The Test Indicator becomes visible when a new TPM Type can be read. When the indicator is visible, pressing the Test Button will initiate the reading of the new TPM Type. If the indicator is not visible then pressing the Test Button will read the last TPM Type read.

8 Data Available Indicator

The TPM Data Indicator becomes visible when there is TPM Data available for viewing either by the display (See View TPM Data menu) or via the PC when the Bartec BRT-DBL4 is in its Mass Storage Device mode (See Audit Mode).

When there is no data present, the TPM Data Indicator will not be visible.

Diagnostics

Prior to servicing any TPM vehicle's wheels and tires, use the BRT-DBL4 to insure the operating condition of the TPM sensors. A quick scan of a vehicle during the "walk around" or during service allows the technician to accurately diagnose sensor status.

AUDIT FUNCTIONS

Audit

The BRT-DBL4 has a powerful feature known as "AUDIT MODE." After a sensor(s) are read, the data stored on the tool can be saved and printed, even attached to the customer's records.

Audit Mode

The BRT-DBL4 is capable of presenting all of its stored data within one or more computer files when connected to a PC via an USB lead. This is the same 'Mass Storage Mode' such as used in USB memory devices. **No extra drivers or software have to be loaded onto the pc (as long as he specified operating systems are used).**

The files and the stored TPM Data enable the BRT-DBL4 to be used as part of an Auditing System.

The tool automatically goes into Mass Storage Device (MSD) mode when connected to an active USB port on the pc.
It is not necessary to power up the tool prior to connecting to the pc- it will power up automatically.
It is important not to accidentally press the enter key on the BRT-DBL4 at the same time as connecting to the pc, as this will put the tool in Program mode which will not allow you access to the Audit File.

Beru Gen 2

The Beru Gen2 sensors have the ability to be forced to transmit by LF activation. These sensors are all 433 MHz.

Beru Gen2 433
Part Number
4D0907275B

Siemens

The Siemens sensors have the ability to be forced to transmit by LF activation. These sensors are all 315MHz. The Siemens sensors have different modes they can be in. With regards to the Audi Vehicles, the modes are Park and Ship. When a sensor is in Park, the sensor is on a 30 second clock, only allowing LF to force it to transmit every 30 seconds. Make sure to keep BRT-DBL4 held up to tire until the tracking bar goes all the way across to insure that you get the transmission. Sensors in Ship mode will be forced the Park when tested, this will be indicated on the screen of the tool and in the audit report.

Siemens 315
Part Number
1K0907253D

DISPLAY AREA (continued)

9 Magnet Activated Sensor Indicator. (see appx B)
Some sensors will only activate using the provided ring magnet. When this icon displays, follow the instructions (see appendix A) regarding activating with ring magnet.

10 Delta P Indicator.
Some sensors will only activate by changing the pressure. When this icon displays, follow the instructions (see Beru Gen1) regarding activating by letting pressure out of the tire.

MENU SYSTEM

The BRT-DBL4 utilizes a menu system for easy navigation and use. Most of the screens on the BRT-DBL4 will indicate to the user what menu is currently selected via the upper most line of text.

Menu Navigation
The menu system is navigated by use of the directional keys:

Up Button:	Navigates up within the current menu
Down Button:	Navigates down within the current menu
Right (Q)Button:	Navigates to the next menu / actions the currently selected item.
Left (back)Button:	Navigates to the previous menu item.

The Q Button's function will vary depending upon the currently selected item and will either action a command or move to a sub menu of the current menu.

The current position within a Menu Page is indicated by the Menu Item Indicator that displays the current item selected and the total number of items on the page. Items are selected by using the Up and Down Directional buttons and will wrap around when the last item is selected.

Main Menu 7

Audi Vehicles 5

All Models 12

Siemens 5

Beru 433 G2 5

Beru 315 G1 3

Beru 433 G1 2

VW Vehicles 4

All Models 15

Siemens 11

Beru 433 G1 2

Beru 433 G2 1

Delete TPM Data

Other Vehicles 42

Settings 5

# of Wheels 2

TPM ID 2

Pressure 3

Lang 1

Temp 2

Tool Box 3

Sie Read Mode 1

Sie Transport Off 1

Check Sensor Type 1
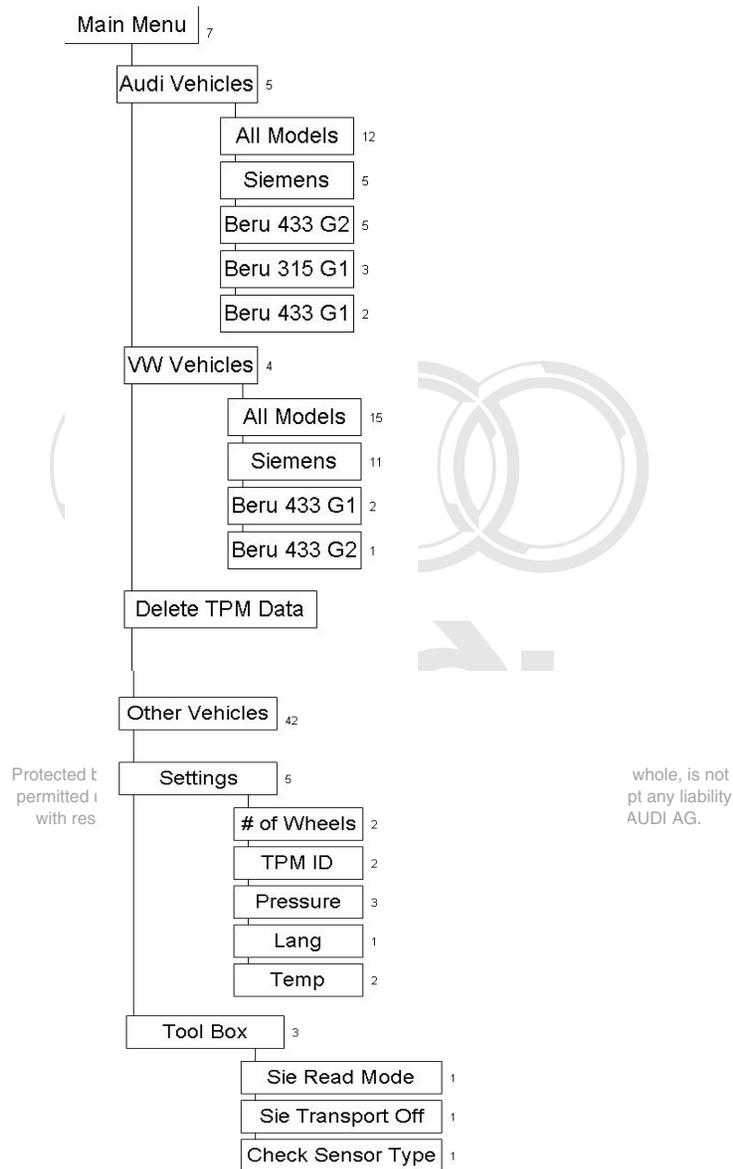
There are 2 methods that can be used with the BRT-DBL4, Long Listen and Delta P

To check the sensors Long Listen (Preferred Method):
1. Setup tool for the vehicle you are working on (i.e. 2002 Audi A8)
2. Place tool against wheel and tire just below the sensor stem.
3. Press test. You will note the instruction on the screen prompting you to reduce the pressure of the wheel and tire, but just hold the tool and wait for the sensor to transmit.

If this method fails to read the sensor, then move to Delta P

To check the sensor Delta P:
4. Setup tool for the vehicle you are working on (i.e. 2002 Audi A8)
5. Remove the valve cap.
6. Place tool against wheel and tire just below the sensor stem.
7. Press test. You will note the instruction on the screen prompting you to reduce the pressure of the wheel and tire.
8. Let air out of the tire by depressing the valve core.

The tools should respond with a tone and collect the data from the sensor – the data (pressure and ID) will be visible on the display

Reading Sensors (continued)

Where TPM's are reread several times, then the number of reads of that TPM is also stored (this data is however only displayed in the Audit File).

If a 6th unique TPM is read, and the TPM is not one of the current five stored, then it will replace the last read TPM Data with this new TPM Data.

NOTE:
Data records are stored in the memory until overwritten by new reads OR they are deleted using the Delete TPM Data command, or after you have connected to the PC using Audit mode.

Beru Gen1 Long Listen – Delta P

There are sensors in use today that can be activated (forced to transmit) by changing the pressure inside the wheel and tire, or waiting for the sensor to transmit on its own, most notably these are Beru Gen1 sensors.

When selected on the BRT-DBL4, these particular vehicles will show the **BER** TPM type AND the ↓**P** icon at the bottom of the tool display.

Beru Gen1 315
Part Number
4D0907275A

Beru Gen1 433
Part Number
4D0907275

MENU SYSTEM (continued)

Main Menu
The Main Menu is the root of the menu system and provides items that perform the core functions of the BRT-DBL4.

Audi Vehicles
> Directs the user to the Audi Vehicles selections

VW Vehicles
> Directs the user to the VW Vehicles selections

Delete TPM Data
> Will allow the user to delete the data currently stored in the tool

Other Vehicles
> Directs the user to select by Make, Model, and Year for vehicles other than Audi or VW

Settings
> Allows the user to make changes to the tools settings: # of wheels to test, TPM ID, Pressure readout, Temp read out

Tool Box
> Gives user a way to check Siemens sensor modes and set sensors to Park. Allows the ability to check a wheel and tire to determine senor type inside wheel without having to break down wheel and tire.

Off
> This will power the tool off

**Each item is a command that can be activated by pressing the Q Button.**

TOOL USE

Reading Sensors

Once a TPM has been selected, either through the TPM Selection process (i.e. Test Indicator visible) or simply a subsequent read of the previously selected type (TPM Indicator not visible) a TPM read can be initiated by pressing the Test Button.

TPM Activation
When the Test Button is pressed the BRT-DBL4 will begin the process of reading the TPM, this will be indicated by the display that details the TPM Type it is activating and a progress bar that indicates the maximum period for which it will send the LF Command and look for the UHF response.
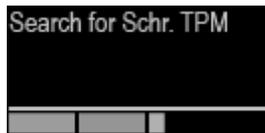
TPM activation can be aborted at any time by pressing the Back Button. When the activation is aborted, the user will be returned to the previous menu.

TPM Found
If a TPM of the indicated type is found, then the BRT-DBL4 will emit a series of tones that follows the pattern of received data. This TPM Data will immediately be stored and displayed. This newly stored TPM Data will be placed in Item position 1 and all other TPM Data will be shifted down a position.

Pressing the Back Button will return the user back to the menu they were previously on (i.e. the Menu Page where the user pressed the Test Button).

Reading Sensors (continued)

TPM Not Found
If the search period expires without reading a TPM then the BRT-DBL4 will emit a single Audible Beep and indicate on the display that no TPM was found. The OE part number will be displayed.

The TPM Data will still be stored but will indicate that the TPM Failed to Read.

Pressing the Left Back Button will return the user back to the previous menu.

TPM Data Storage
The BRT-DBL4 is capable of storing up to 5 TPM Data records for Auditing purposes; this Data is also stored over a power down. TPM Data is stored chronologically, that is, the last read TPM's data will always be displayed in Data Item position 1.

If a Data Item is empty then the display will regard that as an Unknown TPM (Note that unknown TPM's are not displayed in the Audit File, see Audit System).

If a TPM is read that already exists in the TPM Data, then that TPM Data record will be updated with the new information and placed at the top of the list just as if a new TPM had been read.

TPM's that failed to be read are also stored, however, the BRT-DBL4 assumes that any failed read of a TPM that immediately follows a failed read of a TPM of same Type is an actual attempt to reread that TPM, and so the TPM Data is just updated. Failures of the same Type that are interspersed by a successfully read TPM are stored as separate failures.

Cautions & Warnings

Please read these WARNINGS and CAUTIONS before proceeding with maintenance and repair work. You must answer that you have read and you understand these WARNINGS and CAUTIONS before you will be allowed to view this information.

- If you lack the skills, tools and equipment, or a suitable workshop for any procedure described in this manual, we suggest you leave such repairs to an authorized Audi retailer or other qualified shop. We especially urge you to consult an authorized Audi retailer before beginning repairs on any vehicle that may still be covered wholly or in part by any of the extensive warranties issued by Audi.

- Disconnect the battery negative terminal (ground strap)whenever you work on the fuel system or the electrical system. Do not smoke or work near heaters or other fire hazards. Keep an approved fire extinguisher handy.

- Audi is constantly improving its vehicles and sometimes these changes, both in parts and specifications, are made applicable to earlier models. Therefore, part numbers listed in this manual are for reference only. Always check with your authorized Audi retailer parts department for the latest information.

- Any time the battery has been disconnected on an automatic transmission vehicle, it will be necessary to reestablish Transmission Control Module (TCM) basic settings using the VAG 1551 Scan Tool (ST).

- Never work under a lifted vehicle unless it is solidly supported on stands designed for the purpose. Do not support a vehicle on cinder blocks, hollow tiles or other props that may crumble under continuous load. Never work under a vehicle that is supported solely by a jack. Never work under the vehicle while the engine is running.

- For vehicles equipped with an anti-theft radio, be sure of the correct radio activation code before disconnecting the battery or removing the radio. If the wrong code is entered when the power is restored, the radio may lock up and become inoperable, even if the correct code is used in a later attempt.

- If you are going to work under a vehicle on the ground, make sure that the ground is level. Block the wheels to keep the vehicle from rolling. Disconnect the battery negative terminal (ground strap) to prevent others from starting the vehicle while you are under it.

- Do not attempt to work on your vehicle if you do not feel well. You increase the danger of injury to yourself and others if you are tired, upset or have taken medicine or any other substances that may impair you or keep you from being fully alert.

- Never run the engine unless the work area is well ventilated. Carbon monoxide (CO) kills.

- Always observe good workshop practices. Wear goggles when you operate machine tools or work with acid. Wear goggles, gloves and other protective clothing whenever the job requires working with harmful substances.

- Tie long hair behind your head. Do not wear a necktie, a scarf, loose clothing, or a necklace when you work near machine tools or running engines. If your hair, clothing, or jewelry were to get caught in the machinery, severe injury could result.

Cautions & Warnings

- Do not re-use any fasteners that are worn or deformed in normal use. Some fasteners are designed to be used only once and are unreliable and may fail if used a second time. This includes, but is not limited to, nuts, bolts, washers, circlips and cotter pins. Always follow the recommendations in this manual - replace these fasteners with new parts where indicated, and any other time it is deemed necessary by inspection.

- Illuminate the work area adequately but safely. Use a portable safety light for working inside or under the vehicle. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.

- Friction materials such as brake pads and clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.

- Finger rings should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.

- Before starting a job, make certain that you have all the necessary tools and parts on hand. Read all the instructions thoroughly, do not attempt shortcuts. Use tools that are appropriate to the work and use only replacement parts meeting Audi specifications. Makeshift tools, parts and procedures will not make good repairs.

- Catch draining fuel, oil or brake fluid in suitable containers. Do not use empty food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously.

- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten fasteners to the tightening torque listed.

- Keep sparks, lighted matches, and open flame away from the top of the battery. If escaping hydrogen gas is ignited, it will ignite gas trapped in the cells and cause the battery to explode.

- Be mindful of the environment and ecology. Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.

- The air-conditioning (A/C) system is filled with a chemical refrigerant that is hazardous. The A/C system should be serviced only by trained automotive service technicians using approved refrigerant recovery/recycling equipment, trained in related safety precautions, and familiar with regulations governing the discharging and disposal of automotive chemical refrigerants.

- Before doing any electrical welding on vehicles equipped with anti-lock brakes (ABS), disconnect the battery negative terminal (ground strap) and the ABS control module connector.

- Do not expose any part of the A/C system to high temperatures such as open flame. Excessive heat will increase system pressure and may cause the system to burst.

Cautions & Warnings

- When boost-charging the battery, first remove the fuses for the Engine Control Module (ECM), the Transmission Control Module (TCM), the ABS control module, and the trip computer. In cases where one or more of these components is not separately fused, disconnect the control module connector(s).

- Some of the vehicles covered by this manual are equipped with a supplemental restraint system (SRS), that automatically deploys an airbag in the event of a frontal impact. The airbag is operated by an explosive device. Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious personal injury. To guard against personal injury or airbag system failure, only trained Audi Service technicians should test, disassemble or service the airbag system.

- Do not quick-charge the battery (for boost starting) for longer than one minute, and do not exceed 16.5 volts at the battery with the boosting cables attached. Wait at least one minute before boosting the battery a second time.

- Never use a test light to conduct electrical tests of the airbag system. The system must only be tested by trained Audi Service technicians using the VAG 1551 Scan Tool (ST) or an approved equivalent. The airbag unit must never be electrically tested while it is not installed in the vehicle.

- Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times before breaking the bead from the rim. Completely remove the tire from the rim before attempting any repair.

- When driving or riding in an airbag-equipped vehicle, never hold test equipment in your hands or lap while the vehicle is in motion. Objects between you and the airbag can increase the risk of injury in an accident.

I have read and I understand these Cautions and Warnings.