



TECH300plus  
**USER  
GUIDE**



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**TIRE  
PRESSURE  
MONITORING  
SYSTEM**

**DIAGNOSTIC  
and  
RESET TOOL**

**FAQs- Resolution****TABLE OF CONTENTS**

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## 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 make 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 tool's performance.

**Warning:** Changes or modifications not expressly 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: Tech300plus

FCC ID: SX8-DBLPLUS

IC: 5736A-DBLPLUS

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.

## 2.3) Updating the TECH300plus TPMS Tool

Once the installation of the software and drivers is complete, you are ready to update the tool.

To obtain the most recent copy of firmware for your TECH300plus tool, visit [www.bartecusa.com/](http://www.bartecusa.com/) to retrieve the file.

Just as with the loader program, left click the firmware file and save to your desktop.

1. Launch the Programming Software on the PC.
2. Follow the connection instructions- ensuring a good battery is installed.
3. Click "Load Update Button" and browse the folder where the 21211 software is stored – on your DESKTOP.
4. Click "Update Tool Button." – Wait for the program to prompt you to disconnect the tool.

**The tool is now ready to use.**



Once the wizard completes, the following screen is presented.



Click on 'finish.' Launch the Wheelrite program. The program will have an image of the TECH300plus.



Note that if any other pc usb port is to be used in the future, it is good practice to repeat the connection of the TECH300plus to other USB ports.

Only when this process has been completed is the program and hardware fully integrated in the PC

### PART NAMES AND FUNCTIONS



### Functional Description

- 1 Display
- 2 Test Button
- 3 ESC / Directional Left Button
- 4 USB Port
- 5 Alternate ON / Directional Up Button
- 6 Enter / Directional Right Button
- 7 ON / Directional Down Button

### POWER ON/OFF SEQUENCE

The TECH300plus can be powered ON by pressing the ON Button (Arrow Down) or the Alternate ON (Arrow Up) Button.

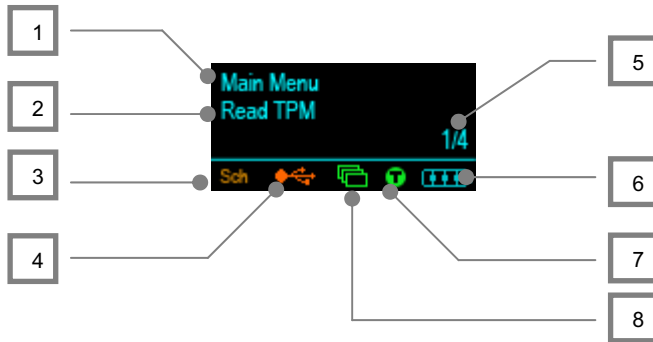
The unit boots up with a Splash Screen that indicates the current version of software. When the unit powers up it will load all of the Data it previously saved (see below).

Powering the TECH300plus Off can be achieved in two ways:

1. The TECH300plus will automatically power off after 30 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.**

### MAIN DISPLAY AREA

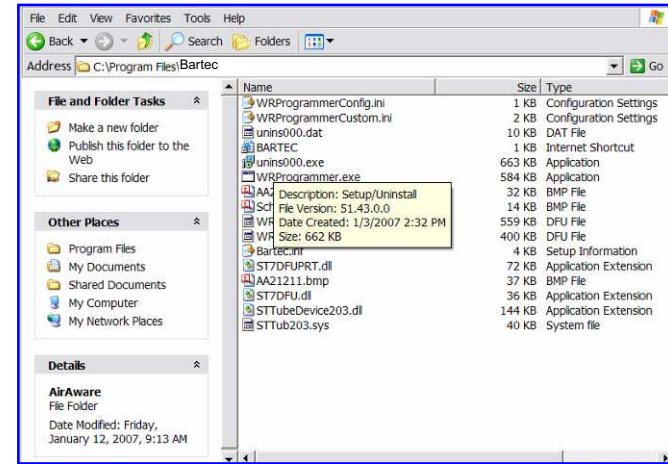


- |   |                   |   |                          |
|---|-------------------|---|--------------------------|
| 1 | Current Menu Page | 5 | Menu Item Indicator      |
| 2 | Current Item      | 6 | Battery Indicator        |
| 3 | Selected TPM      | 7 | Test Indicator           |
| 4 | USB Indicator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

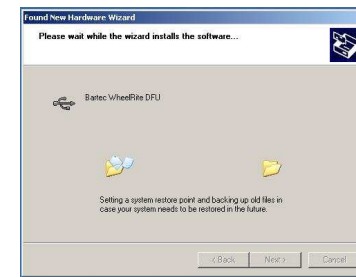
Select the "INSTALL FROM A LIST OR SPECIFIC LOCATION (advanced)" button.

Click NEXT.

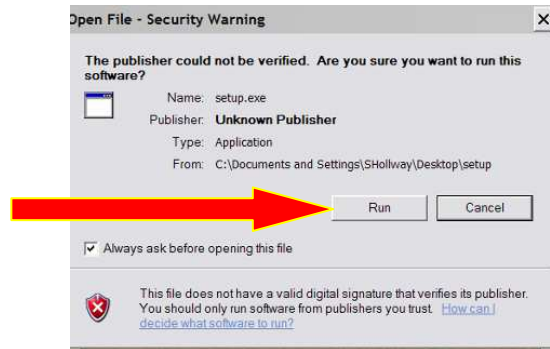
Click the BROWSE button and point to the Bartec folder located in the program files.



The OK button should now be lit. Click OK to complete the installation



Click run if this warning pops up



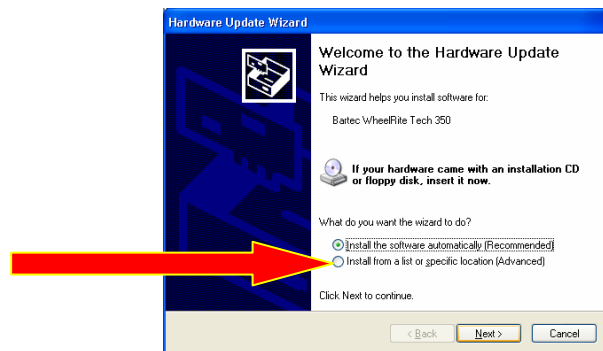
**Follow the wizard's instructions to install the program to your PC or Laptop. Use the default destination folder Bartec to prevent confusion later. The drivers for the tool will be stored in this folder located in program files.**

## 2.2) Installing the Drivers to your PC

After installing the Bartec loader program, you must install the drivers for the tool.

Plug the provided USB cable into your PC. While holding the enter button on the TECH300plus TPMS Tool, plug in the small end of the USB cable into the tool.

The NEW HARDWARE WIZARD should now launch.



## MAIN DISPLAY AREA

### 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.

### 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.

### Select TPM Manufacturer

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).

### USB Indicator

The USB indicator becomes visible when it detects 5 volts on the USB port, i.e. connecting the TECH300plus to your computer via the supplied USB lead. The indicator has two different states:

1. Initialization state



This is the first state that the TECH300plus enters when the USB lead is connected. This indicates that the TECH300plus 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 TECH300plus 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.**

## MAIN DISPLAY AREA



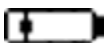

### Menu Item Indicator

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.

### Battery Indicator

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

|   |  |
|---|--|
|  | There is plenty of power in the Battery            |
|  | There is a moderate amount of power in the battery |
|  | There is little power left in the battery          |
|  | The battery has almost run out                     |

When there is an insufficient amount of power remaining in the battery then the TECH300plus will flash its battery icon for two seconds, save all of the TPM Data and then power itself down.

### 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.

## 2) Updating the TECH300plus TPMS Tool

**NOTE: Before the TECH300plus TPMS tool can be updated, the Programming Software must be loaded on to your PC AND the drivers must be installed.**

### 2.1) Installing the Programming Software on the PC

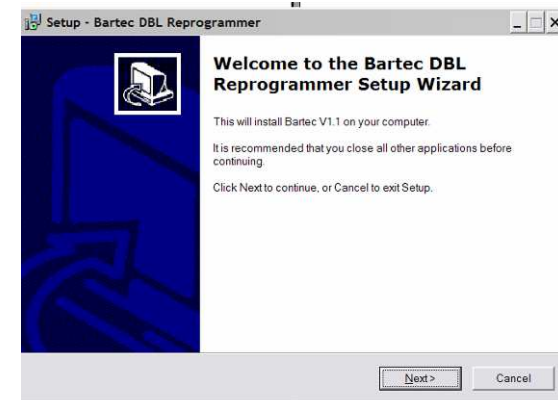
To obtain the necessary software, visit [www.bartecusa.com/](http://www.bartecusa.com/) to retrieve these files.

From the Bartec USA website Left click on the FIRMWARE PROGRAMMING TOOL program and save this ZIP file to your DESKTOP.

From your computer's desktop, double click the Setup Icon to reveal the install files. Unpack the zipped files.



Double click Setup.exe file to launch the installer.



**TECH300plus v1.2.9  
TPM SEARCH FOR SELECTOR POSITION 1G**

**Test Performed On: 27 November 2006 10:08:42**

**Test Performed by:**

| TPM Type                                   | Reads | ID Hex | ID Dec   | Battery State | Pressure | Temperature |
|--|-------|--------|----------|---------------|----------|-------------|
| Schrader 4096<br>Manchester 315 MHz<br>ASK | 1     | 9643BB | 9847739  | Pass          | 31.0 PSI | 71°F        |
| Failed to Read                             | 2     |        |          |               |          |             |
| Schrader 4096<br>Manchester 315 MHz<br>ASK | 1     | 33C572 | 3392882  | Pass          | 30.0 PSI | 70°F        |
| Schrader 4096<br>Manchester 315 MHz<br>ASK | 1     | A764C9 | 10970313 | Pass          | 33.0 PSI | 71°F        |

The audit file example above is representative of a single vehicle with four tires, where one tire failed to read, and a retest was taken to ensure the TPM was at fault.

**Leaving Audit Mode**

To leave the Audit mode and re-enable the TECH300plus simply remove the USB lead.

**MAIN DISPLAY AREA**

**Quick Selection**

In order to read a TPM with a competitive tool, the user is usually required to select it from the appropriate menus (See Menu System), this may involve drilling down the menu several times, e.g.



However, the TECH300plus is an intelligent device that is capable of determining if all of the possible TPM paths would result in reading a TPM of the same Type. When all menu paths lead to the same TPM Type then this TPM Type will be selected and the Test Indicator will become visible to indicate this.

**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 TECH300plus is in its Mass Storage Device mode (See Audit System).

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



## MENU SYSTEM

The TECH300plus utilizes a menu system for easy navigation and use. Most of the screens on the TECH300plus 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 Button: | Navigates to the next menu / actions the currently selected item. |
| Left Button:  | Navigates to the previous menu item.                              |

The Right 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.

### 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 TECH300plus to a PC via its USB lead.

The PC will begin communicating with the TECH300plus. Once communication is established the TECH300plus 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.

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

## PC CONNECTION CAPABILITIES

The TECH300plus can be connected to a pc for one of two purposes

- 1) Present its stored data- the audit system
- 2) Update the TECH300plus software program

The USB indicator is functional under both circumstances.

*The tool is compatible with PCs running Windows operating systems (version XP or 2000).*

*Reduced (audit only) functionality is available with Millennium edition operating systems.*

*USB ports can be either version 1 or 2.*

*There are extra requirements for program updating- eg specific programming software has to be prior loaded onto the pc.*

### 1) Audit System

The TECH300plus 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 the specified operating systems are used).**

The files and the stored TPM Data enable the TECH300plus 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.

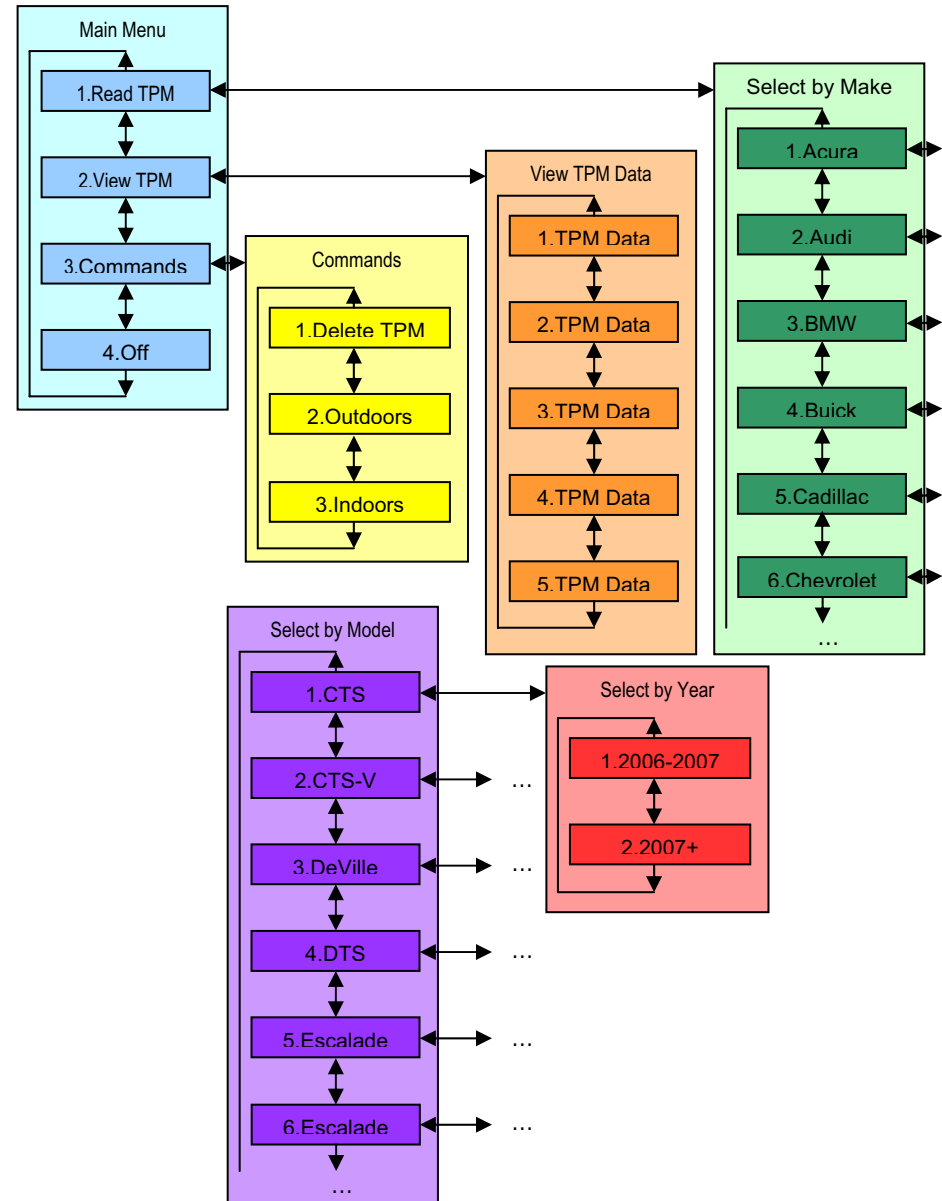
It is important not to accidentally press the enter key on the TECH300plus at the same time as connecting to the pc.

The TECH300plus 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 TECH300plus is in its MSD mode, menu functions are disabled.

## MENU SYSTEM

### Menu Navigation



## MENU SYSTEM

### Main Menu

The Main Menu is the root of the menu system and provides items that perform the core functions of the TECH300plus.

1. Read TPM  
This Item is a sub menu, pressing the Right Button will take the user to the "Select by Make" menu to begin the TPM selection process.
2. View TPM Data  
This item is a sub menu, pressing the Right Button will take the user to the "TPM Data" menu.
3. Commands  
This Item is a sub menu, pressing the Right Button will take the user to the "Commands" menu.
4. Off  
This item is a command. Pressing the Enter Button will action the command and turn the unit off. (See Power On/Off Sequence).

### Commands Menu

The Commands Menu allows the user to perform some of the useful functions of the TECH300plus.

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

1. Delete TPM Data  
This command will delete all the currently saved TPM Data from the TECH300plus.
2. Outdoors Mode  
The TECH300plus is designed for both Indoors and Outdoors use. Outdoor mode intensifies the brightness, of the display and provides a reduced User Interface level, displaying

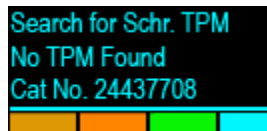
Where TPM's are reread several times, then the number of reads of that TPM is also stored (this data is however only displayed in the Audit File).

If a 6<sup>th</sup> 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.

## READING A TPM

### TPM Not Found

If the search period expires without reading a TPM then the TECH300plus will emit a single Audible BEEP and indicate on the display that no TPM was found. If applicable, it will also display any other information relevant to the TPM part that was not found, e.g. the Schrader Catalogue Part Number.



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

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

### TPM Data Storage

The TECH300plus 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 TECH300plus 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.

only two lines of text, however the TECH300plus still remains intuitive.

3. **Indoors Mode**  
Activating this command will put the TECH300plus into the Indoors Mode. This operates at the default brightness level and with a complete User Interface.

### View TPM Data Menu

The TPM Data Menu differs to those of other menu types in that it does not display the Menu Page name, the Item name or any of the indicators except for the Item Indicator. Instead, the screen provides all of the TPM Data applicable to the TPM Type read; this may include: TPM ID (Hexadecimal & Decimal) Battery State, Temperature and Pressure.

Not all TPMs of the same general Type will display the same amount of Data, some variations in Parts may display less than others.

The way in which this data is displayed differs with the Mode the TECH300plus is in.



As in other Menu Pages, the Up and Down Buttons scroll through the TPM Data Items, and the Left Button returns to the previous menu. Pressing the Enter Button will toggle the display format of the TPM ID between Hexadecimal and Decimal.

TPM Data is stored in chronological order - that is the newest TPM Data is stored at the top of the menu.

If an Item has no TPM Data then the display will indicate that the TPM is Unknown, i.e. all items will display Unknown if the TPM Data has just been deleted.

### Select by Make/Model/ Year Menus

The Read TPM item from the Main Menu begins the process of selecting a TPM to read by placing the user in the Select by Make Menu. To read a TPM the user must select a Vehicle's:

Make → Model → Year

This ensures that the TPM that has been requested for a read is both correct and trouble free, i.e. no look up chart or manual is required by the user.

The user may select the TPM by either drilling all the way to the end of the selection process, i.e. selecting a year then pressing test, or pressing test when the Test Indicator becomes visible (when the Test Indicator becomes visible, the user has drilled down sufficiently in the selection process to find a single TPM Type).

The last selected Item within the Select by Make Menu is stored such that when the user returns to this menu, the last Vehicle Make he selected will automatically be highlighted.

### READING A TPM

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 TECH300plus 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 ESC 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 TECH300plus will emit a series of tones that follows the pattern of received data. This TPM Data will immediately be stored and displayed via the TPM Data Menu (see TPM Data Menu). 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 ESC 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).