

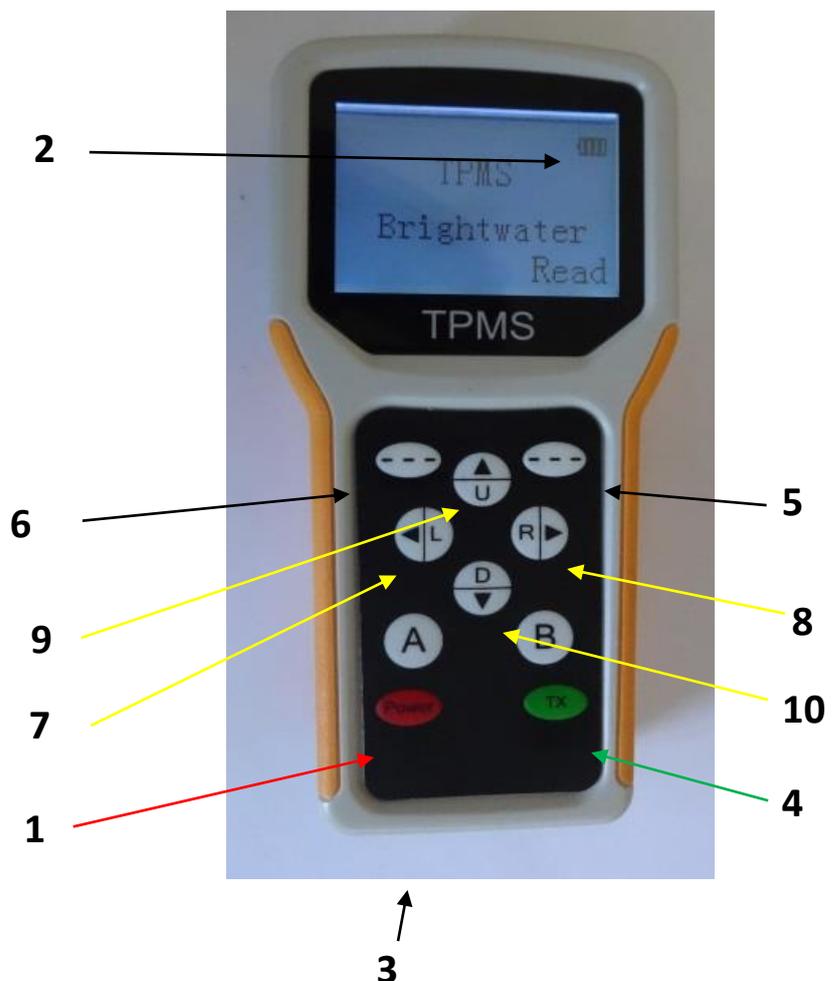
Technical datasheet-TPMS handset operation guide

TMPS Handset Functionality – overview

The TPMS handset is used for direct reading of sensor parameters such as pressure, temperature and battery voltage. It can also be used to program or modify the sensor parameters such as the team code and wheel location. It is also a valuable tool for recognising any changes to new sensor positions when swapping wheels and updating the receiver accordingly.

TMPS Handset – user controls

Handset diagram and user controls are illustrated, defined and described below:



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Powering up and battery information

The handset is powered up using the red 'power' button [1].

Handset battery level is indicated in the top right hand corner when the handset is powered up [2]. The device is charged using a standard micro-USB charging cable via the port at the base of the unit [3]. A charging cable is provided with the handset.

Backlight

The backlight can be toggled on and off using a short press of the TX button [4].

- The handset must be out of 'read' and 'programming (TX)' modes to operate the backlight. Press the white button top right [5] if 'exit' is displayed above it to exit either mode.

Reading sensor information

The following parameters can be viewed:

- Sensor serial number
- Sensor battery voltage
- Tyre pressure (0.1 bar intervals)
- Temperature

Sensor information is read by entering 'read' mode.

- 'Read' mode is activated using the white button top right of the handset [5] (when 'Read' is indicated on the display above it.)
- Pressing the same button [5] when 'Exit' is displayed above it exits 'Read' mode.
- The user must be adjacent to sensor to enable the sensor to be read.
- To read data for the next sensor, the user must move adjacent to next sensor and press the white button below 'Next' on the display [6].

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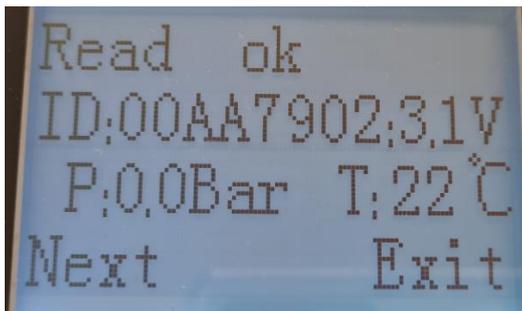
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The example below shows the sensor serial number for the team code AA79 and 02 for the front right sensor location.



NOTE: When sensors are read they transmit the current parameter values to the receiver. These values are also outputted on the CAN line. If these updated values are not transmitted on the CAN line therefore not received this indicates that the receiver is out of the reception range of the sensor. This may indicate the receiver has not been installed in a suitable location.

IMPORTANT NOTE

The TPMS kits are supplied with 4 sensors with unique serial numbers that identify the corner location on the car and also the team code. These sensors have also been allocated to the correct location of the receiver.

The corner positions are numbered 1, 2, 3 & 4 shown below.

Front left sensor.... 01

Front right sensor. 02

Rear left sensor..... 03

Rear right sensor.. 04

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Automatic Assignment of Sensor Location (AASL)

When sensors are relocated to a different position on the car, you can automatically reassign them to their new position using the TPMS handset 'Read' function. For example, if the front wheels are swapped this operation enables you to reallocate the sensor data in the receiver so that the values for the front left sensor are now transmitted on the CAN ID for the front right. Consequently, the sensor data that is viewed on the dashboard and logged is correct and will appear as the front right. Any sensor can be allocated to any of the 4 corner locations. **The 4 sensors must have different serial numbers.**

AASL function is enabled as follows:

- Press and hold the receiver button until it flashes twice then release. This puts the receiver into learn mode where the 4 sensor locations are waiting for sensors to be assigned.
- Using the TPMS handset 'Read' function activate all 4 sensors in the correct order (FL,FR,RL then RR.) The receiver LED will flash a number of times in quick succession as each sensor is allocated correctly. A display of the sensor serial number on the TPMS handset does not guarantee it has also been allocated a position within the receiver.
- Once a sensor serial number has been allocated to the first position (FL) the receiver is now ready to accept the next sensor to be assigned as a (FR) then the (RL) and the (RR) As the receiver learns each sensor serial number it will not allow it to be repeated in the next position.
- Finally press and hold the receiver button until it flashes 4 times to indicate the AASL is completed.

NOTES:

- The AASL operation does not change the sensor serial number only the revised allocation in the receiver.
- The receiver will not function correctly if you exit from the AASL without allocating sensors to all 4 positions. When in normal operating mode any sensor that is read will activate the LED.
- In the event the TPMS handset is not available, the sensor allocation can also be achieved by changing the tyre pressures. (the AASL function must be enabled.) You must avoid changing tyre pressures on wheels that contain sensors and are within the reception range of the receiver.
- During the sensor allocation phase you can 'Read' each sensor more than once if you are uncertain if the receiver has acknowledged the reception.

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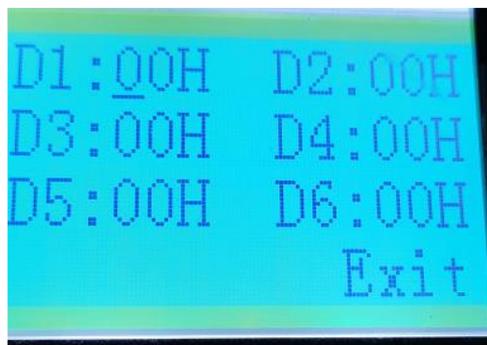
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Modifying sensor serial numbers

Spare sensors can be programmed with any of the serial numbers that have been allocated to a receiver.

To enter the sensor modification menu press and hold the 'TX' button [4] for 3 seconds. The following screen will appear:



- The 'L' and 'R' buttons ([7] & [8] respectively) will move the cursor through hex digits serially from D1 to D6.
- The 'U' and 'D' buttons ([9] & [10] respectively) increase or decrease the hex digits at the selected cursor location.

NOTES

- The sensor serial number must be entered into positions D2 to D5
- The first position D1 must be set to 13H
- Position D6 is not used

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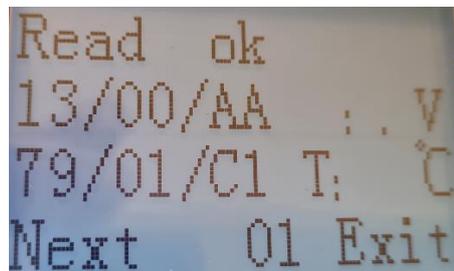
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The example below is for team code AA79 and 01 for the front right sensor location.



Use the 'TX' key [4] to write the new ID into the sensor. The new serial number will be displayed.

- The user must be adjacent to a sensor to enable the sensor to be modified.
- To modify the serial number of the next sensor, move adjacent to next sensor and press the white button below "next" on the display [6].
- The sensor corner location is duplicated at the bottom of the screen.



Further verification of the sensor serial numbers can then be achieved by exiting the modification mode (button [5] when "exit" is displayed above it) and reading sensor information using the "Read" mode as described in "reading sensor information" above (button [5] when "Read" is displayed above it).

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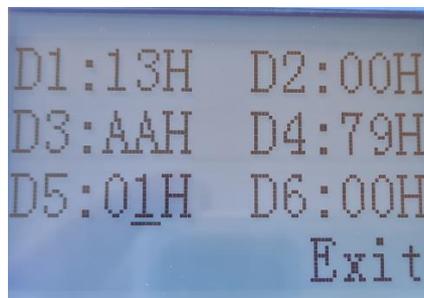
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Swapping the sensor IDs of two unmounted wheels

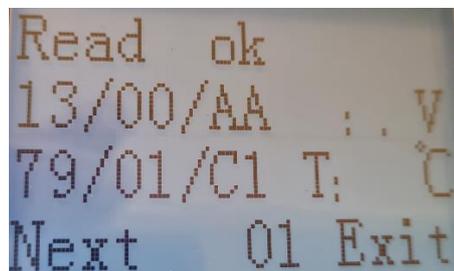
The example below describes the process to reidentify a front left sensor to a front right sensor and vice-versa. This process does not require connection to the car receiver.

You enter the serial number for the for the front left and transmit this to the front right sensor.



```
D1:13H  D2:00H
D3:AAH  D4:79H
D5:01H  D6:00H
Exit
```

The screen will display the following to confirm the reprogramming has been successful.



```
Read ok
13/00/AA  : . V
79/01/C1  T:  °C
Next      01 Exit
```

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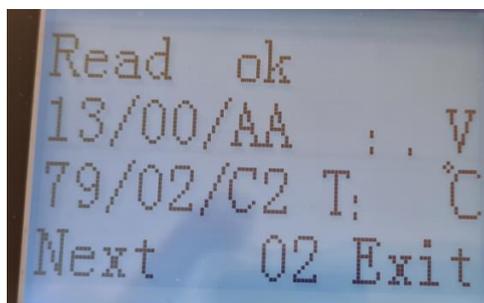
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Then change allocation number in 'D5' on the TPMS handtool from the front right sensor (02) to (01) and transmit this to the new front left sensor.

Press the 'EXIT' key [5] then press the 'L' key [5] 3 times to move the cursor under the number '1' then press the 'U' button [9] to change the number from '1' to '2' and finally transmit the new sensor serial number using the 'TX' button [4].



The screen will display the following to confirm the reprogramming has been successful.



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