

# TPM-RKE Analyzer 9936

Version 06.03 Daimler Chrysler



## User guide

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# REGULATORY STATEMENTS

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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.

“Changes or modifications not expressly approved by the manufacture 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 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.

**WARNING:** Changes or modifications not expressly approved by the manufacturer may violate the user's authority to operate the equipment.

Industries Canada:

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The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website [www.hc-sc.gc.ca/rpb](http://www.hc-sc.gc.ca/rpb)

# User's Manual

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## TABLE OF CONTENTS

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<b>User guide</b>	<b>2</b>
<b>TPM-RKE ANALYZER 9936</b>	<b>2</b>
.1 DESCRIPTION OF THE TPM-RKE ANALYZER 9936	2
.2 FEATURES	3
..1 Radio frequencies	3
..2 Type of valve	3
.3 CONNECTORS	4
..1 Supply connector	4
..2 USB connector	4
..3 RS232 connector	4
.4 DESCRIPTION OF THE INSTRUMENT	5
..1 Power on/off key	5
.5 FRONT PANEL DESCRIPTION	6
..1 Display	6
..2 Lights	6
..3 Keys	6
.6 BATTERY SUPPLY	7
..1 Battery status	7
.7 MEASUREMENT	8
..1 Key measurement (RKE test)	8
..2 Valve measurement (TPM functions)	9
.8 SETTINGS	12
..1 Parameters menu	12
.9 STARSCAN	16
..1 Data transfer	16
..2 TPM/RKE Analyzer program up-dating	16
.10 MENU STRUCTURE	17
..1 Main menu	17
.11 CORRESPONDANCES TABLES	19
..1 Vehicle / Body / valve	19
..2 Countries / frequencies	19
	19
<b>Index</b>	<b>20</b>

# User guide

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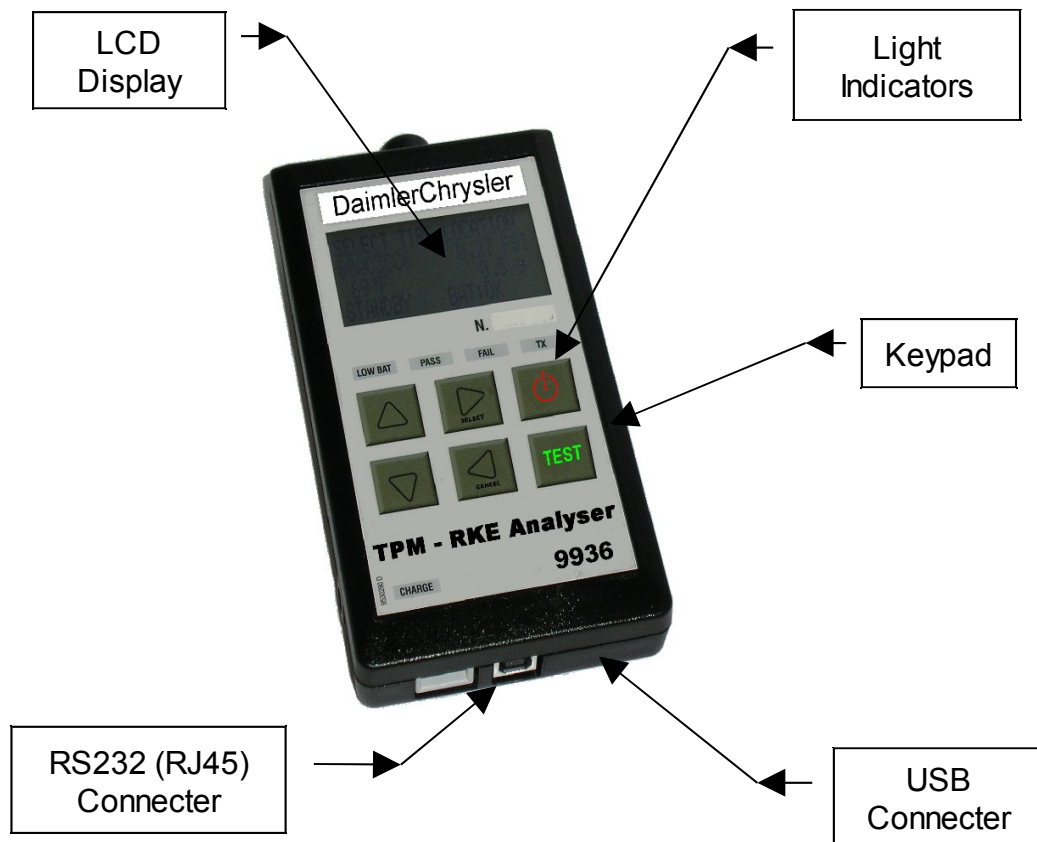
## TPM-RKE ANALYZER 9936

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### .1 DESCRIPTION OF THE TPM-RKE ANALYZER 9936

The principal of this instrument is to awaken and then retrieve data from smart valves mounted on vehicle wheels in order to verify their identifiers.

The instrument interacts with the smart valves without contact through wireless communication.



## **.2 FEATURES**

### **..1 RADIO FREQUENCIES**

Awakening transmission frequency: 125 kHz (LF).

Reception frequencies: 433 MHz or 315 MHz (RF).

### **..2 TYPE OF VALVE**

This instrument is especially designed for the measurement of the Siemens and Schrader valves installed into Daimler-Chrysler vehicles.



Siemens



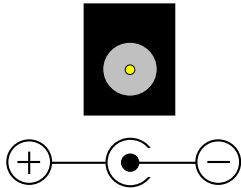
Siemens



Schrader

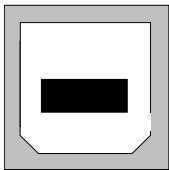
### .3 CONNECTORS

#### ..1 SUPPLY CONNECTOR



To supply the instrument and recharging the internal battery.  
The voltage of the charger is a 24 V DC.

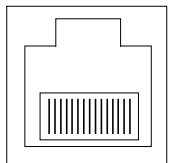
#### ..2 USB CONNECTOR



The USB connector allows the instrument software programs to be updated.

StarScan tool can retrieve information through the USB connector.

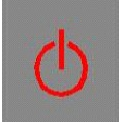
#### ..3 RS232 CONNECTOR






Not used.

## .4 DESCRIPTION OF THE INSTRUMENT

### ..1 POWER ON/OFF KEY

KEY	FUNCTION
	<b>Power on:</b> Press this key to power on the instrument. <b>Power off:</b> Press and hold the key (more than 3 seconds) to power off the instrument.

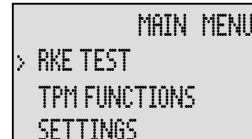
#### ..1. Power on

At power on, it displays the logo.	
Then it displays the software revision number.	
Then the tool displays the main menu and the operator can select desired function.	

## .5 FRONT PANEL DESCRIPTION

### ..1 DISPLAY

The LCD screen displays the parameters menus and the measurements results.



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MAIN MENU
> RKE TEST
TPM FUNCTIONS
SETTINGS
```

### ..2 LIGHTS

**LOW BAT** Battery level light: When this light is on, the battery level is too low, charge it.

**PASS** Pass test light: When this light is on, the instrument has correctly received the frame from the valve (or the RKE).

**FAIL** Fail test light: When this light is on, the instrument has not received the frame from the valve (or the RKE).

**TX** Transmission light: When this light is flashing, the instrument is currently transmitting a 125 KHz frequency to activate a valve.

**CHARGE** Battery charging light: This light turns on when the instrument is being charged.

### ..3 KEYS



Power on and off the instrument.



Navigation menu, "**up**".



Navigation menu, "**down**".



Select Key, **press** to enter in the chosen function or validate a parameter.



Cancel key, **return** to the previous menu or function without parameter validation.



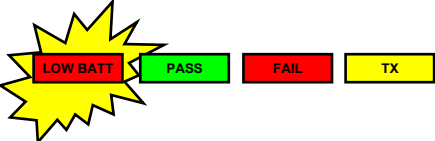







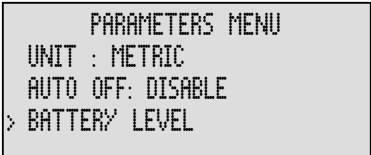


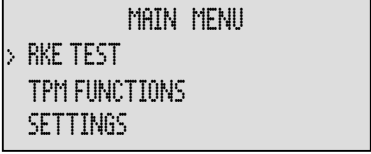
Test Key, to initiate a test cycle.



## .6 BATTERY SUPPLY








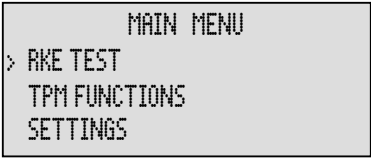
The instrument uses a Li-ion battery, the autonomy depends of the number of cycles carried out. It battery must be recharged with a 24 V DC external power supply (Included).

### ..1 BATTERY STATUS

<p>When the battery is too low, the "<b>LOW BATT</b>" light is flashing for 2 seconds and the instrument will powered off.</p>	
<p>To see the battery status, select the "<b>SETTINGS</b>" menu using the  and  keys.</p> <p>Validate your entry with the  key.</p>	
<p>By using the  and  keys, select the "<b>BATTERY LEVEL</b>" menu and validate with the  key.</p>	
<p>The instrument displays the receivers and the battery status.</p>	
<p>Press the  button to return to the main menu.</p>	




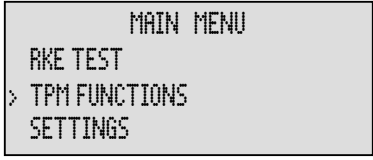



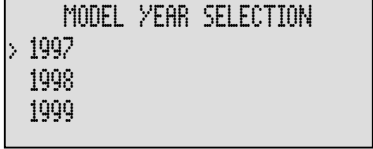
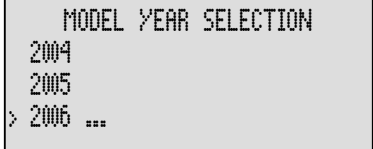








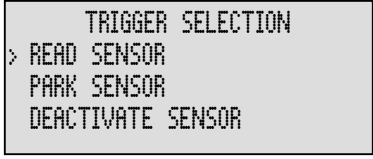

## .7 MEASUREMENT

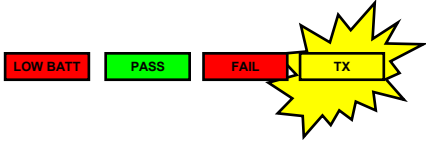
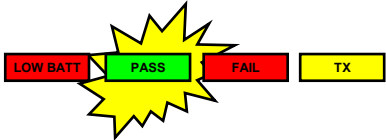


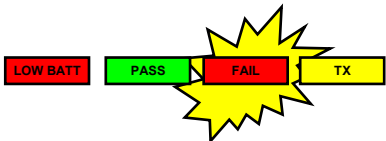
### ..1 KEY MEASUREMENT (RKE TEST)


<p>This menu allows putting the instrument in key test mode (RKE).</p>	 <pre> MAIN MENU &gt; RKE TEST TPM FUNCTIONS SETTINGS           </pre>
<p>Select this mode with the  key, the instrument invites you to launch the test by pressing the <b>TEST</b> key.</p>	 <pre> EUROPE RKE TEST  &lt; TEST &gt; TO START           </pre>
<p>Wait a second for the initialization of the instrument.</p>	 <pre> EUROPE 1997/E RF LEVEL PLEASE WAIT...           </pre>
<p>The instrument displays a horizontal bar and invites you to test the key fob. Hold the key fob near the antenna of the instrument (between 7 and 15 centimetres) and press any button of the key fob.</p>	 <pre> EUROPE RKE TEST  [Progress Bar] PRESS KEY FOB BUTTON           </pre>
<p>The intensity of the RF signal force is indicated on the scale of the horizontal bar. The greater the key fob RF signal power, the greater the horizontal bar is filled.</p>	 <pre> EUROPE RKE TEST  [Progress Bar] PRESS KEY FOB BUTTON           </pre>
<p>Press the  button to return to the main menu.</p>	 <pre> MAIN MENU &gt; RKE TEST TPM FUNCTIONS SETTINGS           </pre>

## ..2 VALVE MEASUREMENT (TPM FUNCTIONS)

Use the following directions to test the functionality of a TPM sensor:

<p>Select "<b>TPM FUNCTION</b>" by using the  and  keys and validate using the  key.</p>	
<p>By using the  and  keys, select the model year of the valve to be tested and validate using the  key (existing years from 1997 to 2006).</p>	 
<p>Next, by using the  and  keys, select the body code of the valve to be tested and validate with the  key (this code is in correspondence with a vehicle).</p>	 
<p>Next, by using the  and  keys, select the trigger selection and validate using the  key (you may select the mode you want to trigger on the valve, read, park, deactivation and sniffing).</p>	
<p>Then the instrument is displaying the valve characteristics chosen and waiting for a start cycle. To start cycle, press the <b>TEST</b> key.</p>	

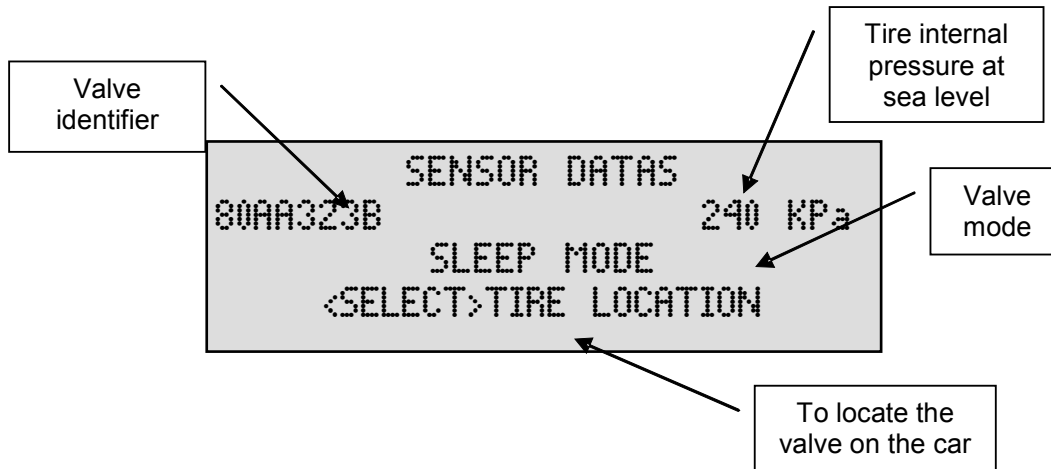
<p>When the "<b>TX</b>" light is flashing, it indicates that the instrument is emitting a frame wirelessly to make the valve respond.</p>	 <div data-bbox="1073 401 1442 556"> <p>EUROPE 2006 .../WK PARK SENSOR TRIGGER PROCESSING</p> </div>
<p><b>First case: a valve is detected:</b></p> <p>When the instrument has detected a frame from the valve, the "<b>PASS</b>" light is on and it displays the valve characteristics.</p> <p><b>NB:</b> <i>the identifier displayed on the screen must be the same as the one written on the valve.</i></p>	 <div data-bbox="1073 747 1442 903"> <p>SENSOR DATAS 80AA323B 240 KPa SLEEP MODE &lt;SELECT&gt;TIRE LOCATION</p> </div>
<p>To locate the valve on the car, press the  key.</p>	<div data-bbox="1073 938 1442 1094"> <p>SENSOR DATAS 80AA323B 240 KPa SLEEP MODE &lt;SELECT&gt;TIRE LOCATION</p> </div>
<p>Then select the valve wheel location and press the  key.</p>	<div data-bbox="1073 1127 1442 1283"> <p>TIRE LOCATION &gt; LEFT FRONT : EMPTY LEFT REAR1 : EMPTY LEFT REAR2 : EMPTY</p> </div>
<p>The instrument confirms the location of the valve.</p>	<div data-bbox="1073 1316 1442 1472"> <p>LEFT FRONT : STORED</p> </div>
<p>And indicates the location valve on the car.</p>	<div data-bbox="1073 1505 1442 1661"> <p>TIRE LOCATION &gt; LEFT FRONT : OK LEFT REAR1 : EMPTY LEFT REAR2 : EMPTY</p> </div>
<p><b>Second case: no valve is detected:</b></p> <p>After a few moments, if no valve frame is detected, the "<b>FAIL</b>" light is on, so start a new test.</p>	

Press the  button to return to the main menu.

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MAIN MENU
> RKE TEST
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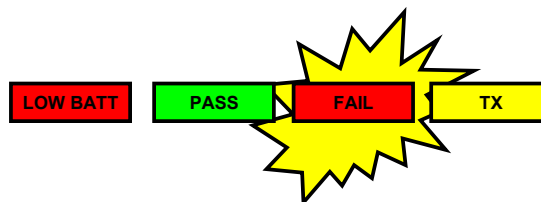
### ..1. Results explanation

The picture below is an example of a valve data communication result:



### ..2. No valve response

If the instrument doesn't receive any information from the valve or if the valve is not compatible with the parameters, after 36 seconds a time out on the instrument stops its cycle and the **"FAIL"** light is switched on.









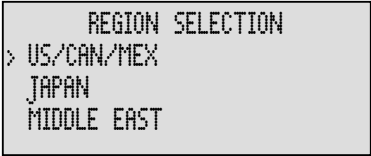


## .8 SETTINGS

### ..1 PARAMETERS MENU

This menu will allow the instrument to be configured according to the operator preferences.








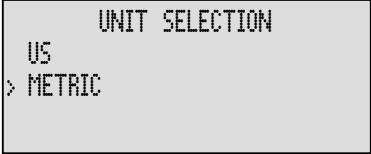


#### ..1. Country

The parameter "**COUNTRY**" allows the user to select the geographic valves region.

<p>Select "<b>SETTINGS</b>" by using the  and  keys and validate with the  key.</p>	
<p>Select the "<b>COUNTRY</b>" parameter and validate with the  key.</p>	
<p>Then select the valve region between <b>US/CAN/MEX</b>, <b>JAPAN</b>, <b>MIDDLE EAST</b>, <b>EUROPE</b> and <b>OTHER</b>. <i><b>NB:</b> the TPM function is not available for the Japan country.</i></p>	
<p>Press the  button to return to the main menu.</p>	




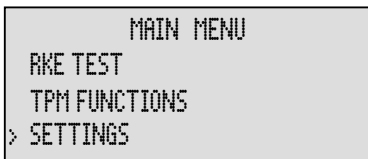







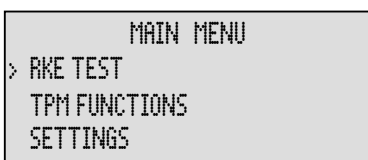
## ..2. Unit

The parameter "**UNIT**" allows the user to choose between the "**METRIC**" unit and the "**US**" unit.

<p>Select "<b>SETTINGS</b>" by using the  and  keys and validate with the  key.</p>	
<p>Select the "<b>UNIT</b>" parameter and validate with the  key.</p>	
<p>Then select the unit between "<b>US</b>" and "<b>METRIC</b>" and validate with the  key.</p>	
<p>Press the  button to return to the main menu.</p>	

### ..3. Auto off

The "**AUTO OFF**" setting allows the user to turn off the instrument automatically after a certain time without use. This is to save the battery before a recharge is required.






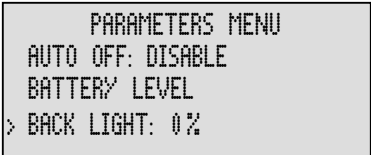






<p>Select "<b>SETTINGS</b>" by using the  and  keys and validate with the  key.</p>	
<p>Select the "<b>AUTO OFF</b>" parameter and validate with the  key.</p>	
<p>The cursor position moves to the right of the screen and by using the  and  keys, choose the auto off time between "<b>DISABLE</b>" and 1 to 60 minutes, then validate with the  key.</p>	
<p>Press the  button to return to the main menu.</p>	

In the above example, after 5 minutes with no use, the instrument will switch off automatically.



#### ..4. Back light

The "**BACK LIGHT**" menu allows the user to adjust the light intensity of the display. The back light increases the battery consumption.

<p>Select "<b>SETTINGS</b>" by using the  and  keys and validate with the  key.</p>	
<p>Select the "<b>BACK LIGHT</b>" parameter and validate with the  key.</p>	
<p>The cursor position moves to the right of the screen and by using the  and  keys, adjust the back light intensity, choose between 1 to 100 percent by 1 percent increments, then validate with the  key.</p>	
<p>Press the  button to return to the main menu.</p>	

## .9 STARSCAN







### ..1 DATA TRANSFER

Data transfer from the TPM/RKE Analyzer 9936 instrument to the StarScan tool.

Connect the USB cable from the TPM/RKE Analyzer 9936 instrument to the StarScan tool, then the StarScan tool recognizes the information to download automatically.

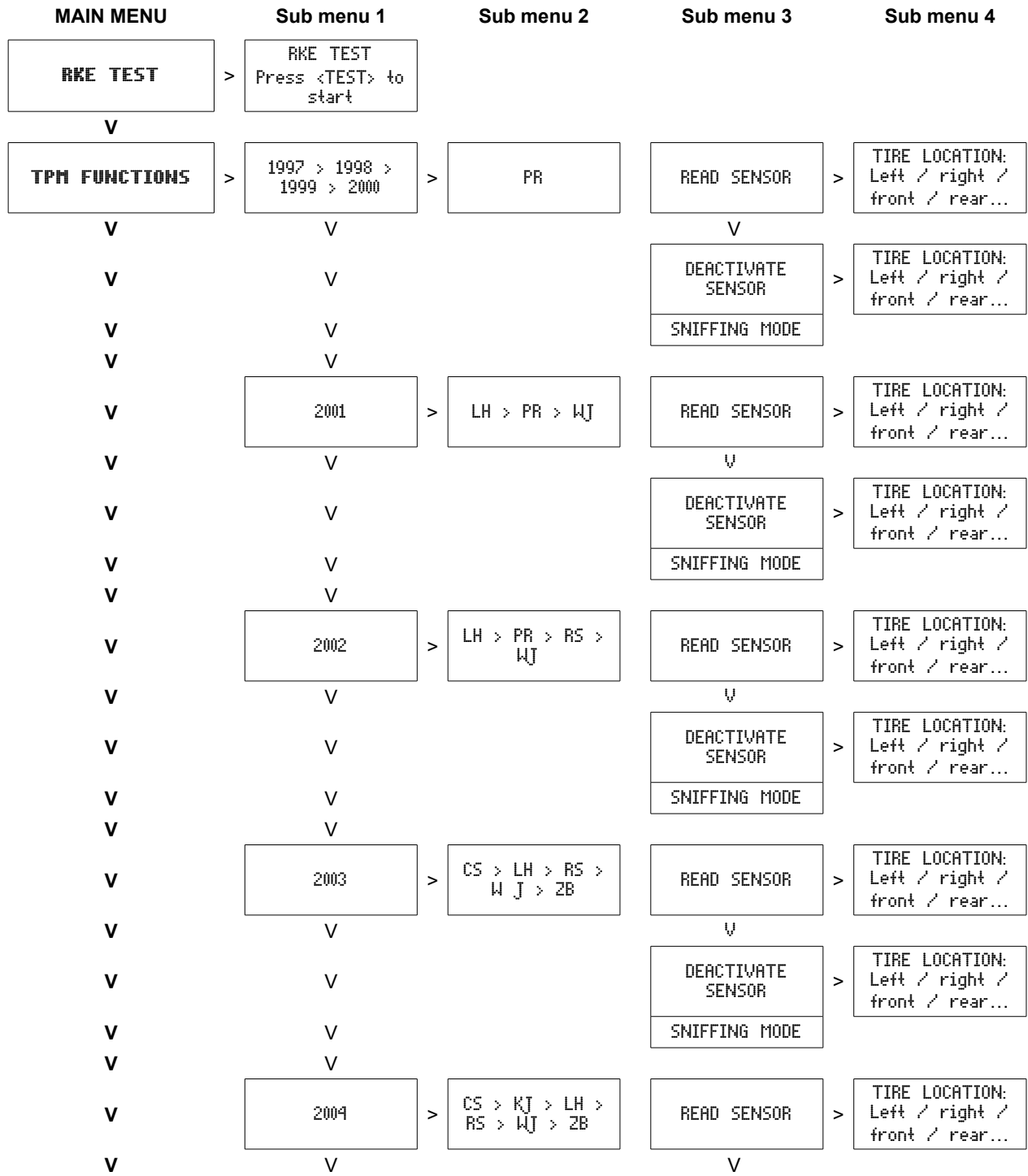
### ..2 TPM/RKE ANALYZER PROGRAM UP-DATING

Connect the USB cable between the computer and the instrument, the USB drivers must be installed first.

<p>Press and hold the  and the  at the same time.</p> <p><b>NB:</b> in case of error of manipulation, to exit from this menu, press the  key.</p>	
<p>When the USB cable is connected, "CONFIGURED" appears on the screen.</p>	
<p>On the computer open the attached file and a browser will appear. Click on "<b>LOAD</b>".</p> <p>The loading progress is displayed and when completed, the instrument will boot to the main menu. Now it's possible to disconnect the USB cable from the PC and the instrument.</p>	

## .10 MENU STRUCTURE

### ..1 MAIN MENU





## .11 CORRESPONDANCES TABLES

### ..1 VEHICLE / BODY / VALVE

Vehicle line	Body code	Model year	Valve manufacturer
Prowler	PR	1997-2002	Schrader
Viper	ZB	2003 - Present	Schrader
Intrepid/300M	LH	2001 - 2004	Schrader
Grand Cherokee	WJ	2001 - 2004	Schrader
Pacifica	CS	2003.5 - 2004	Schrader
Town & Country/Caravan	RS	2002 - 2003	Schrader
Town & Country/Caravan	RS	2004 - 2005	Siemens
Liberty	KJ	2004	Siemens
Liberty	KJ	2005 - Present	Siemens
Commander	XK	2006 - Present	Siemens
Pacifica	CS	2005 - Present	Siemens
Town & Country/Caravan	RS	2006 - Present	Siemens
Grand Cherokee	WK	2005 - Present	Siemens
300C/Magnum/Charger	LX	2006 - Present	Siemens
Durango	HB	2006 - Present	Siemens

### ..2 COUNTRIES / FREQUENCIES

Country	TPM frequencies (MHz)	RKE frequencies (MHz)
US / Canada / Mexico	315	315
Japan	-	315
Middle east	315	433
Europe	433	433
Other	315	315

## Index

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Auto off.....	14
Back light.....	15
Battery status.....	7
Connectors.....	4
Country.....	12
Description.....	2
Display.....	6
Key fob.....	8
Keys.....	6
Lights indicator.....	6
Measurement.....	9
Measurements.....	8
Menu structure.....	17
No response.....	11
Parameters menu.....	12
Parameters setting.....	12
Power on.....	5
Radio frequencies.....	3
RKE.....	8
RS232 connectors.....	4
StarScan tool.....	16
Start key.....	5
Supply.....	7
Supply connector.....	4
Tables.....	19
TPM.....	9
Unit.....	13
Up-dating.....	16
USB connectors.....	4
Valves types.....	3
Results explanation.....	11