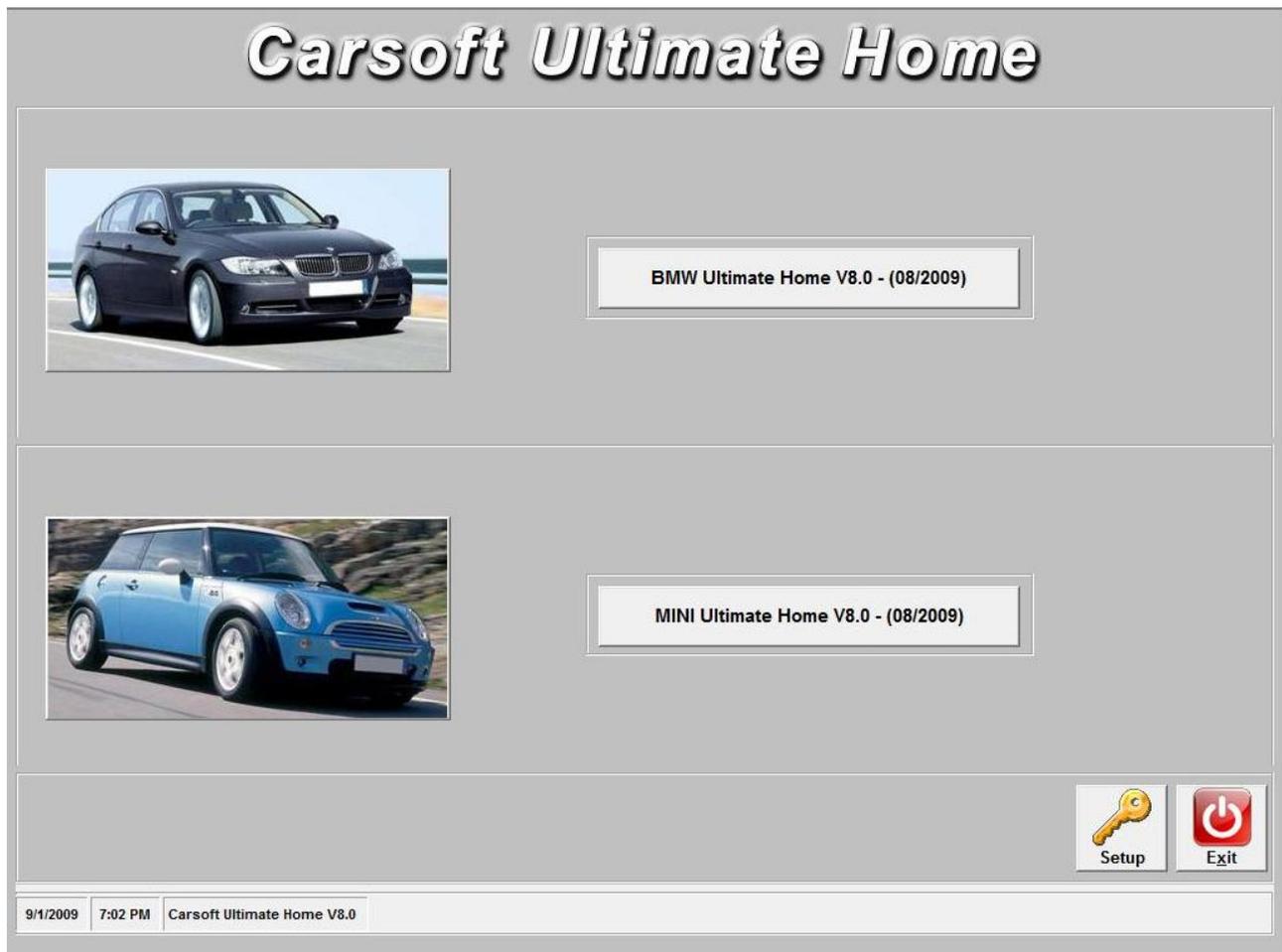


Carsoft[®]™

BMW - MINI Ultimate Home V 8.0 User Manual



FOR BMW AND MINI VEHICLES

*ON-BOARD-DIAGNOSTICS
FOR MS-WIN 98-, ME-, 2000-, XP & VISTA™ OPERATING SYSTEM*

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1. Welcome

Welcome to **Carsoft**^{®™} the first "Do It Yourself" Diagnostic Software for BMW- and MINI Vehicles for Microsoft Windows operating systems.

You have chosen to invest in an item of modern technology, which you will soon find to be an important tool in allowing you to discover what's wrong with your car whilst saving money by avoiding costs associated with obtaining third party assistance....

On our website and via email, you will be able to obtain advice on software or operating questions. However, we are unable to give advice on repairs to the car itself.

We welcome you as a partner on our team!

Dirk Scevenels

Carsoft^{®™} team

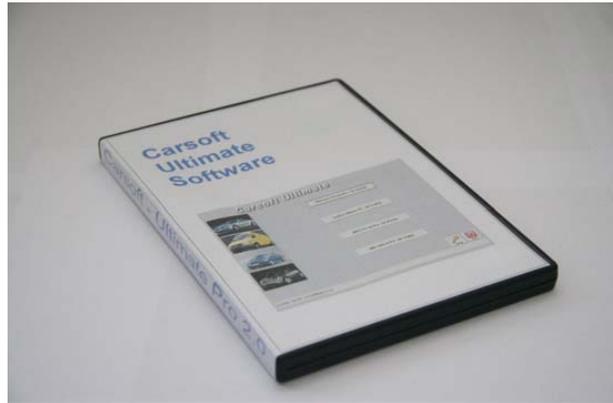
For **INFO** please contact:

Carsoft International

Grand Route 111C
B 4367, CRISNEE
Belgium

bmw80@carsoftsales.com

2. Hardware Specifications



Carsoft^{®™} is developed for use on IBM - compatible computers under Microsoft Windows operating systems. The software is NOT compatible with other operating systems.

Minimum System Requirements:

- ▶ **Pentium[®] I, 60 MHz**
- ▶ **128 MB RAM**
- ▶ **100 MB Hard Disk Space**
- ▶ **1024 x 768 and higher Screen Resolutions**
- ▶ **CD-ROM or DVD-ROM Drive**
- ▶ **Serial Port to connect vehicle interface cable**
- ▶ **USB 1.1 or 2.0 Port to connect security dongle**
- ▶ **Microsoft Windows 98, ME-, 2000-, XP-, or Vista**
- ▶ **A printer is necessary to use the printing functions**

The specifications can be found in the hardware manuals of the manufacturer of your computer.



3. Installation



IMPORTANT:

DO NOT INSTALL ANY HARDWARE COMPONENTS (USB SECURITY DONGLE) UNTIL THE **CARSOFT[®]™ SOFTWARE** INSTALLATION HAS BEEN COMPLETED!

Info: If you are using WINDOWS **VISTA**, you must be logged in as **administrator**.

See next page for more info.

How to create a Vista administrator account

With full administrative access rights (full control)...

* Windows Vista Business, Enterprise or Ultimate:

1. Click **Start**, type **secpol.msc** in the search box, then press **Enter**
2. From the list on the left, choose **Local Policies**, then **Security Options**
3. Set **Accounts: Administrator account status** to **Enabled**
4. Set **User Account Control: Admin Approval Mode for the Built-in Administrator account** to **Disabled**

* Windows Vista Home Basic or Home Premium:

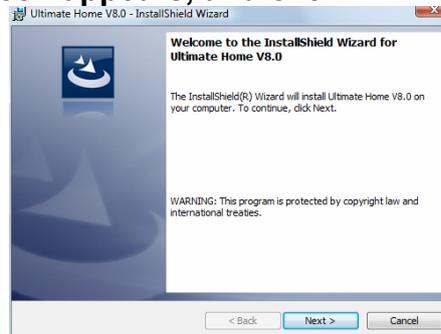
1. Click **Start**, type **cmd** in the search box, right click on the program **cmd.exe** and select **Run as Administrator**
2. In the command prompt window, type **net users Administrator /active: yes** then press **Enter**, you should receive a confirmation saying; The command completed successfully
3. Click **Start**, type **regedit** in the search box, then press **Enter**
4. Navigate to the section:
[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System]
 - o Double click **FilterAdministratorToken** and set it to **0**
5. Next, **logoff** and you will see that a new **Administrator** account will be available. Login to this new Administrator account

You're now logged in to Windows Vista with full administrative rights. You will not receive any security prompts like before and you should have complete administrative rights to your machine.

STEP 1: SOFTWARE INSTALLATION

- Insert the [Carsoft Ultimate Home V8.0 CD](#) into the CD ROM drive
(Do NOT CONNECT the dongle at this moment)

- Wait until the [Welcome](#) screen appears, and click **NEXT**

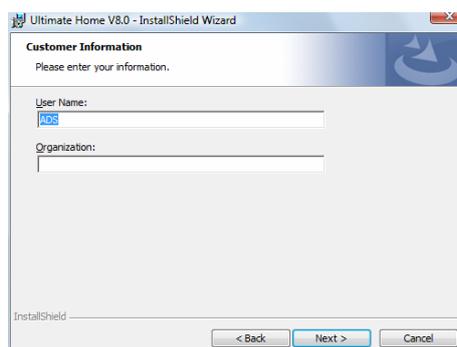


(If the Auto-run feature is not switched on, double click the Setup Icon on the CD)

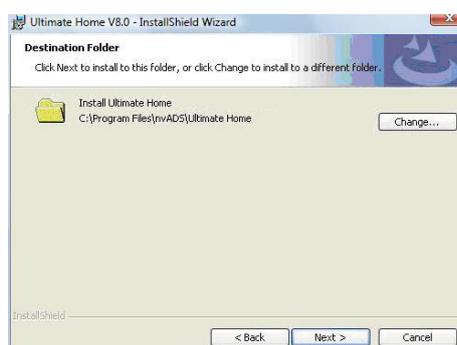
- Wait until the [License Agreement](#) screen appears, then mark “I accept” the terms in the license agreement”, and click **NEXT**



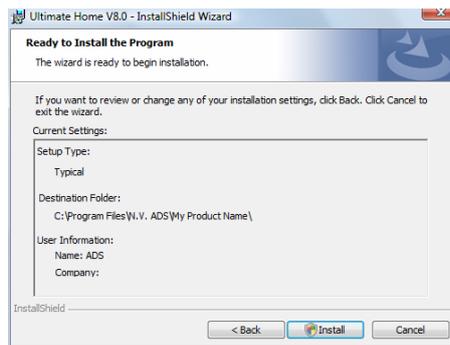
- Wait until the [Customer Information](#) screen appears and verify “User Name” and “Organization”, and click **NEXT**



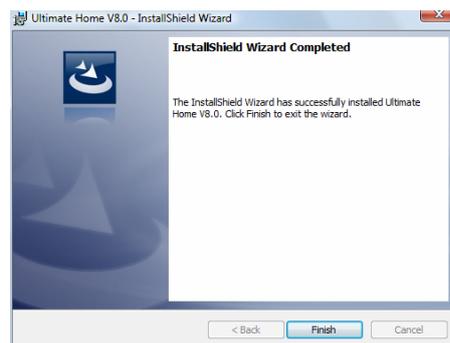
- Wait until the [Destination Folder](#) screen appears, and click **NEXT**



- Wait until the, [Ready to Install the Program](#), screen appears, and click **INSTALL**



- Wait until the [Install Shield Wizard Completed](#) screen appears, then click **FINISH**



- Start the Carsoft application; by double clicking the Launch Carsoft.exe icon on your desktop.



- When you start the program for the first time you will be asked to install the Dongle drivers.

- Now connect the dongle to the USB port of your computer.

After this, the Dongle will be recognized by the windows operating system, and the drivers will be installed automatically. (This can take a few minutes, when it is completed, the windows operating system will inform you that the new dongle can be used)

CARSOFT[®]™ - REGISTRATION

!!! REGISTER NOW !!!

<u>Name</u> :	<input type="text"/>
<u>Address</u> :	<input type="text"/>
	<input type="text"/>
<u>Phone Nr.:</u>	<input type="text"/>
<u>Fax Nr.</u> :	<input type="text"/>
<u>Email</u> :	<input type="text"/>

I've purchased this CARSOFT system from:

Distributor :

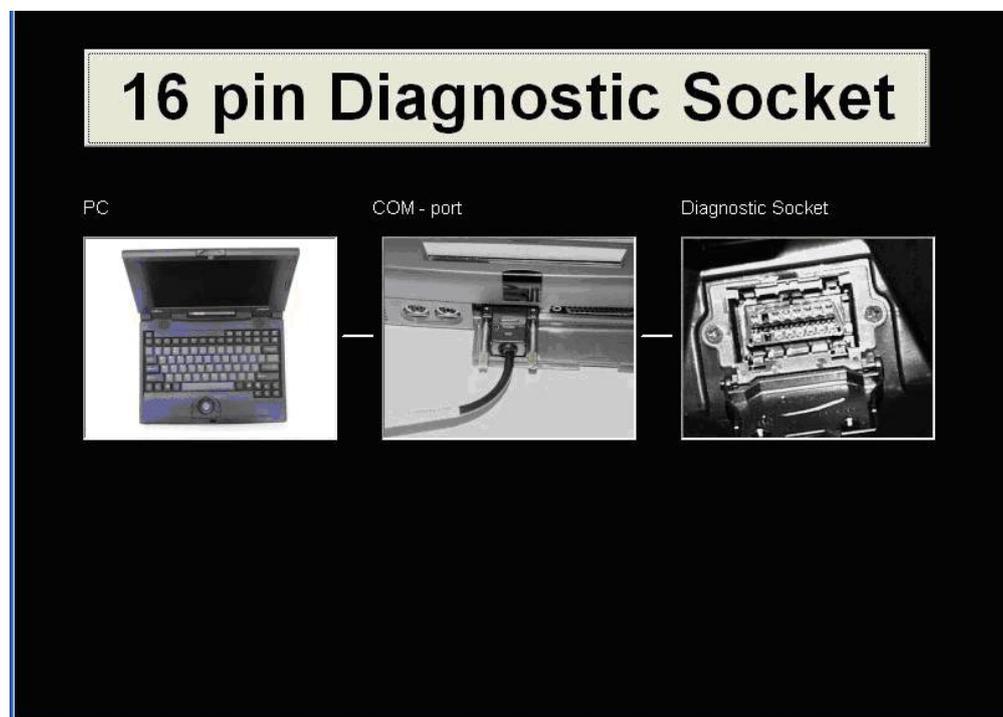
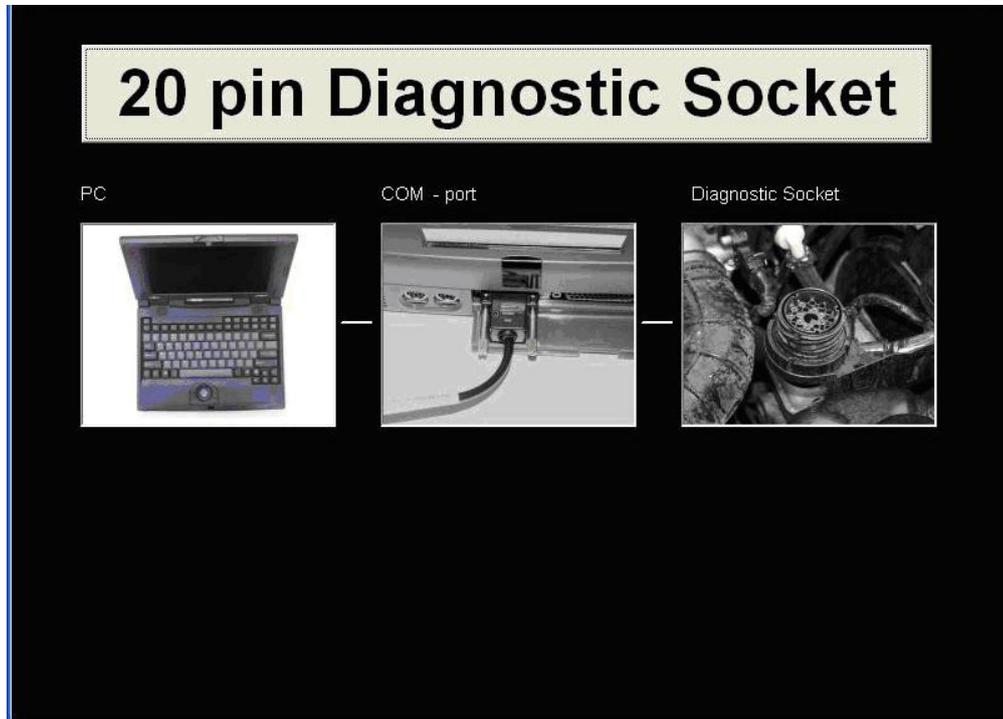
Please send this registration form to

CARSOFT INTERNATIONAL

Email: bmw80@carsoftsales.com

4. Hardware Connection

A) The serial connector from the diagnostic cable will be connected to the computer side. The 20- or 16 pin diagnostic adapter will be connected to the vehicle diagnostic socket.



See appendix B and C in case your computer is not equipped with a serial port.

B) Security Dongle Connection



Security Dongle



Free USB Port

When you connect the dongle for the first time to a free USB Port the following message will appear:



Wait a few seconds, until the next message appears:



>>> Now the dongle is ready to be used <<<<

Remark: This procedure has to be repeated on all the USB ports where you want to use the dongle on.

5. Software Setup

COM Port Setup

Click the ['Ultimate Home V8.0'](#) icon to start the software



Click the ['BMW Ultimate Home V8.0'](#) or ['MINI Ultimate Home V8.0'](#) button.

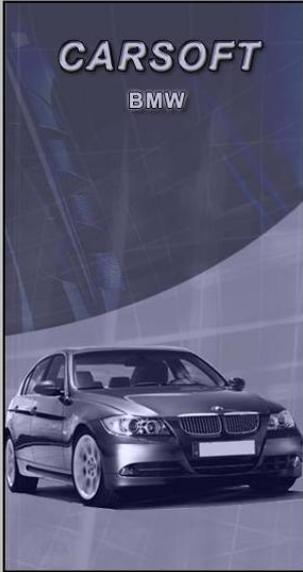


And the appropriate program will start.



Select the appropriate COM port number (See page 15 and 16 for more info)

Carsoft Ultimate Home



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COM Port Settings: COM1 COM2 COM3 COM4

Version **BMW Ultimate Home V8.0 - (08/2009)**

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Fax : +32/19.54.54.30
Email : carsoft@telenet.be
(C) Copyrights N.V. ADS - Belgium

Web-Site : www.carsoftsales.com

 Back Main

 Manual Exit

9/1/20097:03 PMCARSOFT - SETUP

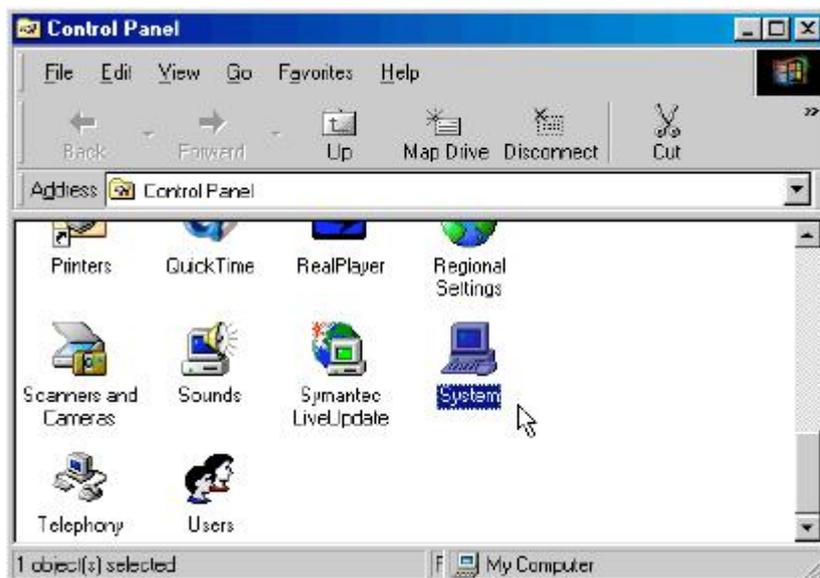
INFO : Serial Port Verification

Checking Serial COM Port Configuration.

This is a guide detailing how to check the settings of the Serial COM Port.

(Although the images are taken from a Windows '98, the procedure is nearly identical under Windows 2000, Windows ME, Windows XP and Windows VISTA as well.)

From the Windows "Start" button, select Settings- Control Panel to bring up the Windows Control Panel.



From the Windows Control Panel select and click on the "System" icon. The following System Properties screen should be displayed on the PC ...



Select the “Device Manager” tab, and use the “View devices by type” option. Scroll down the page until Ports (COM & LPT) is shown then click on the “+” symbol to show the entries in this category.

Look for an entry “Serial Port” with a COM Port number following it, click on it to select it, then click on the “Properties” button at the page to see more details of the device. In the illustration below the Serial COM Port is set to COM3 – this may be different depending on which devices have been installed before.

The General page of the properties screen shows a few details about the device and confirms that the device is working properly (as far as Windows is concerned).



Click on the “Port Settings” tab ...



6. Start

Click the ['Ultimate Home V8.0'](#) Icon to start the software.



Click the ['BMW Ultimate Home V8.0'](#) or ['MINI Ultimate Home V8.0'](#) button



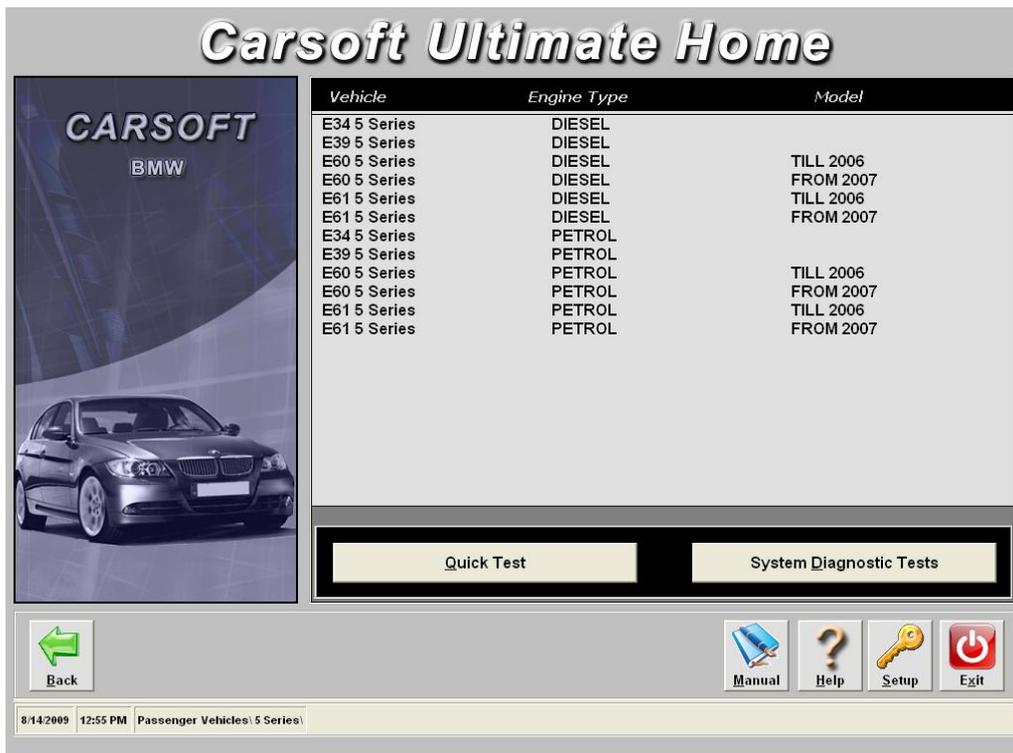
And the appropriate program will start.



After this you select the car type. (For Example [5 Series](#))



After the car type, you select the specific model (For Example [E60 5 series Diesel Till 2006](#))



Now you can make a selection between:

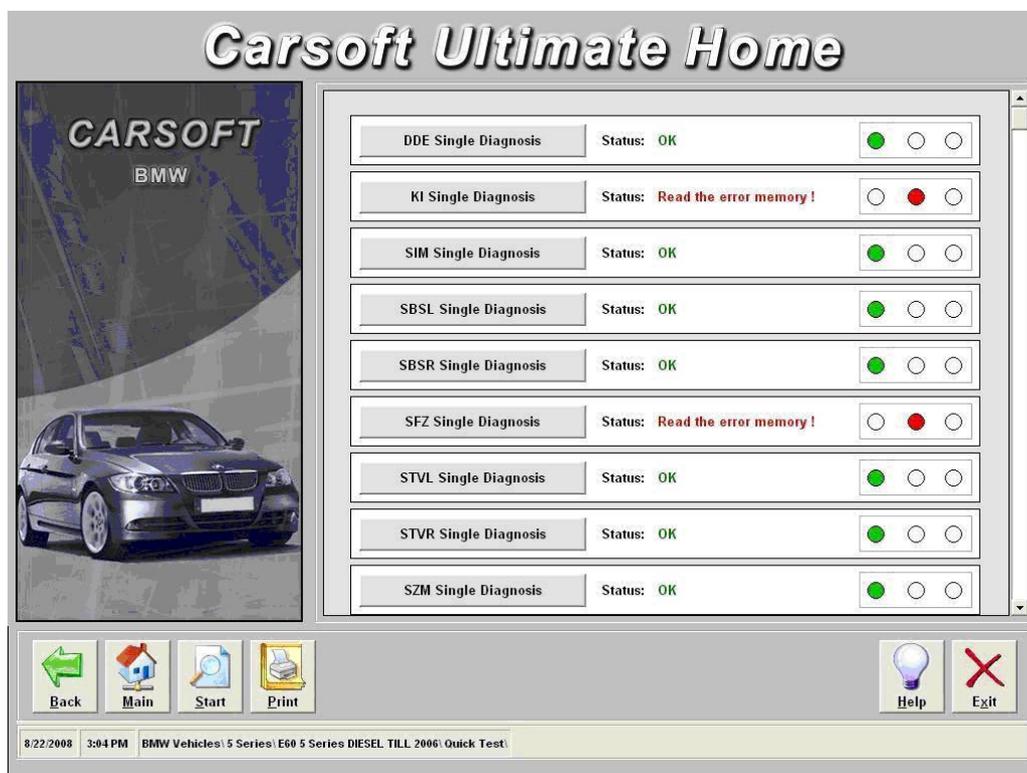
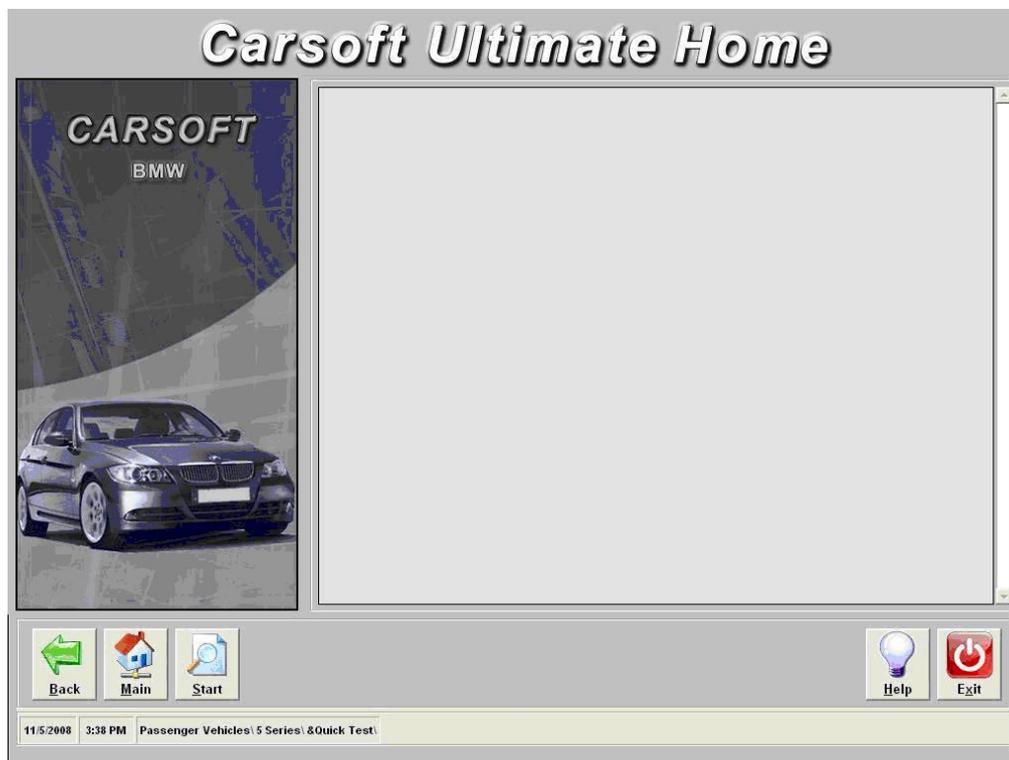
A: Total Diagnosis: Click ['Quick Test'](#)

B: Single Diagnosis: Click ['System Diagnostic Tests'](#)

A: Quick Test:

The 'Quick Test' gives you an overview of the control units which are build in into the car. It also gives you an overview of the status of each control unit.

To start the Quick Test: Click the 'Start' button.



Possibility 1: Status: OK



No actual or stored errors stored in the control unit.

Possibility 2: Status: Read the error memory!



Errors stored in the error memory.
The error memory can be read by performing a single diagnosis from the control unit.
To go to the single diagnosis, click the button at to the left side.

Possibility 3: Status: Module does not respond

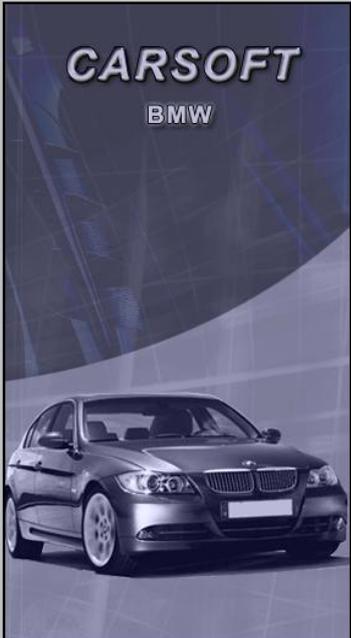


Verify if the control unit is build in into the car. If so, verify the cable connection to the computer and car. Also check if the battery voltage of the car is sufficient. (>12V)

B: System Diagnostic Tests:

The 'System Diagnostic Tests' are giving you detailed information about the control units and the status of the control unit.

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Vehicle	Engine Type	Model
E34 5 Series	DIESEL	
E39 5 Series	DIESEL	
E60 5 Series	DIESEL	TILL 2006
E60 5 Series	DIESEL	FROM 2007
E61 5 Series	DIESEL	TILL 2006
E61 5 Series	DIESEL	FROM 2007
E34 5 Series	PETROL	
E39 5 Series	PETROL	
E60 5 Series	PETROL	TILL 2006
E60 5 Series	PETROL	FROM 2007
E61 5 Series	PETROL	TILL 2006
E61 5 Series	PETROL	FROM 2007

Quick Test System Diagnostic Tests

← BackManual?SetupExit

8/14/200912:55 PMPassenger Vehicles\ 5 Series

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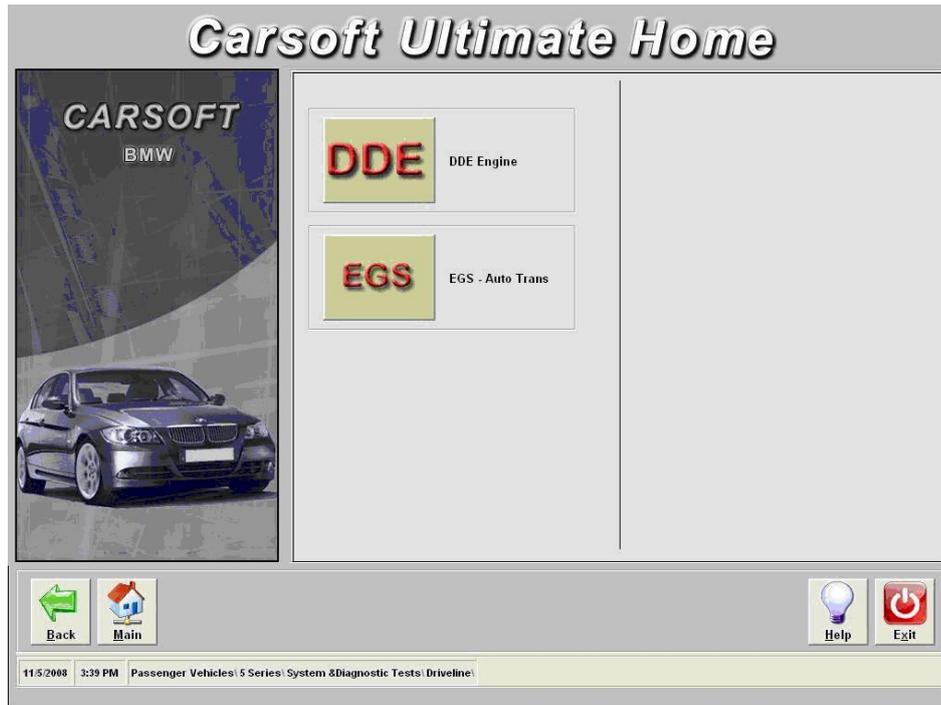


The control units are divided in the following menus:

1. ► Driveline
2. ► Chassis Systems
3. ► Body
4. ► Information and Communication
5. ► Air-conditioning

In these menus, depending to the selected car, car-type and control unit, multiple functions are possible:

Example ['Drive Line'](#)



Example ['DDE Control Unit'](#)



1. ► Read/Erase Fault Codes
2. ► Live Data
3. ► Component Info
4. ► Component Tests
5. ► Component Activations
6. ► Adaptation Functions
7. ► Etc. ...

System Diagnostic Tests Results:

Carsoft Ultimate Home

Status Report :

Error

ECU Info :

Part Number
6767237
Supplier
Bosch
Hardware No
18
Diagnostic Index
1568
Coding Index
2
Production Date
31.7.03
Catalog
0.11.137
Function Software
5.4.66

Date : 11/10/2008 11:03:44

ECU Information:

Part Number : 6767237
 Supplier : Bosch
 Hardware No : 18
 Diagnostic Index : 1568
 Coding Index : 2
 Production Date : 31.7.03
 Catalog : 0.11.137
 Function Software : 5.4.66
 Operating Software : 0.0.0
 Variant Index : 17739

Status: ERROR -> Read the error memory...!

Fault Code : F5F56
 5F56 Car Access System: internal

Fault Code : F5F14
 5F14 Brake block wear front axelle: not plausible

Fault Code : F5EBA
 5EBA Steering angle sensor not plausible

Buttons: Back, Main, Print, Save, Scan, Erase Codes, CIS, No Com., Help, Exit

11/10/2008 11:04 Passenger Vehicles\5 Series\&Quick Test\ ABS\ASCI Error Codes\

Possibility 1 ▶ Status: OK

Status Report :

OK

No actual or stored errors stored in the specific control unit.

Possibility 2 ▶ Status: Error

Status Report :

Error

Errors stored in the error memory.

Possibility 3 ▶ Status: No Communication

Status Report :

No Communication

Verify if the specific control unit is build in into the car. Otherwise verify the cable connection to the computer and to the car. Also verify the battery power of the vehicle.

Used Buttons



Back ► To return to the previous screen



Main ► To return to the Main Menu



Start ► To start the Quick Test



Scan ► To start scanning the error memory



Erase Codes ► To erase the error codes



Manual ► User Manual



Save ► To save the data to disk



Print ► To print the data on paper



Exit ► To exit the program

Contact Info:

► **Website:**

www.carsoftinternational.com

Carsoft International
OnBoard Diagnostic Systems

Carsoft Ultimate
Great Value - Fantastic Coverage

Mercedes
For All
BMW
Sprinter
MINI

Professional Edition Home Edition

The advertisement features a blue background with a grid pattern. It displays four vehicles: a silver Mercedes SUV, a silver Mercedes Sprinter van, a silver BMW sedan, and a silver MINI car. The text 'Mercedes', 'Sprinter', 'BMW', and 'MINI' is written in a light blue font along the grid lines. At the bottom, there are two buttons labeled 'Professional Edition' and 'Home Edition'.

► **Email:**

bmw80@carsoftsales.com

► **Phone:**

+32 19 54 54 29

► **...or contact your local Carsoft distributor**

APPENDIX A: Used Abbreviations

AB - Airbag	CAS - Car Access System
ABL - Brake system warning Lamp (2 color)	CBC - Corner Braking Control
ABS - Anti-lock Braking System	CBS - Condition Based Service
AC - Air Conditioning	CCM - Check Control Module
ACC - Active Cruise Control	CD - Control Display
ACS - Active Comfort Seats	CDC - Compact Disk Changer
ADB(X) - Automatic Differential Braking	CDS - CD player
ADS - Engine intake air control	CIM - Chassis Integration Module
ADV - Windshield wiper pressure control	CO - Carbon monoxide
AEGS - Automatic Electronic Gearbox Control (also EGS)	COMBI – Electronic Instrument Cluster
AFM - Air Flow Meter	CON - Controller
AGD - Suction silencer	CVM - Convertible top Module
AGR - Emission reduction	CVT - Constantly Variable Transmission
AGS - Adaptive transmission control	CW - Drag coefficient
AG - Automatic Gearbox (transmission)	CWP - Cold Weather Package
AHK - Active rear-axle Kinematics	D1 - Xenon light/ gas discharge
AHK - Trailer hitch	D-Bus - Diagnosis bus (same as TXD)
AHM - Trailer Module (not for US models)	DBC - Dynamic Brake Control
AHPS - Advanced HPS	DBS - Dynamic Braking System
AIC - Automatic Interval Control (rain sensor)	DCS - Dealer Communication System
AKF - Activated carbon canister	DE – Diagnostic Unit
AKS - Active head restraint	DD - Dynamic motor Drive
AKS - Pressure regulating device	DDE - Digital Diesel Electronics
ALC - Automatic Light Control	DIN - German industrial standards
ALR - Automatic Lamp Range Adjustment	DIS - Diagnosis and Information System
AMM - Air Mass Meter	DISA - Differential air intake control
AMP - Radio system Amplifier	DIVA - Continuously variable length intake runners
ARI - Car radio information system	DK - Throttle housing/valve
ARS - Active Roll Stabilization	DKB - Throttle w/ brake intervention
ASC - All Season traction	DKE – Throttle Increase
ASC-EZA - ASC w/ engine timing and injection intervention	DKI - Throttle position
ASC+T - ASC+ Traction control	DKR - Throttle reduction
ASK - Audio System controller	DKT - Throttle position signal
ASR - Self starter block relay	DKV - Preset throttle position value
AT - Remanufactured part	DME - Digital Motor Electronics
AT - Antenna	DM-TL - Diagnostic Module Tank Leakage
ATF - Automatic Transmission Fluid	DOHC - Double Over Head Camshafts
ATL - Exhaust gas turbo charger	DS - Gasket set
AUC - Automatic air recirculation	DSC - Dynamic Stability Control
AUT - Automatic transmission	DSP - Digital Sound Processing
AVT - Antenna amplifier Tuner	DTC - Diagnostic Trouble Code (SAE)
AZD - Tightening torque specifications	DTC - Dynamic Traction Control
A/D – Analog/Digital	DWA - Theft deterrent system
B - Benzine (gasoline)	DWS - Tire pressure Warning System
BAT - Battery	DZM - revolution counter
BC - Board Computer	E - “in” (Ein)
BC1 - Body Controller 1	EBV - Electronic Brake force proportioning
BL - Brake Light	ECE - European market version
BLS - Brake Light Switch	ECM - Engine Control Module
Bluetooth - A wireless interconnection technology	ECU - Electronic Control Unit
BMBT - Board Monitor	EDC - Electronic Damper Control
BS - Block diagram	EDR - Electronic throttle control
BST - Battery Safety Terminal	E-KAT - Electrically heated catalytic converter
BVA - Brake pad wear indicator	EZA - See ASC-EZA
BZM - Center console control center	ECM - Engine Control Module
BZMF - Center console control center, rear	ECO - Controller for I-Drive system
CAN – Controller Area Network	EDC - Electronic Dampening Control
CAN-Bus - Controller Area Network (bus)	EDC-K - Electronic Dampening Control - Continuous
CANH-Bus - CAN bus, High	EDK - Electronic throttle valve
CANL-Bus - CAN bus, Low	EDS - Pressure regulator
CANP - fuel tank ventilation valve	EFH - Electric window lifter
	EGS - Electronic transmission control

EH - Electronic-Hydraulic
 EHC - Electronic Height Control
 EKM - Electronic body Module
 EKP - Electric fuel Pump
 ELV - Electronic steering lock
 EM - Electro-Mechanical
 EMF - Electro-Mechanical parking brake
 EML - Electronic Motor Load regulation
 EMV - Electro-Magnetic sensitivity
 EO - Component location
 EPC - Electronic Parts Catalog
 EPROM - Erasable/ Programmable chip Memory
 ETK - Electronic parts catalog
 ETM - Electrical Troubleshooting Manual
 ESS - Electronic anti-theft device
 EV - Injection Valve
 EWS - Electronic drive-away protection
 FB - Function description
 FBC - Fading Brake Control
 FBD - Remote control services
 FBZV - Radio frequency locking system
 FGR - Vehicle Speed Control (Cruise Control)
 FH - Window lifter
 FHK - Rear Heater/ air conditioner
 FLC - Automatic Light Control
 FRU - Flat Rate Unit
 FS - Crash Sensor
 FZV - Central lock receiver
 GAL - Speed dependent sound volume
 GM - General Module
 GMR - Yaw moment control
 GPS - Global Positioning System
 GRIL - Cruise Control
 GRS - Rotation Rate Sensor
 GS - Belt Tensioner
 GWK - torque converter lock-up control
 H - "rear"
 H2 - Xenon headlights
 HA - Rear Axle
 HC - Hydro Carbon
 HD - Heavy Duty
 HDC - Hill Decent Control
 HFM - Hot Film air mass Meter
 HG - Manual Gearbox (transmission)
 HKL - Hydraulic trunk lid Lift
 HLM - Hot Wire Air Mass Meter
 HPS - Head Protection System
 HR - Heater control (from ETK)
 HVA - Hydraulic Valve Adjuster
 Hz - Hertz (Cycle)
 I-Bus - Information bus
 IB - Interior lighting control signal
 IHKA - Automatic Heating and A/C
 IHKAF - IHKA w/ micro filter
 IHKR - Regulated Heating and A/C
 IHKRF - IHKR w/ micro filter
 IHKS - Standard Heating and A/C
 IHPD - Internal High Pressure Deformation
 IHR - Integrated Heater control
 IKE - Instrument cluster Electronics
 ILH - Interior Lighting, rear
 ILV - Interior Lighting, front
 IMS - Instant Mobility System
 IR - Infrared
 IRS - Infrared Locking System
 ISC - Idle Speed Control
 ISIS - Intelligent Safety Integration System
 ISN - Individual Serial Number
 ISOFIX - Standardized mounts for child restraints
 ITS - Head airbag assembly/ Inflatable Tubular Structure
 IVM - Integrated power supply Module
 K-Bus - Body bus
 KAT - Catalytic converter
 KATON - Converter creating (signal)
 KD - Kick-Down
 KHI - Interface for headphones
 KL - Terminal designation
 KL15 - Run bus (ignition switch run position)
 KL30 - Battery bus (hot at all times)
 KL31 - Ground bus (chassis ground)
 KL50 - Start bus (ignition start position)
 KLR - Accessory bus
 KO - Compressor "on" signal
 KOMBI - Instrument cluster
 KOREL - Compressor relay signal
 KR - Contact Ring
 KSK - Knock Sensor
 KVA - Fuel consumption signal/value
 KW - Crankshaft
 KW - Kilowatt
 LCM - Lamp Check Module
 LDP - Leak Diagnosis Pump
 LEV - Low Emissions Vehicle
 LEW - Lateral acceleration sensor
 LHD - Left-Hand Drive
 LKM - Lamp control Module
 LL - Closed throttle
 LM - Light Module
 LMM - Air flow meter/sensor
 LMR - Light alloy wheel
 LRA - Vertical headlight aiming
 LSM - Steering column memory
 LSZ - Lamp switching center
 LVA - Air supply system (for EHC system)
 LWR - Vertical headlight aim control
 LWS-5 - Steering angle sensor
 M-Bus - IHKA/IHKR stepper motor bus
 MAL - Center armrest
 MBC - Maximum Brake Control
 MDK - Motorized throttle valve/system
 MFL - Multi-Function steering wheel
 MFC - Multi-Function Controller
 MFU - Multi-Function Clock
 MID - Multi-Information Display
 MIL - Malfunction Indicator Lamp (SAE), "check engine" Lamp
 MIR - Multi-Information Radio
 MMC - MultiMedia Changer
 MOST-Bus - Media Oriented System Transport bus
 MRS - Multiple Restraint System
 MSR - engine drag torque Regulation
 MV - Magnetic Valve (solenoid Valve)
 n-ab - Rotational speed, transmission (rpm)
 n-mot - Rotational speed, engine (rpm)
 NAVI - Navigation module
 NG - New Generation
 NG - Tilt sensor
 NOX - Nitrogen Oxides/ exhaust gas recirculation
 NSD - Rear muffler
 NSL - Rear fog Lamp
 NSW - Fog lamp
 NTC - Negative Temperature Coefficient

NW - Camshaft
 OBC - On-Board Computer
 OBD - On-Board Diagnosis (SAE)
 P/N - Park/Neutral position
 P-Bus - Periphery bus
 PB - Pin assignments
 PBS - Parts Bulletin System
 PDC - Park Distance Control
 PGS - Passive Go System
 PM - Power Module
 PP - Impact Pad
 PTC - Positive Temperature Coefficient
 RLS - Rain-Light Sensor
 PWG - Pedal position sensor/ potentiometer
 RA - Repair instructions
 RAM - Random Access Memory
 RAL - Aluminum wheels
 RAL - Standard color
 RDC - Tire pressure Control
 RDS - Radio Data-broadcast System
 RDW - Tire pressure Warning
 RHD - Right-Hand Drive
 RM - Relay Module
 ROZ - Research Octane rating/ fuel grade
 RPA - Tire puncture warning
 RPS - Rollover Protection System
 RS - Repair kit
 RSW - Back-up lamp
 RXD - Wake-up Diagnosis line
 RZV - Direct stationary ignition
 SASL - Satellite, A-pillar left
 SASR - Satellite, A-pillar right
 SAV - Sport ACTIVITY Vehicle
 SB - Fuse assignments
 SBE - Seat occupancy detector/sensor
 SBFH - Seat module, passenger-side rear
 SBSL - Satellite, B-pillar left
 SBSR - Satellite, B-pillar right
 SBT - Tech reference information
 SCA - Soft Close Automatic/Actuator
 SD - Sliding roof
 SD - Silencer/ muffler
 SE - Special Equipment
 SES - voice recognition System
 SFAH - Seat module, driver's side rear
 SFZ - Satellite, vehicle center
 SG - Control unit
 SGS - Seat integrated belt System
 SHD - Sliding/ lifting roof
 SHD - Sunroof module (also SHDM)
 SI - Service Information
 SIA - Service Interval system (ver. I, II, III, IV, etc.)
 SII - Service Interval Indicator
 SIM - Safety Information Module
 SINE - Siren/tilt sensor
 SKD - Steel sliding roof
 SKHD - Steel sliding/ lifting roof
 SM - Seat Module
 SM/SPM - Seat/Mirror Memory
 SMBF - Seat Module, passenger side
 SMFA - Seat Module, driver's side
 SMG - Sequential Manual Gearbox
 SP - Schematic
 SRA - headlight/fog light cleaning
 SRS - Supplementary Restraint System
 SSD - Steel sliding roof
 SSH - Seat Satellite, rear seat
 ST - connector views
 Steptronic - transmission shift control
 STVL - Satellite, left front door
 STVR - Satellite, right front door
 SVS - Speech processing System
 SWR - Headlamp cleaning system
 SWZ - Special tool listings
 SZL - Switch center, steering column
 SZM - Central switch center Module
 TAGE - Door handle Electronics
 TCM - Transmission Control Module
 TD - Engine speed signal (ignition pulse)
 TD - Technical Data (in TIS)
 TE - Fuel evaporation control
 TEL - Telephone control unit
 TEV - Evaporative purge control
 THZ - Tandem master cylinder
 ti - Injector "on" Time (duration)
 TIS - Technical Information System
 TL - Part throttle / load signal
 TLEV - Transitional Low Emission Vehicle
 TMBFT - Door Module, passenger side
 TMBFTH - Door Module, passenger side rear
 TMFAT - Door Module, driver's side
 TMFATH - Door Module, driver's side rear
 TP - Tandem Pump
 TPS - Throttle Position Switch/Sensor
 TR - Engine speed signal (rpm)
 TR - Transistor
 TRG - fuel level sensor
 TRI - Technical Reference Information (also SBT)
 TRS - Battery isolation Switch
 TSD - Torsion vibration dampener
 TSB - Technical Service Bulletin
 TSH - Door lock Heating
 TSZI - Transistorized coil Ignition system
 TU - Technical Update
 TXD - Transmitting Diagnosis line
 U-batt - Battery voltage
 U-vers - Supply voltage
 UERSS - Rollover bar
 URS - Rollover protection System
 USIS - Ultrasonic passenger compartment Sensor
 V - "front"
 V - Vehicle road speed
 VA - Front Axle
 VAT - Front axle support
 VANOS - Variable camshaft timing
 VEP - Distributor-type injection Pump
 VID - Video module
 VL - Full load (wide open throttle)
 WBG - Hazard warning switch
 WIM - Wiper control Module
 WK - Torque converter lock-up clutch
 WSS - Wind Shield
 ZAB - Ignition fade-out (reduction)
 ZAE - Central Airbag Electronics
 ZAS - Ignition starter switch
 ZGM - Central Gateway Module
 ZK - Cylinder head
 ZKE - Central body Electronics
 ZKH - Cylinder head cover
 ZMS - Dual-Mass flywheel
 ZV - Central locking system
 ZS - Central lock
 ZSD - Center muffler
 ZV - Central locking system
 ZVM - Central locking Module
 ZWD - Idle control valve

APPENDIX B: No Communication

Possible causes in case that the module is not responding:

- ▶ **The Control Unit Not Build In (The vehicle is not equipped with this control unit)**
- ▶ **Control Unit Power Supply:**
 - **Verify for: Low battery voltage**
 - **Verify if the diagnostic cable is properly connected to the diagnostic socket and to the computer port.**
 - **Bad power or ground circuits on the diagnostic socket**
- ▶ **Wrong Communication port setting from the computer**

APPENDIX C: Oxford RS 232 - PCMCIA Card



A) Installing the controller card into the notebook

1. Insert the controller card into an empty PCMCIA slot. As the card supports Hot Plug function, it could be inserted into the PCMCIA slot while notebook is in power on or power off condition.
2. When the card is detected, the OS will ask for the software driver.

B) Installing Windows driver for the controller card

1. Once Windows is running, a new controller card is detected.
2. Insert the Drivers & Utility Cd into the CD-ROM, assume drive D
3. When the system ask for the driver for CF Gen, choose "Install from a list or specific location (Advanced)"
4. Choose "Don't search. I will choose the driver to install"
5. Choose "Ports (COM & LPT)"
6. Click on "Have Disk"
- 7 Browse to the following directory on the CD Driver: D:\Oxford\OX95x\Windows
8. Choose "OxSER.INF"
9. Select "PCcard OX16CF950"
10. Follow the on screen instructions until the driver is totally installed

C) Checking the status of the installed driver

1. Right click on the icon of My Computer and choose Properties
2. Choose Device Manager
4. Let click on the "+" sign of the Ports (COM & LPT)
4. The following devices should be shown PCard OX16CF950
5. Right click on the device above and choose Properties
6. Check the Device Status in the General window. The following should be shown:
This Device is Working Properly

Changing COM Port number:

Some serial devices need a special COM port in order to work. If your serial device works properly, do not change this setting.

1. From the Device manager Window double click Ports (COM & LPT), then double click the Profilic USB-to Serial Comm Port ... you want to change.
2. Click port Settings tab and click Advanced ...
3. Click the down arrow that is next to the COM Port Number box, select a COM port that us not in use, then click OK.
4. Click OK, then close Device Manager to save the changes.

APPENDIX D: APIOTEK RS232 - Express Card



Windows XP/Windows 2000 Installation

1. Don't insert the Express Card into the Express Card Slot.
2. Insert the CD into the CD-ROM Drive.
3. At the Windows desktop click Start, then RUN.
4. Type D:\EC-0008(Serial port)\WIN98SE&ME&2K&2003\Setup.exe
5. Follow the on-screen instructions to complete the installation.
6. Insert the Serial Express Card into the Express card slot.
7. Open 'Device Manager' under System Properties and check if there is the device you install under "Proflic USB-to-Serial-Comm Port ..."
8. Now the Serial Express Card is ready to use.

Windows Vista Installation

1. Don't insert the Express Card into the Express Card Slot.
2. Insert the CD into the CD-ROM Drive.
3. At the Windows desktop click Start, then RUN.
4. Type D:\EC-0008(Serial port)\VISTA\Setup.exe
5. Follow the on-screen instructions to complete the installation.
6. Insert the Serial Express Card into the Express card slot.
7. Open 'Device Manager' under System Properties and check if there is the device you install under "Proflic USB-to-Serial-Comm Port ..."
8. Now the Serial Express Card is ready to use.

Changing COM Port number:

Some serial devices need a special COM port in order to work. If your serial device works properly, do not change this setting.

1. From the Device manager Window double click Ports (COM & LPT), and then double click the Proflic USB-to Serial Com Port ... you want to change.
2. Click port Settings tab and click Advanced ...
3. Click the down arrow that is next to the COM Port Number box, select a COM port that us not in use, then click OK.
4. Click OK and then close Device Manager to save the changes.