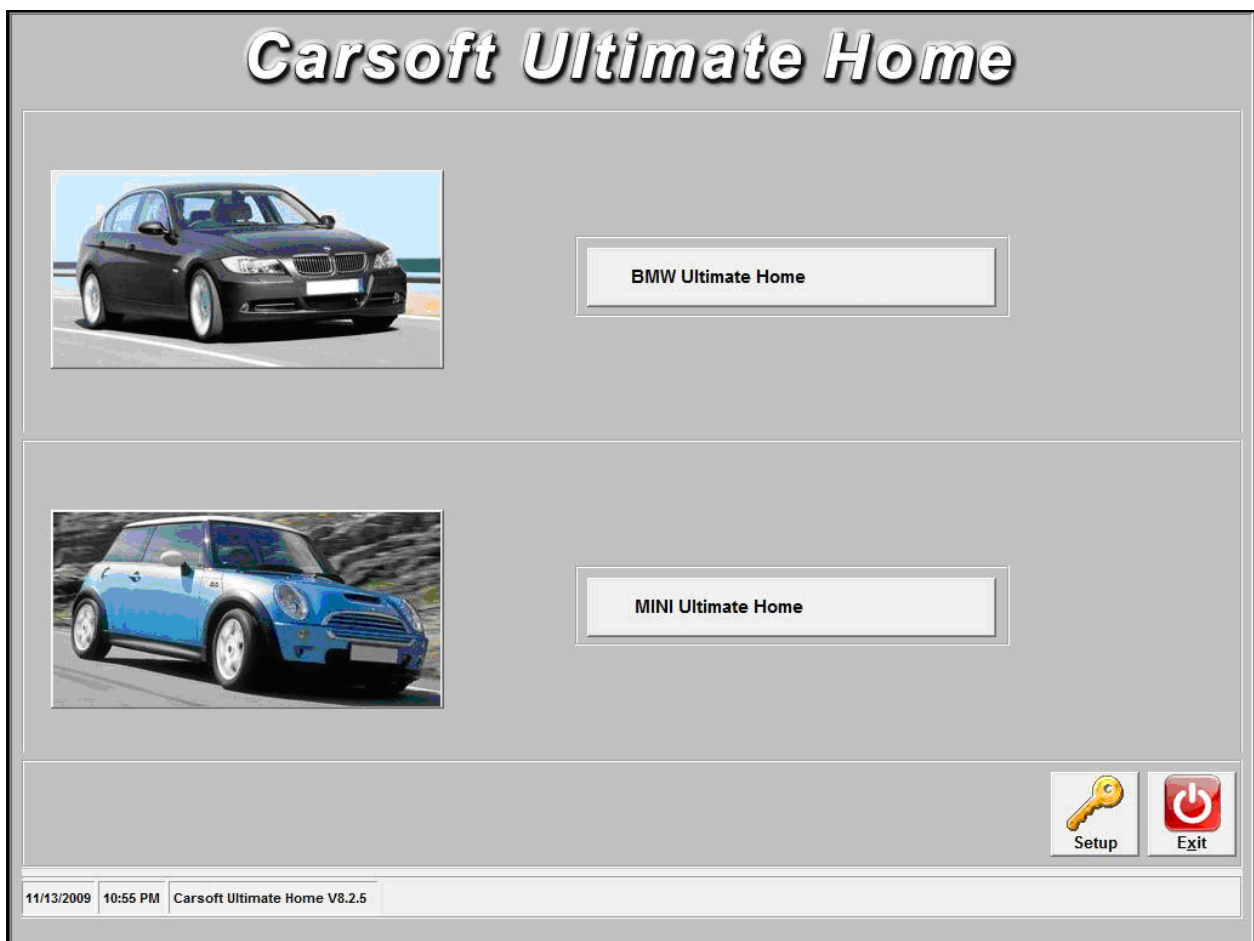


# Carsoft<sup>®</sup>™

## BMW - MINI Ultimate Home

### V 9.0 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

**W**elcome to **Carsoft**<sup>®™</sup> the first "Do It Yourself" Diagnostic Software for BMW- and MINI Vehicles for Microsoft Windows operating systems.

**Y**ou 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....

**O**n 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**<sup>®™</sup> team

For **INFO** please contact:

**Carsoft International**

Grand Route 111C  
B 4367, CRISNEE  
Belgium

[bmw90@carsoftsales.com](mailto:bmw90@carsoftsales.com)

## 2. Hardware Specifications



Carsoft<sup>®™</sup> 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<sup>®</sup> 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<sup>®</sup>™ 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:

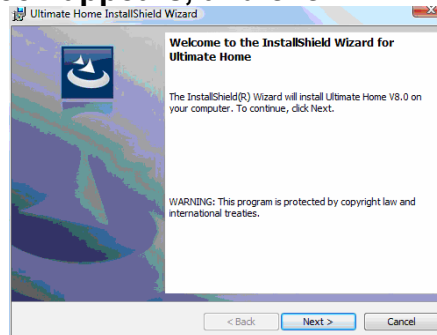
1. Click **Start**, type **cmd** in the search box, right click on the program **cmd.exe** and select **Run as Administrator**
2. In the command prompt window, type **net users Administrator /active: yes** then press **Enter**, you should receive a confirmation saying; *The command completed successfully*
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 V9.0 CD](#) into the CD ROM drive  
(Do NOT CONNECT the dongle at this moment)

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

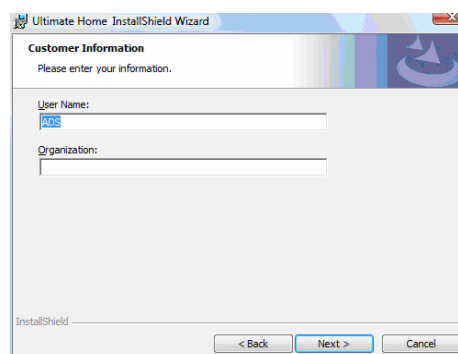


(If the Auto-run feature is not switched on, double click the Setup Icon on the CD)

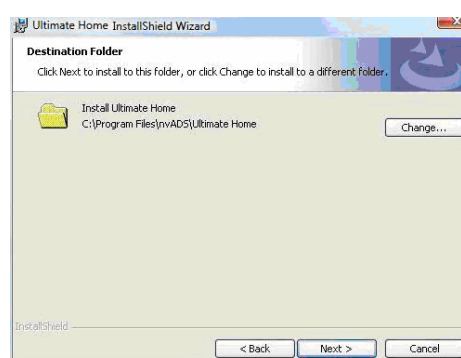
- Wait until the [License Agreement](#) screen appears, then mark **“I accept”** the terms in the license agreement”, and click **NEXT**



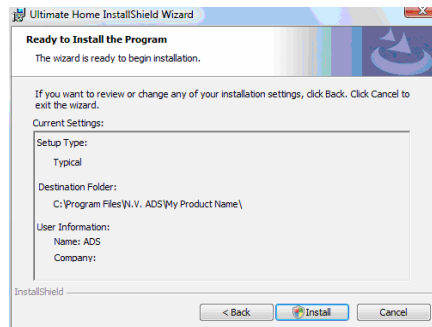
- Wait until the [Customer Information](#) screen appears and verify **“User Name”** and **“Organization”**, and click **NEXT**



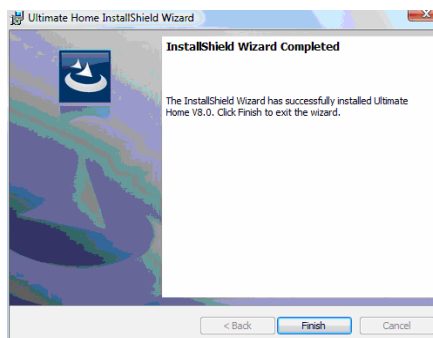
- Wait until the [Destination Folder](#) screen appears, and click **NEXT**



- 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<sup>®</sup>™ - 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 :**

---

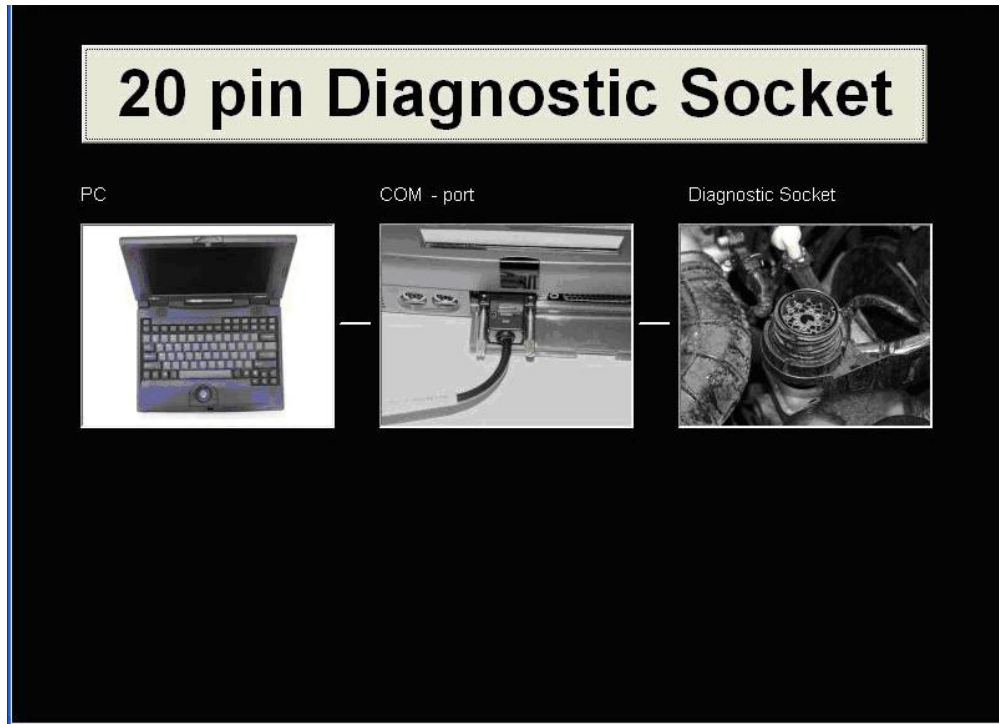
**Please send this registration form to**

**CARSOFT INTERNATIONAL**

Email: [bmw90@carsoftsales.com](mailto:bmw90@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.

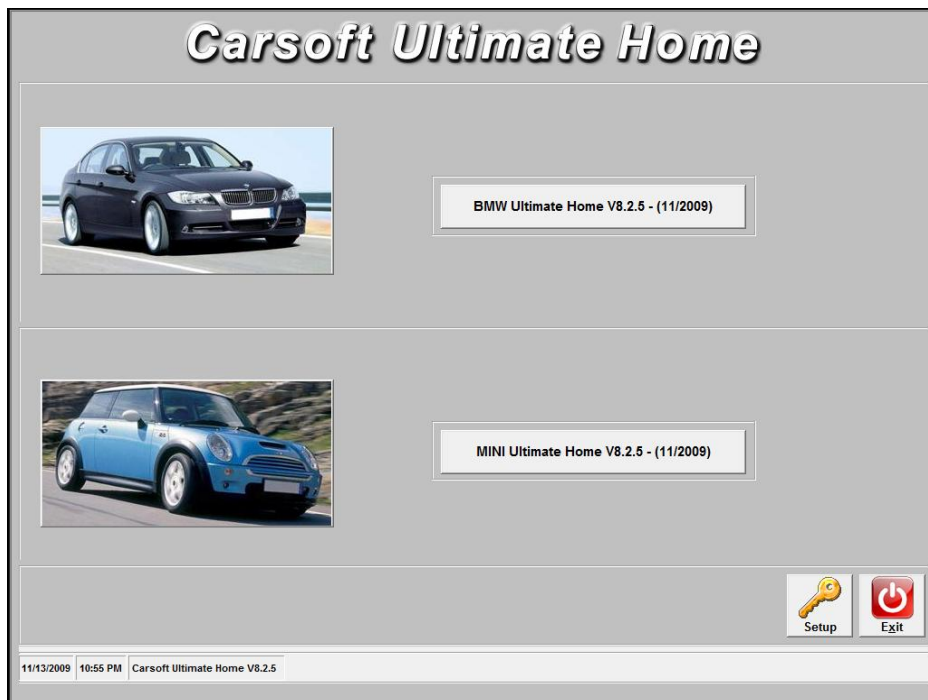
# 5. Software Setup

## COM Port Setup

Click the ['Ultimate Home V9.0'](#) icon to start the software



Click the ['BMW Ultimate Home V9.0'](#) or ['MINI Ultimate Home V9.0'](#) button.

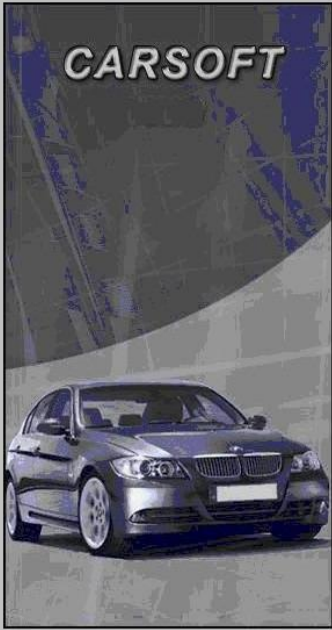


And the appropriate program will start.



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

# Carsoft Ultimate Home



COM Port Settings :

COM1    COM2    COM3    COM4

Version :

Carsoft Ultimate Home V8.2 - (10/2009)

Contact Info :

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Email : Carsoft@pandora.be  
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Web-Site :

[www.carsoftinternational.com](http://www.carsoftinternational.com)



Back



Exit

10/16/2009 10:19 AM

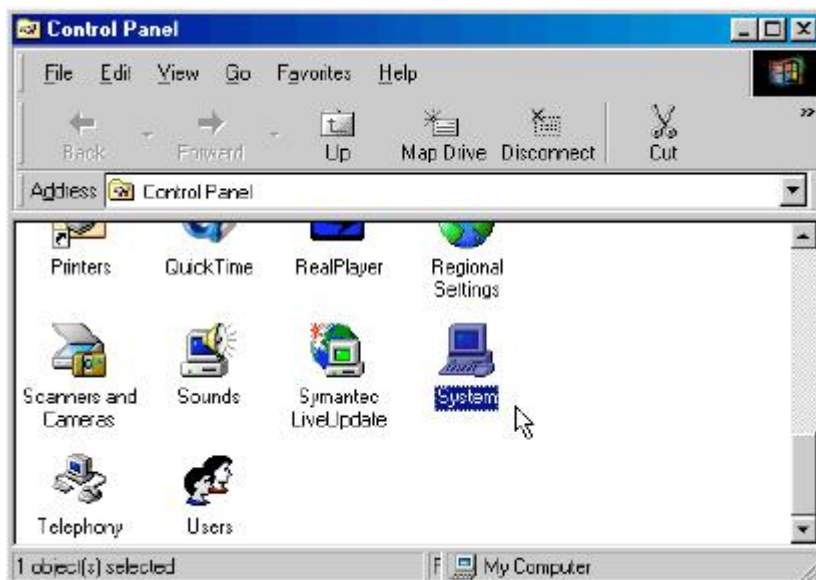
# INFO : Serial Port Verification

## 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.



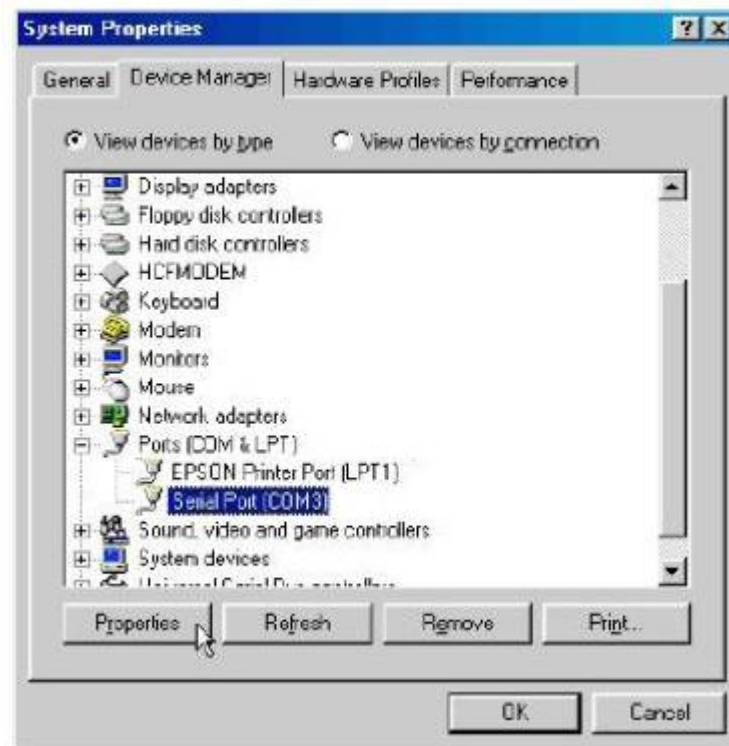
From the Windows Control Panel select and click on the "System" icon. The following System Properties screen should be displayed on the PC ...



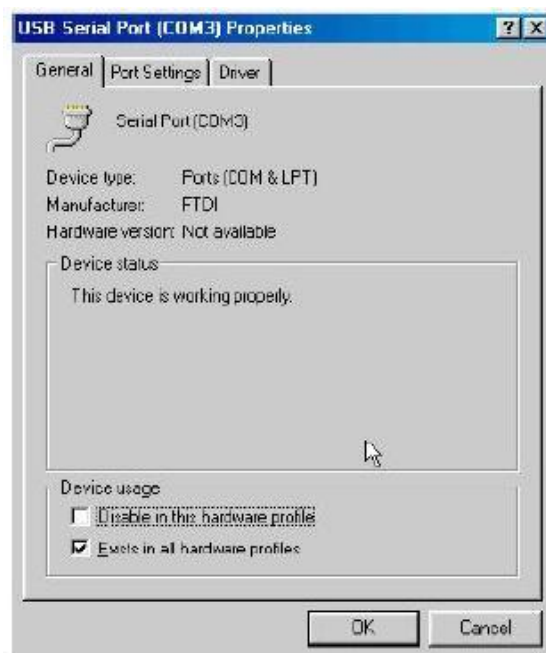
Select the “Device Manager” tab, and use the “View devices by type” option. Scroll down the page until Ports (COM & LPT) is shown then click on the “+” symbol to show the entries in this category.

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 ...

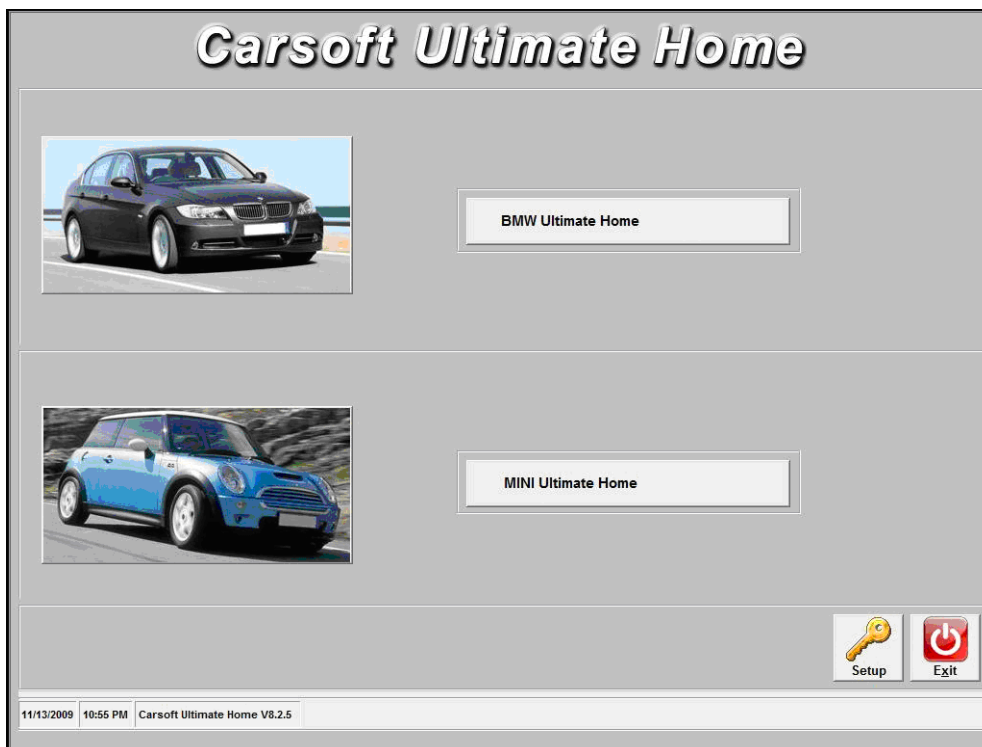


## 6. Start

Click the ['Ultimate Home V9.0'](#) Icon to start the software.



Click the ['BMW Ultimate Home V9.0'](#) or ['MINI Ultimate Home V9.0'](#) button



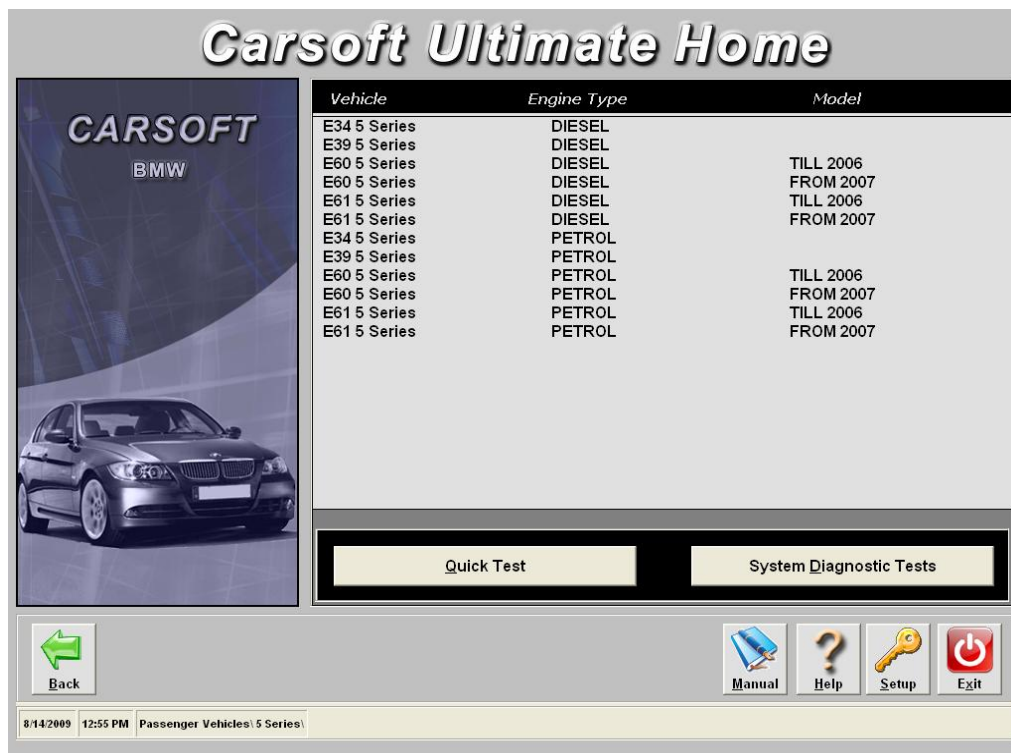
And the appropriate program will start.



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:

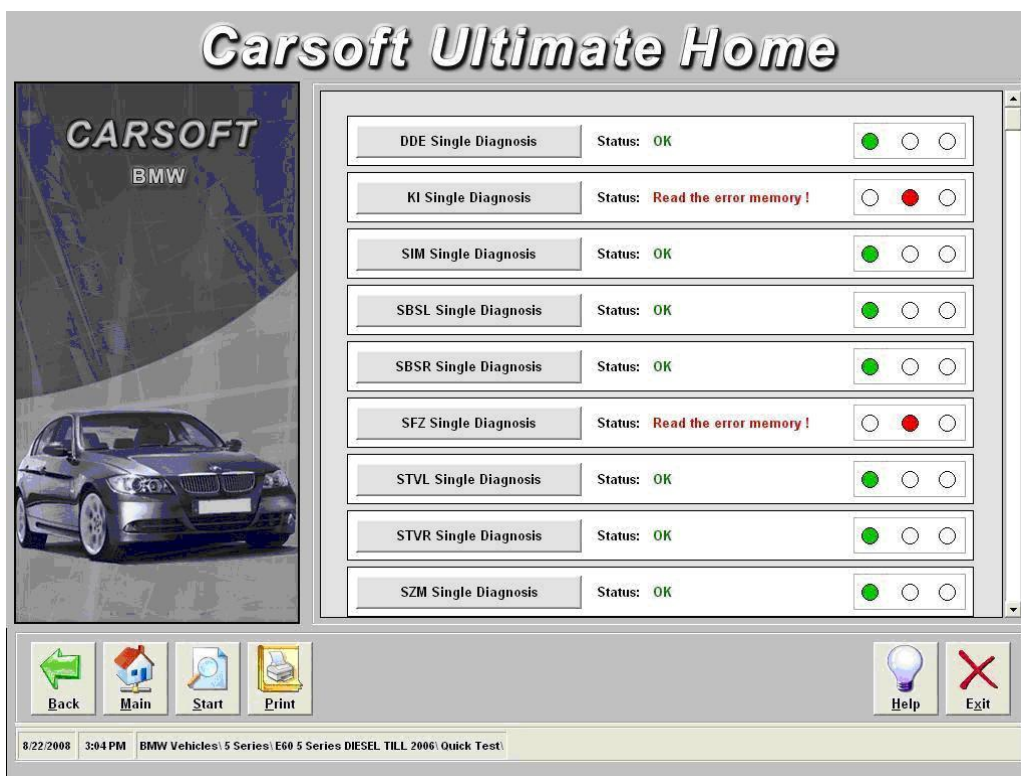
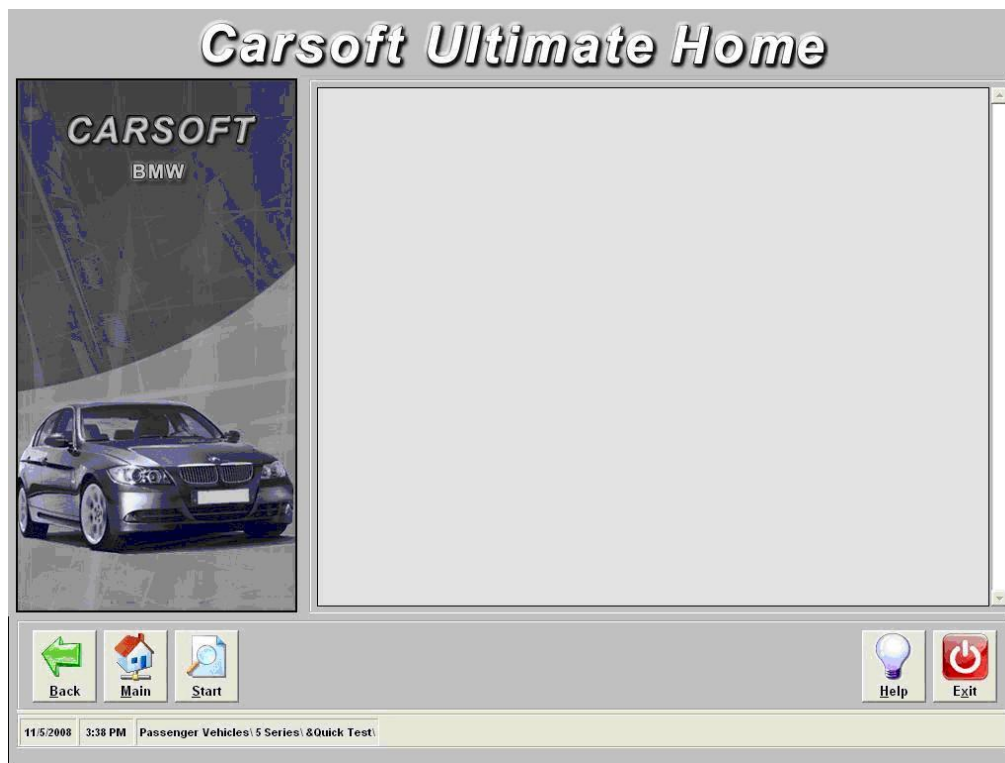
A: Total Diagnosis: Click ['Quick Test'](#)

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**

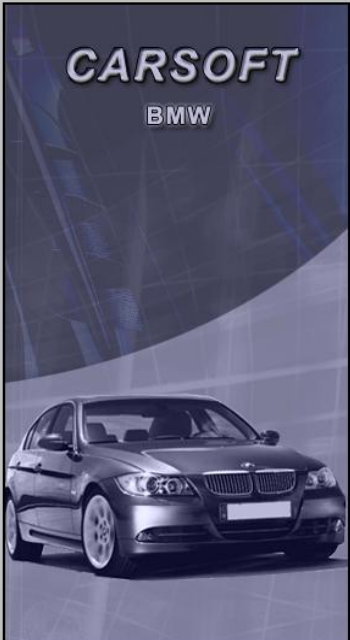


Verify if the control unit is build in into the car. If so, verify the cable connection to the computer and car. Also check if the battery voltage of the car is sufficient. (>12V)

## B: System Diagnostic Tests:

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

### Carsoft Ultimate Home



**CARSOFT**  
BMW

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?HelpSetupExit

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

# Carsoft Ultimate Home

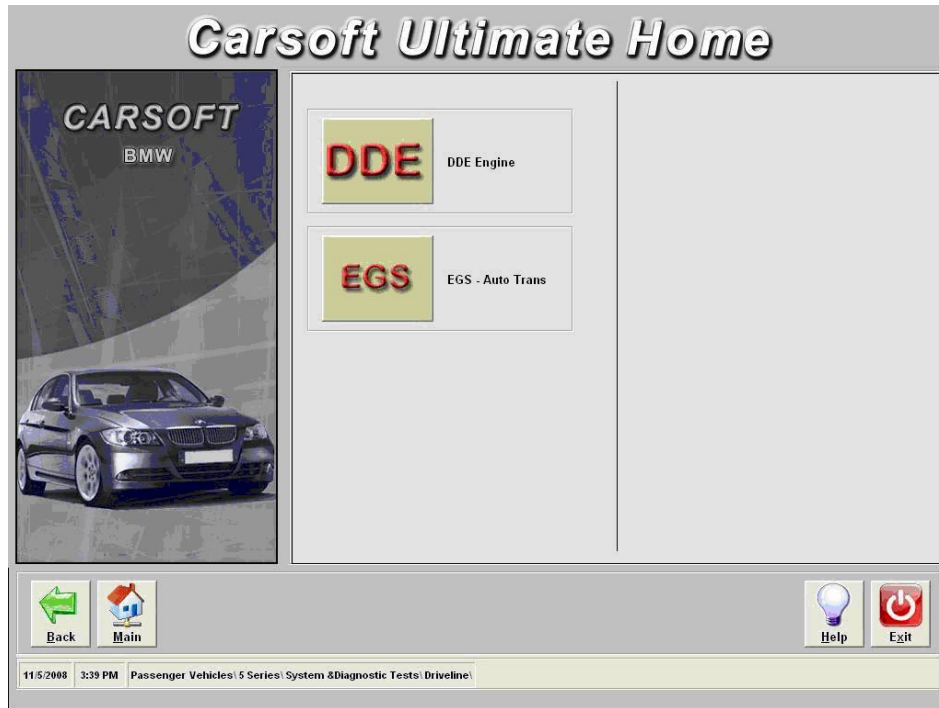


The control units are divided in the following menus:

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](http://www.carsoftinternational.com)

The advertisement features a blue background with a grid pattern. At the top right, it says "Carsoft International" with a small logo and "OnBoard Diagnostic Systems" below it. The main text "Carsoft Ultimate" is in a large, white, serif font, with the tagline "Great Value - Fantastic Coverage" in a smaller, yellow, sans-serif font below it. The phrase "For All" is written in a white, sans-serif font in the center. Four cars are shown: a silver Mercedes SUV on the left, a silver Mercedes Sprinter van in the center, a silver BMW sedan on the right, and a grey MINI car at the bottom right. The words "Mercedes", "BMW", and "MINI" are written in a white, sans-serif font along the top and right edges of the car images. At the bottom, there are two buttons: "Professional Edition" on the left and "Home Edition" on the right.

► Email:

[bmw90@carsoftsales.com](mailto:bmw90@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  
 GRII - 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.