



Autologic

Total Diagnostics for BMW

Designed by

Autologic Diagnostics Ltd





INDEX

| | |
|-----------------------------------|---------|
| 1. INTRODUCTION..... | page 3 |
| 2. BMW PRODUCT DESCRIPTION..... | page 4 |
| 3. DIAGNOSTIC CAPABILITIES..... | page 6 |
| 4. PRODUCT UPGRADE PROGRAMME..... | page 15 |
| 5. SYSTEM SUPPORT..... | page 16 |



1. INTRODUCTION

Autologic has been developed by diagnos to provide specialist BMW, Land Rover, Mercedes-Benz, Jaguar, VAG, Porsche and Volvo workshops with dealer-level diagnostics to enable them to be totally independent of main dealer facilities.

Autologic is designed and manufactured by Autologic Diagnostics Ltd and is contained in a rugged notebook-sized casing, using a 12.1" colour touch screen. *Autologic* utilises the latest solid-state technology, contains no moving parts and uses no disk or CD media. Access to vehicle systems is via a touch-button interface with an intuitive menu structure. A large number of pages are backed-up by help screens, displaying nominal values and pin configurations.

The system is backed up by a software development programme to keep *Autologic* up-to-date with current vehicles and by telephone/fax/email support staffed by Land Rover, Mercedes-Benz, BMW, VAG, Jaguar, Porsche and Volvo-trained technicians. Vehicle-oriented diagnostic training courses are offered periodically to enable *Autologic* users to keep up with new technology.

Keep in touch with *Autologic* via our web site www.autologic-diagnostics.com





2. BMW PRODUCT DESCRIPTION

The *Autologic* diagnostic tool for BMW vehicles is without doubt the most comprehensive tool to be made available to independent BMW specialists. The world-first software enables access to full dealer-level capabilities that initially covers E31, E32, E34, E36/Z3, E38, E39, E46, E53, E60, E61, E63/64, E65/66, E70, E71, E81, E82, E83, E84/Z4, E85, E87, E88, E90/E91/E92/E93, R50, R52, R53, R56.

Autologic for BMW is unique in offering full fault code read and re-set, full component activation, electronic control unit procedures, clearing and setting of adaptation values, full coverage of (ECU) control units coding, full programming capability including engine control modules and transmission control modules, adjustment of engine idle, real-time reading of all dynamic data, procedure for engine and immobiliser alignment, procedure for trial substitution of control units and procedure for the fitting of BMW accessories. Car/Key Memory Function for personalising vehicle.

Systems accessed by the tool include:

- Service Interval reset including CBS, CBS error correction
- Quick Test & Quick Clear
- Engines
- Transmissions
- ABS/Adaptive Stability Control/ Dynamic Stability Control
- On-board Computer
- Multi Information Display Systems
- Multiple Restraint Systems
- Central Body Electrics
- Alarm System
- Electronic Vehicle Lockout (EWS)
- Cruise Control
- Multi-functional Steering Wheel
- Air Conditioning Systems
- Instrument Cluster Electronics (IKE)
- Lamp Control Module (LCM) (LSZ)
- Park Distance Control and Radio.
- Roll over system / convertible hood module
- Automatic interval control
- Rain light sensor
- Seat / steering module
- Xenon lights
- Language input system
- Tyre pressure monitoring
- Infrared/Radio remote control
- Display / information systems
- Burglar alarm system (DWA)



- CIP (Coding Individualisation & programming)

Leads & connectors:

- Fibre optic interface
- OBDII connector and 1m cable
- BMW diagnostic connector and 1m cable
- 3m extension cable
- USB connector cable for Internet upgrades

System packaged in a lightweight, ruggedised flight case

3. DIAGNOSTIC CAPABILITIES

| | |
|---------------------------------|--|
| Engines | Idle speed adjustment, exhaust gas regulation, limitation of fuel delivery, adjusting of start fuel delivery, calibration of injection map, re-align consumption map, program all diesel engines. Adjustments under DDE 5.0 – electronic compression test, smooth running measurement test. Module information – read and clear fault codes, dynamic data, activation of components, clear and re-set adaptation values. |
| E60, E63/64, E65, E87, E70, E90 | DME 9, MS 70, DME 9.2, MS 45, MS S65, MS 80, DDE 5, DDE 6, DDE 7 |
| VALVETRONIC | Communication through DME |
| E60, E63/64, E65, E87, E70, E90 | |
| TRANSMISSION | Read and clear fault codes, diagnosis request, component information, module information, clear adaptations. |
| E60, E63/64, E65, E87, E90, E70 | EGS 19, EGS 19A, EGS 19B, EGS 19C, SMG 60, SSG 60 |
| CAS | Security |
| | Read and clear fault codes, diagnostic request, module information, personalisation, enable and disable key, DME/DDE alignment, CAS reset. |
| E60, E63/64, E65, E87, E90, E70 | |
| ACC | Active Cruise Control |
| | Read and clear fault codes, adjust sensor, module information |



| | |
|----------------------------------|--|
| DYNAMIC DRIVE | |
| | Read and clear fault codes, diagnosis request, module information, initialisation, sensor values. |
| E60, E63/64, E65, E87, E90, E70. | |
| CIM | Chassis integration module |
| | Read and clear fault codes, diagnosis request, module information, component activation, CIM adaptation. |
| E65 | |
| DSC | Dynamic Stability Control |
| | Read and clear fault codes, diagnosis request, component activation, module information, bleeding facility, hydraulic test, adjust steering angle sensor re-set. |
| E60, E63/64, E65, E87, E90, E70 | |
| EDC | Electronic Damper Control |
| | Read and clear fault codes, diagnosis request, component activation, module information, system start up, shock absorber adjustment, shock absorber performance. |
| E60, E63/64, E65, E87, E90, E70 | |
| EHC | Electronic Height Control |
| | Read and clear fault codes, diagnosis request, component activation, module information, ride level adjustment, check lift lower function, check ride level sensors, delete energy saving mode, clear air supply system, check compressor relay. |
| E60, E63/64, E65, E87, E90, E70 | |
| EMF | Parking Brake |
| | Read and clear fault codes, diagnosis request, component activation, module information, brake bedding-in –procedure, positioning travel check, assembly mode. |
| E65, E70 | |
| RDC | Read and clear fault codes, diagnosis request, module information. |
| E65 | |
| PM | Power Module |
| | Read and clear fault codes, diagnosis request, component activation, module information, register battery replacement. |
| E65, E65 | |
| DISPLAY INFORMATION | CID, FD, CON, FBI, HUD, INSTR, SVS. |
| | Read and clear fault codes, diagnosis request, component activation, module information. |
| E60, E63/64, E65, E87, E90, E70 | |
| AUDIO/VIDEO/NAVIGATION | AMP, M-ASK-CCC, CCC-A, CCC-ANT, CDC, DVDC, SDARS, NAV, VM, DAB. |
| | Read and clear fault codes, diagnosis request, component activation, module information. |
| E60, E63/64, E65, E87, E90, E70 | |
| TELEPHONE | TCU/ULF |
| | Read and clear fault codes, diagnosis request, component activation, module information |
| E60, E63/64, E65, E87, E90, E70 | |
| | |
| LIGHTS | AHL, AHM, LM, RLS |
| | Read and clear fault codes, diagnosis request, component information, module information. |
| E60, E63/64, E65, E87, E90, E70 | |



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| IHKA/SHZH | Automatic heating air conditioning/Independent auxiliary heating |
| | Read and clear fault codes, diagnosis request, component information, module information, refrigerant compressor activation run in. |
| E60, E63/64, E65, E87, E90, E70 | |
| LOCKING & SECURITY | KBM, JBE, TMFA, TMBF, HKL, SHD, DWA, SINE, CA |
| | Read and clear fault codes, diagnosis request, component information, module information, initialisation, alarm triggers. |
| E60, E63/64, E65, E87, E90, E70 | |
| SAFETY FUNCTIONS | SGM, KGM, SFZ, SZL, SZM, SBSL, SBSR, TMFA, TMBF, SASL, SASR etc |
| | Read and clear fault codes, diagnostic request, module information, component activation. Start system time, write system time. |
| E60, E63/64, E65, E87, E90, E70 | |
| PDC | Park Distance Control |
| | Read and clear fault codes, diagnosis request, component information, module information. |
| E60, E63/64, E65, E87, E90, E70 | |
| SEATS | SMFA, SMBF, ALBBF, ALBFA. |
| | Read and clear fault codes, diagnosis request, component information, module information. |
| E60, E63/64, E65, E87, E90, E70 | |
| BUS FUNCTIONS | Can Byte-flight, MOST |
| | Fault codes |
| E60, E63/64, E65, E87, E90, E70 | |
| | |
| CONDITION BASED SERVICE | Service reset function, error correction |
| E60, E63/64, E65, E87, E90, E70 | |
| | |
| CIP | Coding Individualisation & Programming |
| | Coding of all control units |
| | Car/Key memory electrical settings |
| | Programming of control units |
| | Programming Updates |
| | Conversion & Retrofitting (Language / CDC / iPod etc) |
| E60, E63/64, E65, E87, E90, E70, E71 | |
| QUICK TEST & QUICK CLEAR | Scans through ECU's on vehicle for fault codes and reports back, clears fault codes that have been recorded after repair has been carried out. |
| E31, E32, E34, E36, E38, E39, E53, E83, E85, E60/61, E70, E63, E65/66, E90/91/92/93, E81/82/87/88, R50, R52, R53, R56 | |



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| Engines | |
| | Idle speed adjustment, exhaust gas regulation, limitation of fuel delivery, adjusting of start fuel delivery, calibration of injection map, re-align consumption map, program all diesel engines. Adjustments under DDE 4.0 – electronic compression test, smooth running measurement test. Module information – read and clear fault codes, dynamic data, activation of components, clear and re-set adaptation values. |
| E32 | DME 1.3, DME 3.3, DME 1.7 M70 |
| E34 | DME M1.3, DME 1.7, DME 3.1, DME 3.3 M60, DME 3.3 S38 B38, DDE2.1,2.2 |
| E36 | DME 1.7, 1.7.2, 1.7.3, BMS 43, DME 5.2, DME 3.1, DME 3.3.1, MS 40.1, DME 3.3, MS S50, Diesel DDE 2.1 |
| E38 | DME 3.3, DME 5.2, MS 41.0, MS 42.0, MS 42.1, MS 43, DME 5.2.1 Diesel DDE 2.2, DDE 3.0, DDE 4.0 |
| E39 | MS 41.0, MS 41.1, MS 42.0, MS 43.0, DME 5.2, DME 5.2.1, MS S62 Diesel DDE 2.2, DDE 3.0, DDE 4.0 |
| E46 | BMS 46, MS 42.0, MS 54, ME 9 Diesel DDE 3.0, DDE 4.0 |
| E53 | MS 43.0, DME 7.2, DDE 4.0 |
| E83 | MS 45, DDE 5, |
| E85 | MS 43, MS45 |
| R50/R53 | EMS 2 (integrated with transmission control unit), MS 5150 |
| EML | |
| | 6 Cylinder & 12 Cylinder |
| | Read and clear fault codes, diagnostic request, throttle adaptation. |
| GEARBOXES | |
| | Read and clear fault codes, diagnosis request, component information, module information, clear adaptations. |
| E36 AGS/EGS | EGS 8.32, EGS 8.34, EGS 8.55, EGS 9.22, EGS 8.60.0, EGS 8.60.2, EGS 8.60.4, SMG 2 |
| E38 | As above excepting SMG 2 |
| E39 | As above excepting SMG 2 |
| E46 | As E36 |
| E53 | GS.20, EGS 8.60.2 |
| E83 | GS20 |
| E85 | EGS 8.60.4, SMG 2 |



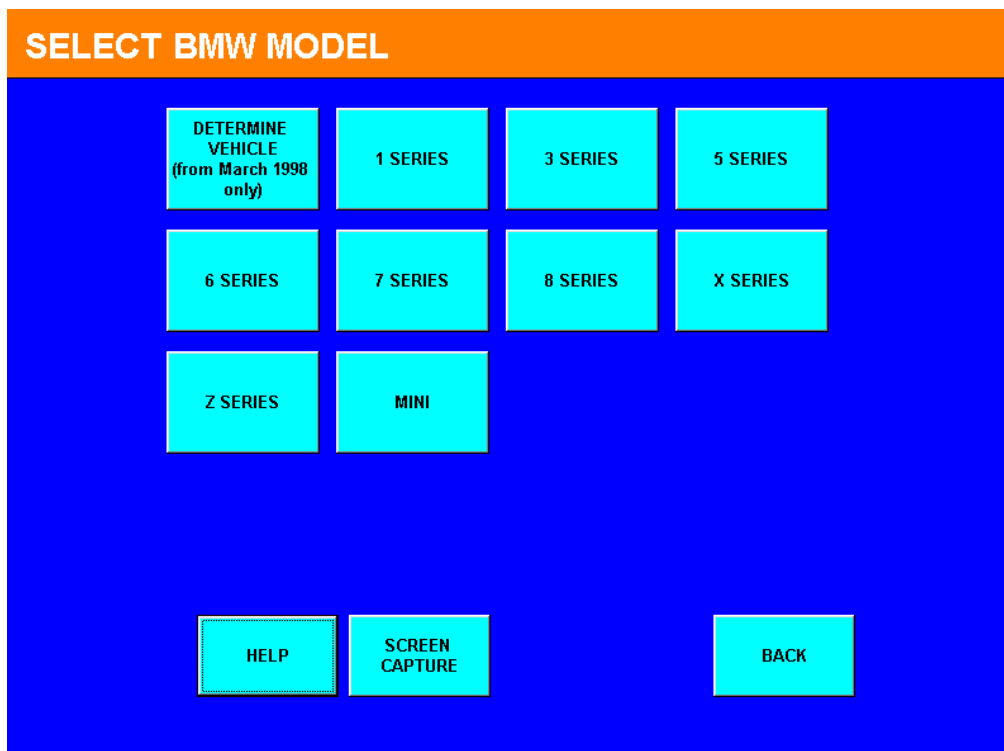
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|--|---|
| AIRBAGS | |
| | Read and clear fault codes, diagnosis request, module information, ECU coding information |
| E36, E38, E39, E46, E53, E83, E85, R50/R53 | SRS, BAE, ZAE, MRS, MRS 2, MRS 3, MRS 4, Safety and information module, Satellite sensors, Start system time. |
| EWS | Security |
| | Read and clear fault codes, diagnosis request, module information, ECU coding information, key status (enable or disable), display keys used in vehicle, align EWS to DME or DDE |
| E36, E38, E39, E46, E53, E83, E85, R50/R53 | EWS 2, EWS 3, EWS 3D |
| | |
| ABS/ASC/DSC/DDS | |
| | Read and clear fault codes, diagnosis request, component activation, module information, bleeding facility, hydraulic test, adjust steering angle sensor re-set. |
| E36, E38, E39, E46, E53, E83, E85 R50/R53 | ABS/ASC 5, ABS/ASC MK 60, ABS/DSC 3, ABS/ASC 5.7, ABS MK IVG, ABS/ASC MK 4, ABS/ASC MK 20, DSC 8 |
| | |
| ZKE/ZVM | Central body electrics |
| | Read and clear fault codes, diagnosis request, component activation, module information, burglar alarm, burglar alarm reader, central locking, electric windows, interior lights, electric mirrors, Servotronic steering, slide/tilt sun roof, soft close boot lid system, windscreen wash-wipe system, seat and steering column, ECU coding information. |
| E36 | ZVM 2, GM 4 |
| E38 | GM 3 |
| E39 | GM 3 |
| E46 | GM 5 |
| E53 | GM 3 |
| E83 | GM 5 |
| E85 | GM 5 |
| R50/R53 | BC 1 |

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|--|---|
| OM/IKE | Instrument cluster |
| | Read and clear fault codes, diagnosis request, component activation, module information, system test, service interval re-set. |
| E36, E38, E39, E46, E53, E83, E85, R50/R53 | |
| IHR/IHKA/IHKR | Air conditioning/heater control |
| | Read and clear fault codes, diagnosis request, component activation, module information, transportation lock, ECU coding information. |
| E36, E38, E39, E46, E53, E83, E85, R50/R53 | |
| LKM/LSZ/LCM | Lamp control module/light switching centre |
| | Read and clear fault codes, diagnosis request, component activation, module information, ECU coding information. |
| E38, E39, E46, E83, E85 | LCM, LCM 2, LCM 3, LS 2, LS 2.2. |
| | |
| CVM | Convertible top |
| E36, E46, E85, R52 | Read and clear fault codes, diagnosis request, component activation, module information, ECU coding information, re-set convertible top reading, roof initialization. |
| | |
| ROPS | Roll-over protection system |
| E36, E46 | Read and clear fault codes, diagnosis request, component activation, module information, ECU coding information, read and re-set trigger counter. |
| | |
| PDC | Park distance control |
| E36, E38, E38, E39, E53, E83, E85, R50/R53 | Read and clear fault codes, diagnosis request, component activation, module information. |
| | |
| DSP | Digital sound processor/amplifier/control panel |
| E38, E39, E46, E53, R50/R53 | Diagnosis request, component activation, module information, speaker test. |
| | |
| RADIO | |
| E38, E39, E46, E53, E83, E85, R50/R53 | Read and clear fault codes, diagnosis request, component activation, module information |
| | |
| MID | Multi-information display |
| E38, E39, E53 | Read and clear fault codes, module information |
| | |
| RAIN SENSOR, DRIVING LIGHTS | |
| E38, E39, E46, E53, E83, E85 R50/R53 | Read and clear fault codes, diagnosis request, A/C initialization |
| | |
| MULTI-FUNCTIONAL STEERING WHEEL | |
| E38, E39, E46, E53, E83, E85, R50/R53 | Read and clear fault codes, diagnosis request, module information, ECU coding information |
| | |
| BMBT | On-board monitor control panel |
| E38, E39, E53, R50/R53, E83, E85. | Read and clear fault codes, diagnosis request |
| | |
| EDC | Electronic damping control |
| E38, E39, E53, E60, E65 | Read and clear fault codes, diagnosis request, steering angle offset, component activation, module information |
| | |
| EHC, EHC 2 | Electronic height control |
| E38, E39, E53 | Read and clear fault codes, diagnosis request, module information, ride level adjustment |
| | |
| HDC | Hill descent control |
| E53 | Read and clear fault codes, diagnosis request, module information |



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| | |
| CRUISE CONTROL | Cruise control |
| E38, E39, E46, E53, R50/R53, | Read and clear fault codes, diagnosis request, module information |
| | |
| SMF/SMB/SPMFT/SPMBT | Electric seats |
| E38, E39, E46, E53, E83, E85. | Read and clear fault codes, diagnosis request, component activation, module information |
| | |
| LEW | Steering angle sensor |
| E38, E39, E46, E53, E83, E85, R50/R53 | Read and clear fault codes, diagnosis request, module information |
| EHPS | Electro-hydraulic steering assistance |
| R50/R53 | Read and clear fault codes, diagnosis request, component activation, module information |
| LRA | Head light vertical aim control |
| R50/R53 | Read and clear fault codes, diagnosis request, component activation, module information |
| SHD | Sliding - tilt sunroof module |
| E46, R50/R53, E60, E63, E65, E83, E85, E90 | Read and clear fault codes, diagnosis request, component activation, module information & Initialisation |
| RDC/RPA | Tyre pressure check |
| E38, E39, E46, E53, | Read and clear fault codes, diagnosis request, module information |

3.1 EXAMPLE SCREEN SHOTS



DIAGNOSIS REQUEST

| | | | |
|-------------------------|-------------------|-----------------------|-----------------|
| CODING DATA | BASIC INFORMATION | GENERAL | ASC/DSC CONTROL |
| THROTTLE MODULE | EWS | CRUISE CONTROL | FAULT MESSAGE |
| AIR CONDITIONING SYSTEM | KNOCK CONTROL | OXYGEN-SENSOR CONTROL | SUPPLY |
| EOBD/OBDII | READINESS FLAGS | CVT GEAR | CAN REQUESTS |
| HELP | | | BACK |



5. PRODUCT UPGRADE PROGRAMME

Autologic Diagnostics Ltd is committed to a constant programme of development to incorporate additional BMW, Land Rover, Mercedes, VAG, Jaguar, Porsche and Volvo models.

Planned BMW upgrades are as follows:

| | |
|-------|--|
| Model | |
|-------|--|

To be announced

Upgrades will be downloaded to users via our Internet site.

In addition to model upgrades, Autologic Diagnostics Ltd commits to a programme of software system improvement which will be made available free of charge to all Autologic users under warranty or maintenance agreement.

Keep in touch with updates by accessing the USER LOG-IN menu on our web site at

www.autologic-diagnostics.com

6. SYSTEM SUPPORT

Support is implemented via telephone, email and the *Autologic* website. When making a call you should have the following information available:

- Software version number
- Vehicle type and VIN number
- System e.g. IKE, EWS, etc.
- Function e.g. Read fault, dynamic information etc.
- Description of problem

Most technical calls should be resolved simply on the telephone. Should there be a software bug, this will normally be resolved within 24 hours and a revised version can be downloaded from our web site to your *Autologic*.