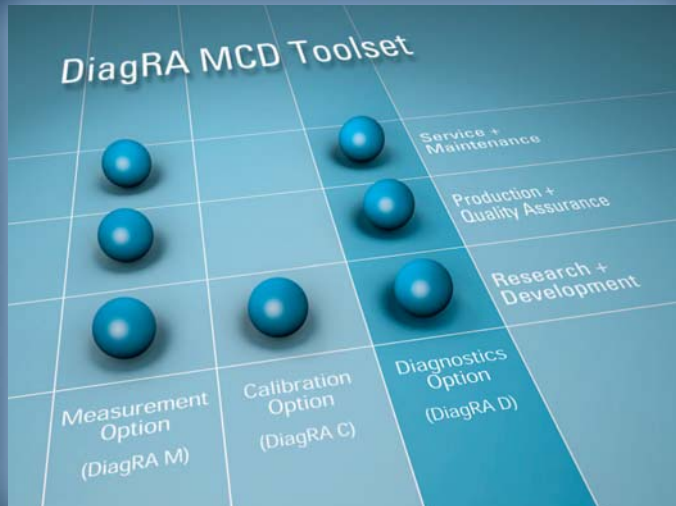


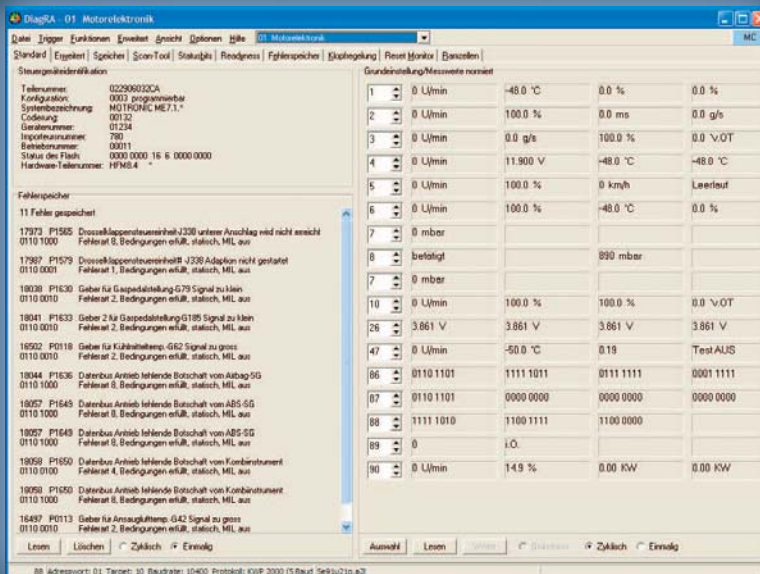
DiagRA D

Diagnostics option from the DiagRA MCD Toolset



The features:

- Scan-Tool, workshop tester and advanced developer functions
- K-Line and CAN
- Support of all common diagnostic protocols und CARB modes
- Convenient functions to save data and to record values
- Optional plug-in for flash programming
- Automation via ASAP-3 and DDE interfaces
- CAN messages can be acquired and transmitted



Your benefit:

- Clear ECU diagnostics for developers
- ECU communication without complex hardware requirements
- Simple, intuitive handling
- Extensive context sensitive help
- Interaction with DiagRA M and DiagRA C for measurement and calibration

DiagRA MCD Toolset

The DiagRA MCD Toolset is an applications and diagnostics tool for working with electronic control units in the automotive industry. It consists of the three integrated options DiagRA M, DiagRA C and DiagRA D. All three options can also be run separately.



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Diagnostics with DiagRA D

The diagnostics option from DiagRA MCD Toolset

DiagRA D is used as a complete, intuitive to operate and particularly clear diagnostics tool by almost 5000 users worldwide. Our previous tool **DiagRA** is now integrated into the **DiagRA MCD Toolset** and is therefore extended by functionalities and features that are necessary for the interoperation with **DiagRA M** (measurement option) and **DiagRA C** (calibrations option).

The functional range can be subdivided into three basic sections:

1. customer-specific workshop diagnostics
2. Scan-Tool for OBDII/EOBD diagnostics
3. advanced developer functions

The workshop diagnostics function is a customer-specific part of the program, which is applicable for various automobile manufacturers. The functionality can be used for all ECUs inside the vehicles. The user needs only information about the diagnostics protocol and bus system used by the ECU. Depending on the vehicle type the following functions are available:

- ECU identification
- Read-out of diagnostic trouble codes
- Deletion of diagnostic trouble codes
- Running the actuator test
- Performing basic settings
- Performing parameter coding
- Read-out of normalized measurement values also with basic setting
- Reading and writing of adjustment channels
- Executing log-in request
- Security access support
- Address oriented reading of memory locations

The scan tool function (address word 33) is implemented in compliance with ISO 9141-2 / SAE J1979, ISO 14230, ISO 15765-4 (CAN), J1850 VPW and J1850 PWM. This means that all control devices that support these protocols can be addressed. In general, these are emission related control devices. The scan tool function supports all 9 modes defined by the authorities as well as all the sub-functions (PIDs). The acquired data can be stored in several formats. Additionally a table of all supported

modes and PIDs can be displayed. All the Scan-Tool relevant control units will be displayed automatically.

The advanced developer functions are designed specially for development engineers. These functions permit you to read out and display the internal fault code memory in full, display the status of the diagnostics functions, read out RAM cells, adaptation ID fields etc. For this a control device description file in DAM or A2L format is required. At the moment the maximum range of display masks is available for engine control units from Robert Bosch GmbH. Customisation for other ECU manufacturers is possible anytime and have been carried out repeatedly.

Further program functions:

- Easy to install and easy to configure
- Usable directly after installation
- Easy-to-define measurement configurations
- Automatic and manual measurement with adjustable parameters
- Protocol file to store measurement data in different formats e.g. XML
- Continuous recording of measurement data with time stamp and saving in .CSV-File (Excel compatible)
- DDE interface for data interchange with other programs
- Test bench connection via ASAP3 interface to read out RAM cells
- Flash option to flash with KWP2000 (CAN TP2.0) using HEX/S19/BIN or SGM data container
- Display and transmission of CAN messages, described in CANdb files
- Complete context sensitive help with simple handling instructions
- Available in German and English, Italian and Czech language

Technical Data:

- **DiagRA D** for Windows 95/98/NT/2000/XP
- Data transfer over KWP 1281 or 2000 with fast or 5 baud initialisation
- CAN diagnostics over several KWP 2000 protocols at ISO-CAN and CAN TP2.0 as well as CAN TP1.6
- GMLAN and Volvo D2 on CAN

- K-Line diagnostics with simple level converter cable on RS232 or USP port
- Several supported CAN und multi-bus interface devices, among others I+ME Basic+ XS and Blue XS, IXXAT CAN interface devices, Vector CANcard X/XL, Etas CAN-Link II, Siemens BlueVCI
- Additionally all PassThru devices according to SAE J2534 (specifications v0202 and v0404) are supported.

Acquired measurement value blocks and values from Scan-Tool Mode1 can be processed with the measurement option **DiagRA M** graphically and numerically.

Based on an Open-Source(GPL) DOS tool for the conversion of the test sequences for the SAE J1699-3 OBDII Compliance Test Cases, we offer with **DiagRA D** a Windows interface, which makes it possible to carry out tests according to SAE J1699-3 in the usual environment.

The Open Source Tool is permitted by the SAE as the only binding tool and is maintained on behalf of SAE. The SAE J1699 expansion module is available free as an additional function in accordance with the regulations for the use of Open Source Software. Unfortunately, on the basis of this combination, we cannot guarantee the long-term availability of this function. We will however maintain and adapt this module as long as is economically justifiable and technologically meaningful.

The use of **DiagRA D** is only possible with a special software license key, generated by RA Consulting. Workshop diagnostics function, advanced developer functions and flash option are only delivered to user group defined by RA Consulting.

A variant **DiagRA D for Windows CE** is also available. It comes with the full functional range of workshop diagnostics and Scan-Tool and with reduced range of developer functions. **DiagRA D for Windows CE** has no interconnectivity with other tools of the **DiagRA MCD Toolset**.

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