

# DiagRA C

Calibrations option from the DiagRA MCD Toolset

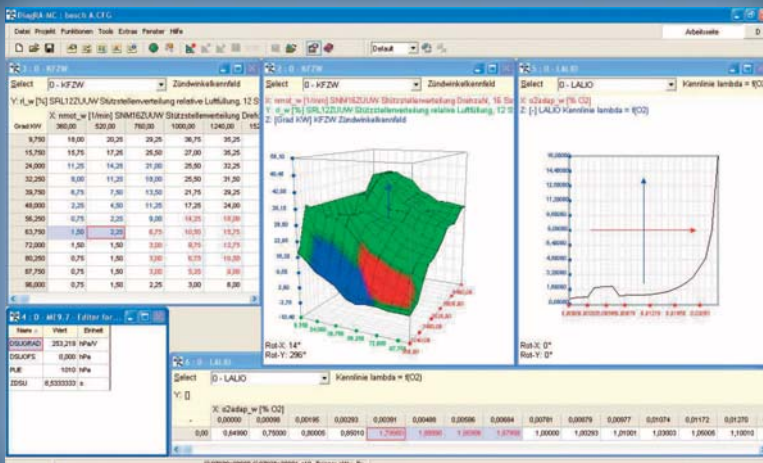


## The features:

- Mobile control unit calibration
- Graphical and numerical display of characteristic curves and fields
- Ergonomic characteristic field editor
- Listing, comparing and mixing of adjustment data
- Editor for structured parameter adjustment of the fault path manager
- Online adjustment
- Standards: CCP, MCD-2, DCM

## Your benefit:

- Powerful calibrations tool
- Flexible, adaptable and storable user interface
- Minimum hardware requirements
- Minimum familiarization time because of intuitive keyboard shortcuts
- Fast and simple configuration
- Interaction with DiagRA M and DiagRA D for measurement and diagnostics



## 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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# Calibration with DiagRA C

The calibration option from DiagRA MCD Toolset



With **DiagRA C** parameters in control units can be changed (calibration) by using the CAN calibration protocol (CCP).

The emphasis here is on simple, fast and intuitive operation as well as a functionality which is exactly tailored to the needs of the applications engineer.

Together with the other options from the **DiagRA MCD Toolset** a complex, but cost efficient applications environment can be assembled.

Our standard software **Codes** has been integrated as an editor for the structured parameterisation of the error-paths for different control unit manufacturers.

## Features

### 1. Low cost

- No emulator needed
- Minimum hardware requirements
- Use of existing hardware
- Simple installation
- Minimum familiarization time
- Minimum build up times
- Fast and simple configuration
- Data exchange with existing applications systems

### 2. Mobility

- Single hand operation
- Notebook as applications computer
- Calibration directly in the vehicle
- If requested wireless communication with the ECU via Bluetooth device (e.g. Blue XS/I+ME Actia, CANblue/IXXAT, Siemens Blue VCI)

### 3. Task suitability

- Demand-oriented functionality by modularisation
- Clarity
- Intuitive operation
- Configurable user interface
- Flexible window handling
- Fast adaptation of user interface and configuration
- The configuration can be stored – hence the functional sequences can be repeated and compared

- Graphical and tabular processing of characteristic curves and fields
- Ergonomic characteristic field editor with copy & paste function for maps and to MS Excel, histogram function for operating point in text mode, 20-fold undo function
- Using standard data exchange format DCM co-operation with e.g. with INCA (product of ETAS GmbH) is possible

### 4. Functionality

- Online adjustment
- Flash function
- Offline processing of data sets
- Listing, comparing and mixing of adjustment data
- Adjustment possible without description files
- Control unit version administration (compatibility testing)
- Sending of CAN frames
- Display of adjustment values in the oscilloscope.
- Switching between working and reference page

### 5. Standards

- CCP conformity
- XCP conformity – as soon as the control devices support this
- DCM for data transfer

### 6. Hardware support for CAN interface devices

- PassThru interface devices according to SAE J2534; already tested: I+ME Basic XS, I+ME PassTru+XS, Dearborn Python and Gryphon
- CAN interface devices from IXXAT GmbH
- MCS4 from Kleinknecht
- CANcard XL (Vector)/CAN-Link II (ETAS)

### 7. System requirements

- Windows NT/2000/XP
- Possibility to connect the used interface hardware

## Codes

Error diagnostics functions are built into each electronic control unit. The data to be analyzed and stored from the diagnostics functions is partly defined by legislation (CARB, EOBD), and partly manufacturer-specific. The common factor is that a core module (Diagnostics Error path manager, Dynamic error management, Fault Management) exists, which has to be parameterized dependent on the vehicle and control unit.

This parameterization takes place via value blocks, characteristic fields, characteristic curves or also individual constants in the memory of the control unit.

The logically connected labels and value blocks necessary for the parameterization of DEPM (Diagnostics Error Path Manager) are generally spread over the address fields of the control unit. The values are frequently coded in a form which is not intuitive for the application engineer (special significance of individual bits, bit fields in which error paths are activated or deactivated etc.), so that correct parameterization or even a comparison of different projects is extremely difficult.

**Codes** supports the application engineer in the parameterization of DEPM. For this purpose Codes analyzes the input data in the form of a descriptive file and provides this information in a structured and clear way. To achieve this it draws additional information from external files (e.g. for the display of error codes in plain text). In its new version 3.0, **Codes** supports the error path managers of various manufacturers.

**Codes** 3.0 is integrated into the **DiagRA C** option of the **DiagRA MCD Toolset**.

The use of **DiagRA C** is only possible with a special software license key, generated by RA Consulting.

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