



MAHAGROUP

EUROSYSTEM V8

Software for Safety Test Lanes

Original Operating Instructions

BAE13101-en



BAE13101-en
2022-06-22

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The contents of this edition have been checked with great care. However, errors cannot be fully excluded. Subject to technical change without notice.

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Contents

1	General Safety Instructions	7
1.1	Introduction	7
1.2	Symbols and Signal Words	7
1.3	What to Do in the Event of Defects or Malfunctions	7
1.4	What to Do in the Event of an Accident	8
1.5	Requirements on Operating and Service Personnel	8
1.6	Observance of the Operating Instructions	8
1.7	Installation Requirements	8
2	Installation and Configuration	9
2.1	Start Set-up from DVD	9
2.2	Software Download	12
2.3	Unattended Set-up	13
2.4	Recommendations and Restrictions	14
3	System Requirements	14
4	Licensing	15
4.1	Test Period	15
4.2	Activation	15
4.3	Withdrawal of License after Changes to System Time	17
4.4	Copy Protection and Licensing Software	17
5	Operation	18
5.1	Main Menu and Screen Elements	18
5.2	Start and Quit Program	20
5.3	Virtual Remote Control	21
6	Test Procedure	22
6.1	Side Slip Test	22
6.2	Shock Absorber Test	23
6.3	Brake Test	24
6.3.1	Ovality Test	25
6.3.2	Brake Efficiency Test	26
6.4	Leaving the Test Lane or the Test Stand	27
6.5	Intervention in the Automatic Test Sequence	28
7	Perform Visual Inspection	29
7.1	Entering and Saving Visual Defects	29
7.2	Displaying the Listed Defects	31
8	Save Measurement	32
8.1	Assignment after the Test	32
8.2	Assignment before the Test	33
8.3	Prepare New Vehicle Inspection	33
9	Customer and Vehicle Management	34
9.1	File Specification	34
9.2	Load Master Data	34
9.3	Complete Data Entry	35
9.4	Delete Measurements	35

9.5	Redisplay Measurements.....	35
10	Brake Test	37
10.1	Final Evaluation of Brake Test	39
10.1.1	Total weight has already been recorded.....	39
10.1.2	Total weight has not been recorded	39
11	Shock Absorber Test	40
12	Side Slip Test.....	40
13	Test without Predefinition	41
14	Safety Inspection	44
15	Define Automatic Measurement	45
16	Administration.....	46
16.1	Database (Administrator).....	46
16.2	Delete Measurements Individually.....	47
16.3	Delete Measurements via Date Range	47
16.4	Delete Measurements via ID Number Range	48
16.5	Delete All Open Tests	48
16.6	Backup of the Database	48
16.7	Restoring the Databases	49
16.8	Transfer Data from an External EDP.....	49
16.9	Table Export / Import / Delete	49
16.10	Test Equipment (QA Representative)	50
16.11	Old Measurements	50
16.12	Export Measurements	51
16.13	Import Measurements	51
16.14	Customer Master Data	52
16.15	Vehicle Master Data	52
16.16	Complete Vehicle Master Data	53
17	User.....	54
18	Settings.....	55
19	Diagnostics.....	56
20	Print All Settings.....	56
21	Version Control	57
22	PC System Overview	57
23	Process Protocol.....	57
24	LON Bus System	58
25	SQL Database.....	58
26	Remote Control and Pedal Force	59
27	Scale	59
28	Check RPM Pulses.....	60
29	Check Pit Safety System	60
30	Calibration	61
31	Pointer	61
32	Additional Tests	62
32.1	Noise Detection	62
32.2	Load Simulation.....	64

32.2.1	Load simulator cannot be released?	68
32.3	Four-Wheel / ASR / ASD Test.....	69
32.3.1	Four-Wheel Brake Testing.....	71
32.3.2	Check ASR / ASD.....	73
32.3.3	Pseudo Four-Wheel	74
32.3.4	Drive Control Pro – Simple Test Procedure.....	75
33	Set up Database Connection.....	76
34	Multi-User Capability.....	78
35	Hybrid System	79
36	Forward.....	80
37	Troubleshooting.....	82

EUROSYSTEM (for short: ESYS) is the name of a software product from MAHA.

- The product integrates vehicle test equipment and other measuring devices and enables the implementation of vehicle test sequences for a PTI.
- Test devices can be connected to the control computer with the LonWorks field bus, via the serial interface or via Bluetooth.
- The data model is stored in a relational database based on the Microsoft SQL Server product.

1 General Safety Instructions

1.1 Introduction

- Please read these operating instructions carefully before using the software. The operating instructions must be kept readily accessible at all times.
- The listed procedures and sequences must be strictly adhered to.
- A printed copy of the operating instructions must always be kept at the site of use.
- The relevant regulations regarding accident prevention and health and safety must be observed.
- Personal injuries caused by non-observance of these operating instructions are not covered by product liability law.
- MAHA accepts no liability for damage to the test stand caused by non-observance of these operating instructions.
- Safety instructions warn of dangers and help to avoid personal injury and damage to property. For your own safety, the safety instructions in this operating manual must be observed.
- The applicable national and international safety regulations on occupational health and safety must be complied with. Each operator is responsible for complying with the regulations that apply to him and must make his own efforts to comply with the current regulations.

1.2 Symbols and Signal Words



Denotes important information and notes which indicate easier handling and operation or warn against incorrect operation.

1.3 What to Do in the Event of Defects or Malfunctions

- In the event of any danger, the test stand and its peripheral equipment must be shut down with the main switch (emergency stop function) on the electrical/switch box.
- In the event of any defects, e.g. deformation, leaking liquid or smoke, please switch off the computer and the test stand immediately and disconnect them from the mains plug and secure them against further use.
- Contact service team.

1.4 What to Do in the Event of an Accident

- Notify first aiders, the ambulance service and/or immediate care doctor:
 - ⇒ Where did the accident happen (address, workshop ...)?
 - ⇒ What happened?
 - ⇒ How many are injured?
 - ⇒ What injuries have occurred?
 - ⇒ Who is reporting the accident?
- Keep calm and answer questions.

1.5 Requirements on Operating and Service Personnel

All persons involved in the operation, assembly, dismantling and disposal of the equipment must

- have the mental and physical capacity for their role,
- have read and understood the operating manual, and in particular the instructions on the procedure in the event of a malfunction,
- show knowledge and experience in handling the equipment and the dangers posed.

The test stand to be connected may only be put into operation by authorised qualified personnel. Furthermore, the test stand may only be operated by instructed qualified personnel.

1.6 Observance of the Operating Instructions

The operating instructions must always be observed in full. Furthermore, these must be passed on to any subsequent owners of the system.

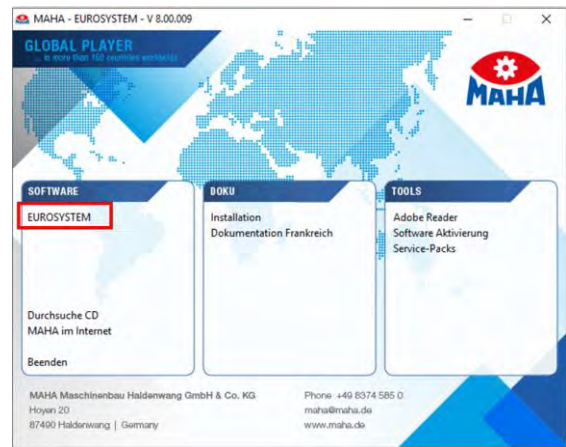
1.7 Installation Requirements

- All passwords and administrator rights are required for installation.
- For test lanes with multi-user sections, a TCP/IP network must be available.
- For external devices with RS232 connection, an RS232 interface must be available.
- A large number of USB-to-RS232 adapters are available from PC dealers, but there is no guarantee that every adapter will work on the RS232 interfaces. For this reason, MAHA provides adapters via the order number (VZ 910140) that have been tested on MAHA products and have manufacturer approval.
- A LON USB card (VZ 912033) is required to connect the LON test lane to the computer.

2 Installation and Configuration

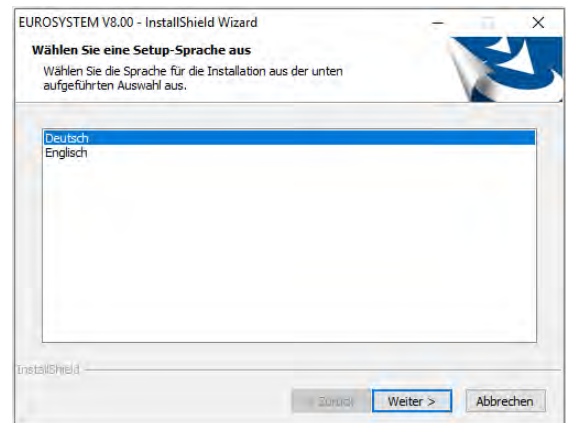
2.1 Start Set-up from DVD

Insert the DVD into the drive.
Installation will start automatically. If this is not the case, please start the <Autorun.exe> or <EUROSYSTEM\Setup.exe> by double-clicking.

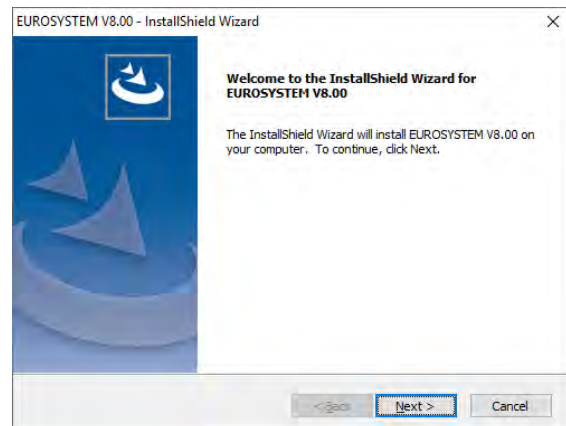


To start the installation process please click <EUROSYSTEM>.

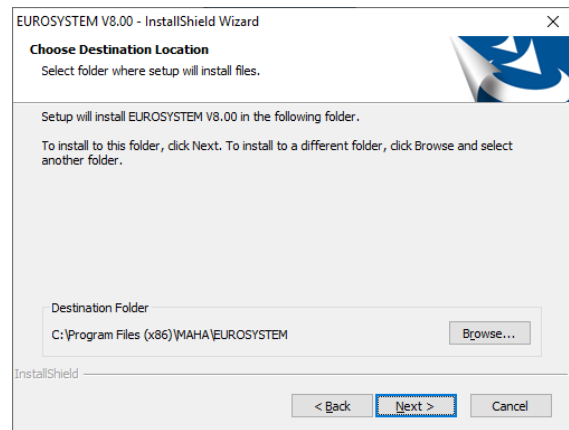
Select the desired set-up language.
Then confirm with <Next>.



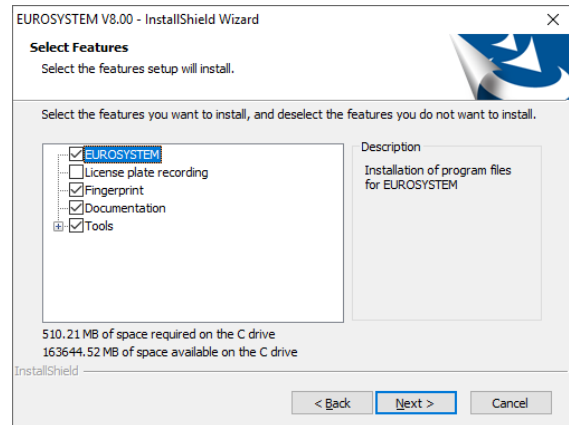
Now the InstallShield-Wizard appears.
Confirm with <Next> here as well.



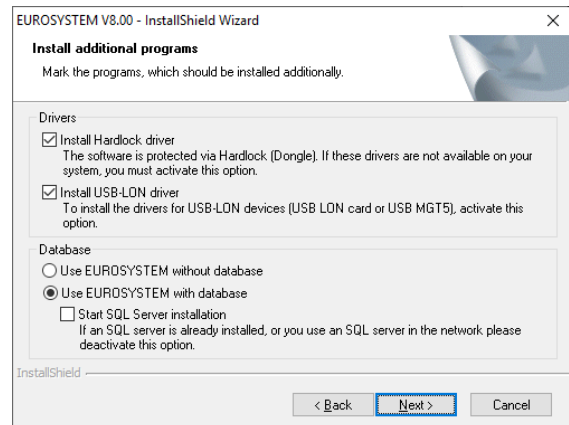
Select the suggested destination directory or click **<Browse>** to select a different directory. Confirm with **<Next>**.



Select the check boxes of the features you want to install.
Then confirm with **<Next>**.

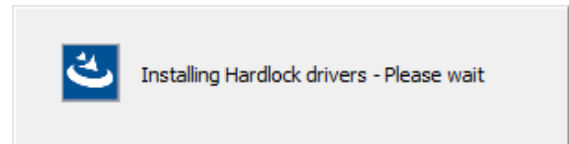
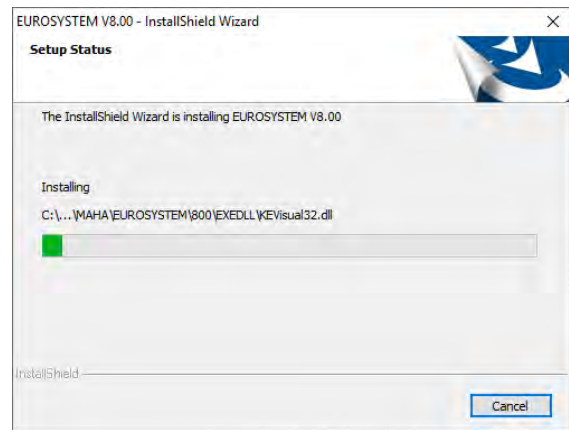


Select the check boxes of the features you want to install.
Then confirm with **<Next>**.

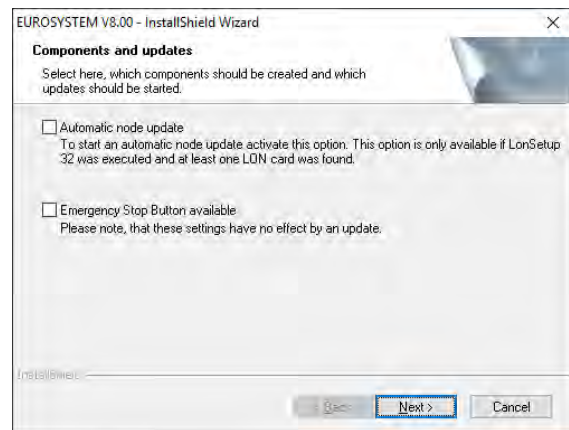


If an SQL server is already installed on your computer, the **<Start SQL server installation>** option is automatically disabled.

The V8 and additional selected programs will now be automatically installed on your system.



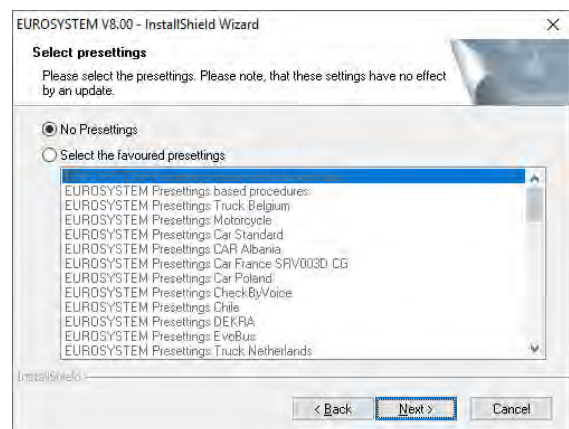
Choose to create an auto-start shortcut on your desktop and/or run an automatic node update: Confirm with **<Next>**.



The **<Automatic Node Update>** option is only available if Lon Setup-32 has been executed and at least one LON card has been found

Now please select the desired SQL presets.

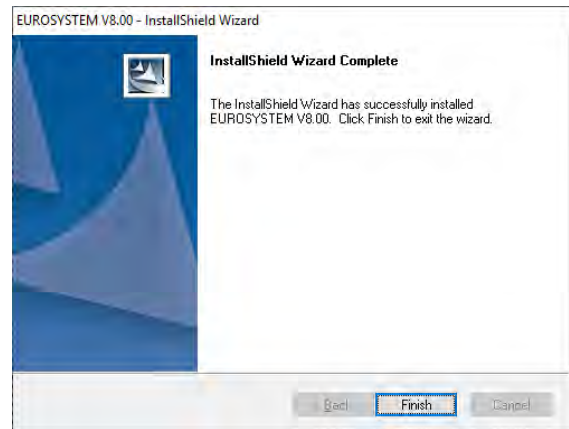
Then confirm with **<Next>**.





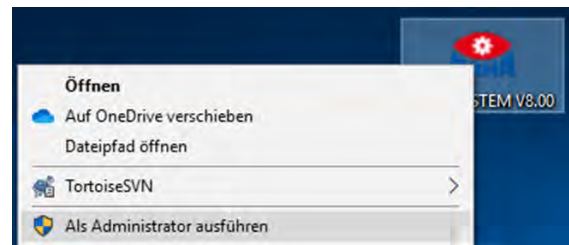
Depending on the selected preset, additional dialogue boxes may appear.

If this window appears, the installation has been completed successfully.
Click **<Finish>**.



Afterwards the V8 must be started once as administrator.

To do this, right-click on the V8 icon on your desktop and select **<Run as administrator>** from the context menu that opens.



The V8 now runs in the administrative context and has the permission to create the required ODBC data sources for the server. For subsequent EUROSYSTEM launches, a normal double click on the icon will suffice.

2.2 Software Download

The V8 is available for download from our FTP server on the MAHA homepage.

<https://www.maha.de/downloads.htm>



Differentiation between **full versions** and **service packs**.

Full versions are suitable for new installations, for example, since all settings are reset, and an SQL server is also installed.

Service packs only change e.g. fixed bugs, product improvements or implemented customer requirements. I.e. all other configured settings will remain unaffected.

2.3 Unattended Set-up

Deployment option:

The installation of the V8 supports what is referred to as an "unattended set-up". This type of installation is performed without any dialogue boxes appearing during the installation or any other user input being required.

Unattended set-ups help system administrators to roll out software using "push" technologies, for example. The user himself can neither cancel the installation nor influence it in any way.

Generate a response file:

An unattended set-up reads the values of a response file created from the original user input. To create this response file, run the following call from the command line: **<Setup.exe -r>**

You must be in the directory where the Setup.exe file is located. Now install EUROSYSTEM as usual and make all settings that are to be executed later during an unattended set-up.

After the installation is complete, you will find the Setup.ISS file in the Windows directory. Copy this Setup.ISS to the source files of your EUROSYSTEM.

Running an unattended set-up:

To run an unattended set-up, run the following call from the command line: **<Setup.exe -s>**

This assumes that the Setup.ISS file is located in the same directory as Setup.EXE. If the Setup.ISS file is located in a different directory, this can be specified with the <f1> parameter: **<Setup.exe -s -f1"<path>\Setup.ISS">**

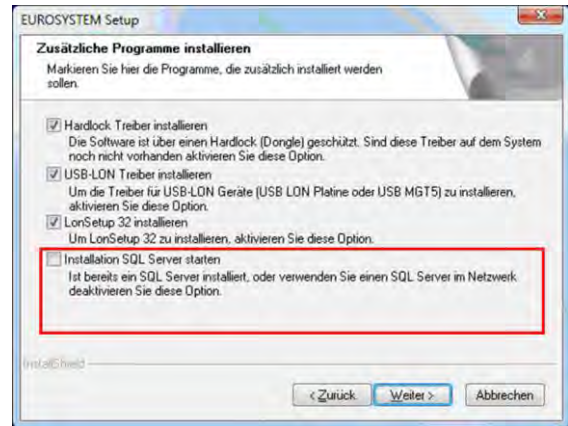
After the unattended set-up has been executed, a log file is created. This is usually located in the directory where the Setup.ISS file is located.

If the log file is to be created in a different directory, the parameter -f2 can be used for this:

<Setup.exe -s -f1"<path>\Setup.ISS" -f2"<path>\Setup.LOG">

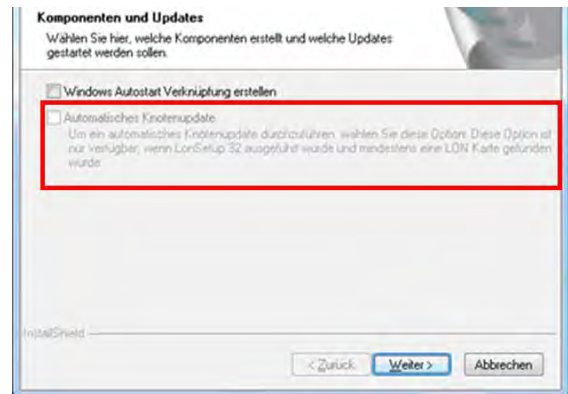
2.4 Recommendations and Restrictions

If a software deployment tool is being used, it is recommended that you do not install the Microsoft SQL server together with the V8, and instead create a separate "distribution package" for this. This is the only way to ensure that the SQL server installation is not started a second time.



In case of an unattended set-up, the item Automatic Node Update must be deactivated.

Reason: This setting calls the Lon-Manager 5 tool, which performs an automatic node update. For security reasons, dialogue boxes are always shown during this node update, and these interfere with an unattended set-up.



3 System Requirements

Compatible Microsoft operating systems

- Windows 7
- Windows 8 and 8.1
- Windows 10 release < 2004/H2

Hardware

CPU	HD space	RAM	USB ports	RS 232
2 GHz	20 GB	2 GB	4	optional

Compatible SQL servers

- 2014
- 2016

Note:

MAHA uses an SQL express version in the V8. That means this version is license-free for the customer per se, but has the following restrictions:

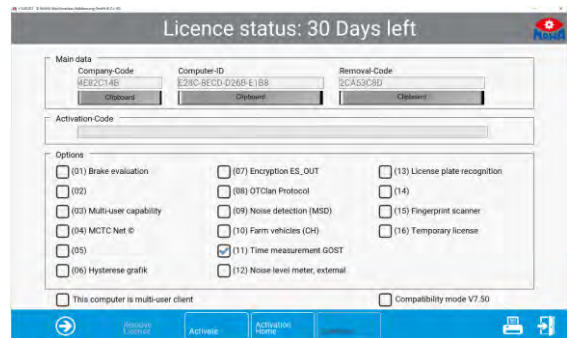
- Max. 10 GB storage capacity
- Use of only one CPU
- Use of the main memory (RAM) is fixed at 1 GB

4 Licensing

4.1 Test Period

The software is license-free for 30 days after installation and can be used as a full trial version.

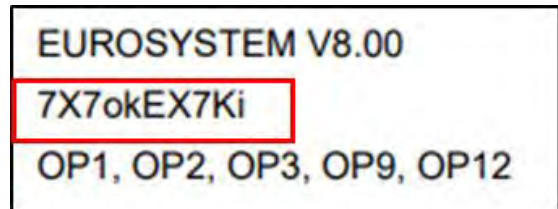
After the 30 days, the software must be licensed and is then available for an unlimited period of time.



4.2 Activation

A PIN is required to activate the software and its options.

This is a ten-digit number and includes the version as well as the selected options.



If you do not have a PIN, you can obtain one from the following service address:

MAHA Service Center

Hoyen 20

87490 Haldenwang

Germany

Phone: +49 8374 585 100

Internet: <http://www.maha.de>

Mail service@mahaservicecenter.com

or at:

<https://www.maha.de/de/software/activation-code>

To get the 32-digit activation code, please press this button:

ORDER YOUR PERSONAL ACTIVATION CODE ONLINE

You will now be redirected to the following page:



Now select the appropriate product and fill in the required fields.

The screenshot shows a form with the following fields and values:

- Produkt: EUROSYSTEM V8.00
- Firmen Code: 77267507
- Computer ID: 9F8D-A66F-748E-96A4
- PIN ist vorhanden:
- Lösch-Code vorhanden:

A red asterisk is visible next to the Product, Firmen Code, and Computer ID fields. A 'Weiter' button is located at the bottom center.



Use the **<clipboard>** copy function to easily copy the company code and computer ID from the software interface.

Then confirm with **<Next>**.

Now enter your e-mail address and PIN:

The screenshot shows a form with the following fields and values:

- E-Mail: max.muster@maha.de
- E-Mail wiederh.: max.muster@maha.de
- PIN: 7X7okEX7Kj

A red asterisk is visible next to the PIN field. A 'Weiter' button is located at the bottom center.

Then confirm with **<Next>**.

You will immediately receive the 32-digit activation code. In addition, you will receive a copy sent to the e-mail address we have on file for you.

AUFTRAGSBESTÄTIGUNG

1x Lizenzierung: EUROSYSTEM V8.00
+ Option: Bremsauswertung VZNr: VZ911079
+ Option: MLT 3000 Bluetooth VZNr: VZ990441
+ Option: Mehrplatzfähigkeit VZNr: VZ911276
+ Option: Geräuschsuche (MSD) VZNr: VZ990385
+ Option: Schallpegelmessgerät extern VZNr: VZ911374

Firmen Code: 77267507
Computer ID: 9F8D-A66F-748E-96A4

Ihr Persönlicher Aktivierungs-Code: FD0EBC2B-D35639EA-9C52660F-141891F5

Diese E-Mail wurde automatisch erstellt

Mit freundlichen Grüßen
MAHA Maschinenbau Haldenwang GmbH & Co. KG Hoyen 20 - 87490 Haldenwang (Deutschland)

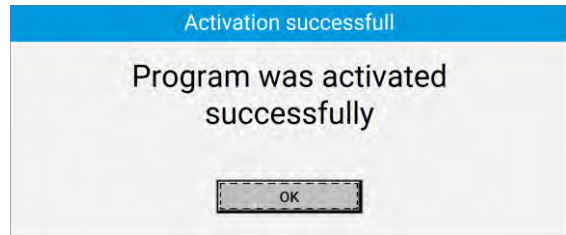
Now copy the activation code and paste it into the interface.

The screenshot shows the 'Licence status: 26 Days left' window. It contains the following information:

- Main data: Company-Code (85774352), Computer ID (8DD9-C739-7DE0-191D), Removal-Code
- Activation-Code: [Empty field]
- Options: A grid of checkboxes for various features, including (01) Brake evaluation, (07) Encryption ES_OUT, (13) License plate recognition, (02), (08) OTClan Protocol, (14), (03) Multi-user capability, (09) Noise detection (MSD), (15) Fingerprint scanner, (04) MCTC Net G, (10) Farm vehicles (CH), (16) Temporary license, (05), (11) Time measurement GOST, (12) Noise level meter, external, (06) Hysteresis grafik.
- Bottom: 'This computer is multi-user client' and 'Compatibility mode V7.50' checkboxes.

Navigation buttons at the bottom include 'Activate', 'Activation Home', and 'Continue'.

Then confirm with <Activate>. (Computer ID corresponds to MAC address).



4.3 Withdrawal of License after Changes to System Time

In the event that the system time (date and time) in Windows is excessively changed, the license is withdrawn by the program. The background to this measure is that the software suspects possible tampering.

Changes to the system time can be made in a range of **±90 minutes** without the license being withdrawn.

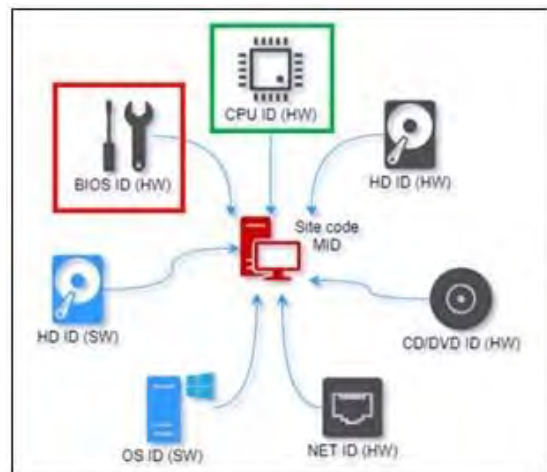
4.4 Copy Protection and Licensing Software

In order to prevent unauthorised reproduction or illegal use, the "PC Guard" software is employed for licensing EUROSYSTEM.

In the current configuration, the following system parameters are being monitored:

- a. **CPU ID**
- b. **BIOS ID** (only up to and including Release 8.00.020)

In the event that one of these IDs is changed, the license is withdrawn by PC Guard.



IMPORTANT:

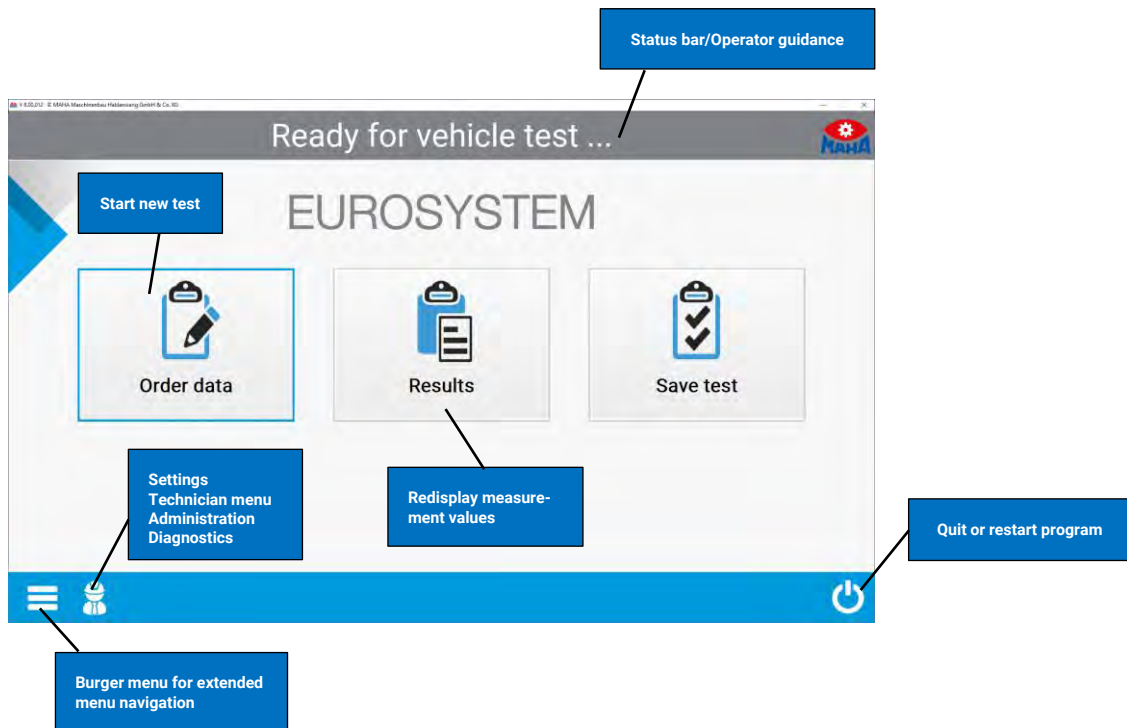
- As from Release 8.00.021, only the CPU ID will be monitored. This is due to the fact that special updates may cause changes to the BIOS ID, which cannot be influenced by the user.
- Changes to the system time can be made in a range of **±90 minutes** without the license being withdrawn (see section "Withdrawal of License after Changes to System Time").
- The **EuroSy32.exe** is additionally monitored. Changes made to this file will also result in the license being withdrawn.

5 Operation

5.1 Main Menu and Screen Elements

Note:

The operation of the V8 software is menu-driven and largely self-explanatory and intuitive. In the following, only the most important program items are explained.



In general, all functions or buttons on the screens can be selected using the cursor or tab key and selected with **<Return>** or **<Enter>**.

You can also select by clicking the mouse or by touching the buttons via touch screen.



The screen layout of the main menu may differ slightly depending on the section number and/or the settings, browser or options selected.

Screen elements

The screenshot shows a software interface titled "Overview of order data" with a MAHA logo in the top right. The interface is divided into several sections: "Vehicle identification" (with fields for Vehicle type, License plate no., Axles, and VIN), "Customer data" (with fields for Name/company, Street, Email, Telephone, and First name/company 2), "Vehicle data" (with fields for Manufacturer, Model, Veh. type 2, Year man., Vehicle no., Init. reg., Mileage, Engine no., and Brake manufacturer), and "Test data" (with fields for Inspector, perm. weight [t], Calculation pressure, and toggle switches for Vehicle loaded and Brake system, hydraulic). A bottom navigation bar contains icons for back, forward, home, and buttons labeled "Load data", "Additional data", and "Continue". Three blue callout boxes point to the MAHA logo, the input fields, and the bottom navigation bar.

Yellow = mandatory fields

Information line

The first line of the screen is the information line. The notices seen here during the program run refer to the next step and/or the current program activity.

Input fields

Input fields appear recessed on the screen. Entries can be made via the keyboard. You can switch between the input fields by pressing the tab key (or cursor keys up/down, or the return key).

Within an input field you move with the cursor keys right/left. Overwrite mode is enabled, i.e. the input of a character overwrites the character to the right of the cursor. Overwrite mode can be deactivated by pressing the Ins key.








Characters before the cursor can be deleted individually by the Del key (those behind the cursor using Backspace).

Buttons

Buttons appear highlighted like a physical button on the screen. In general, buttons can be activated by mouse click and by pressing the corresponding function key on the keyboard.

Touch-screen monitors offer additional operating options and convenience.

Not all buttons shown here are always visible on the screen. Their position also changes depending on the type of display. For example, other buttons are larger and labelled. Their function is thus evident from the label or the symbol.

Button	Assignment
	Previous page
	Next page
	Main menu
	One level up
	One level down
	Call up test report/start printout
	Exit page

5.2 Start and Quit Program

Start program

Turn the test stand's main switch to "ON".

Start Windows and start the V8 with a double click on the desktop icon.

⇒ The first screen to appear is the MAHA logo. In the bottom line you can read which version of the program it is.

Initialisation. Please wait.

The components listed under <**Connected devices**>are installed and ready for operation.

Confirm with <**Next**>.

<**Please wait...**> appears and then the main menu of the user software appears

Quit program

Before switching off the main switch, the software and the Windows operating system must be properly exited.

From the main menu, press **<ESC>**.

A window will now open above the main screen

To quit the program, select:

<ESC> to return to the program

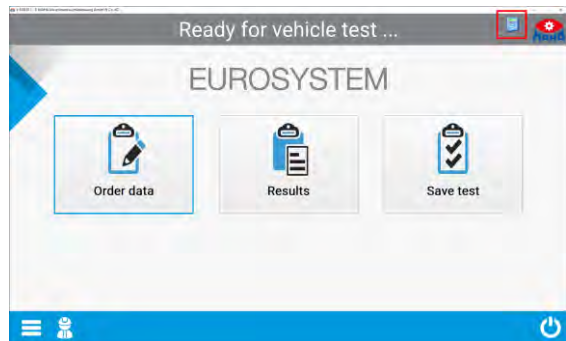
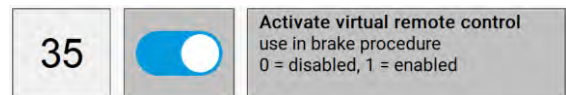
<F2> to quit the program

5.3 Virtual Remote Control

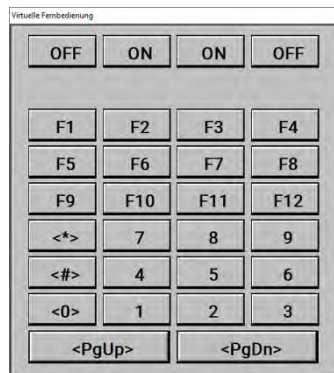
This is required when using a tablet to enter customer or vehicle data if no keyboard is connected.

Under the soft dips **<Options>**, set no. 35 to active.

- 1 To call up the virtual remote control, click on this symbol in the information line.



The following view then opens:



- 2 To switch off or put the remote control in the background, click the icon again.

6 Test Procedure

6.1 Side Slip Test

- 1 Drive the front axle of the vehicle over the test plate (speed between 2.5 and 7.5 km/h) of the side slip tester.

⇒ Side slip tester active

This screen appears and displays the track deviation measured for the front axle in m/km.



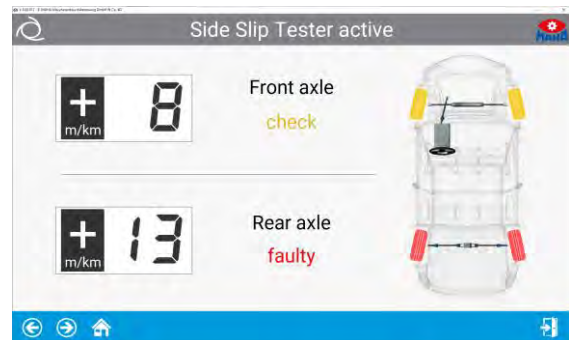
- 2 If the measured values are within the tolerance range, i.e. if the side slip test is OK, the values are displayed in green (side slip test faulty in red).
- 3 The rear side slip is measured when the rear axle of the vehicle is moved over the side slip tester.

The rear axle is tested in the same way as the front axle.

⇒ Side slip tester active

The measured values are now added to the screen.

In the example, the measured values are outside the tolerance range, i.e. the side slip test is faulty.



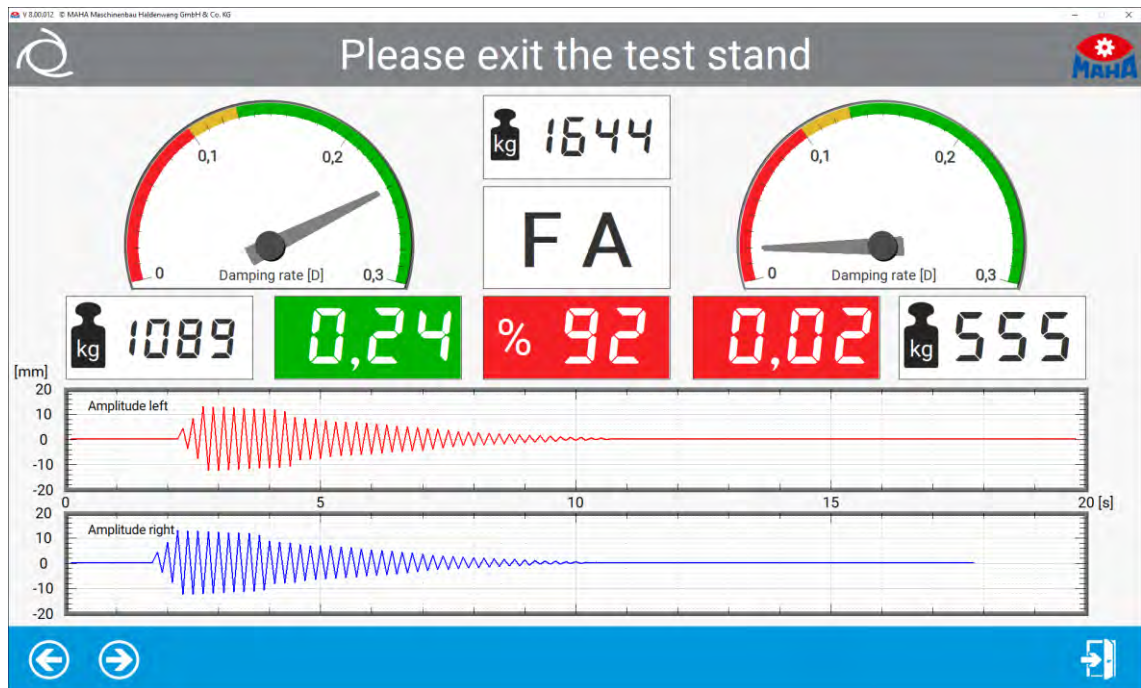
The first measured value stored in the temporary memory is always the value for the side slip of the front axle. This order cannot be altered.

Intervention by the tester in the automatic test sequence is not possible with this measurement. When the test is repeated, the measured values in the temporary memory are overwritten.

The measured values can be saved and displayed again later. Please read the detailed description in the chapter "Saving the measurement" and "Displaying measurements again".

6.2 Shock Absorber Test

- 1 Park the vehicle with the front axle on the test plates. The wheels must be straight and centred on the test plates and must not be blocked by the gears or an applied brake.
 - ⇒ The test stand is automatically activated when both test plates are loaded with > 100 kg.
 - ⇒ The test is carried out in a controlled manner from 10...5 Hz and is performed simultaneously for both sides.
 - ⇒ After completion of the measurement, the test stand switches off automatically.
 - ⇒ The degree of damping D is determined and displayed on the screen.



- 2 Drive the vehicle until the rear axle is on the test plates.
 - ⇒ The test is carried out in the same way as for the front axle
 - ⇒ The button <Single graph> shows the amplitudes are either separately or one superimposed on the other.



You can **intervene in the automatic test sequence** by moving onto the test plates again. Check if the field in the top centre shows the desired axle, if necessary, switch to the correct axle with the navigation keys.

6.3 Brake Test



It is not necessary to carry out the brake test to prove the legally specified braking effect up to the slip cut-off.

The slip cut-off is generally to be understood as a safety cut-off (gentle on the tyres) and not as a cut-off point for the brake test. *

Stopping the brake test prematurely at approx. 90 % of the possible braking force is completely sufficient and is strongly recommended to avoid tyre damage!

* Please observe the implementation regulations for determining the braking effect.

The specified sequence of brake tests is (example truck):

- 1 Ovality test of the front axle
- 2 Brake efficiency test of the front axle
- 3 Brake efficiency test of the parking brake
- 4 Ovality test of the rear axle
- 5 Brake efficiency test of the rear axle



The acquired measurement values are stored in this order the temporary memory. The test stand does not automatically detect which brake you are currently testing.

For example, you have performed the brake test for the parking brake. The display jumps to the next brake test, i.e. for the rear axle. Even if you now repeat the parking brake test, the measured values are still stored as rear axle values.



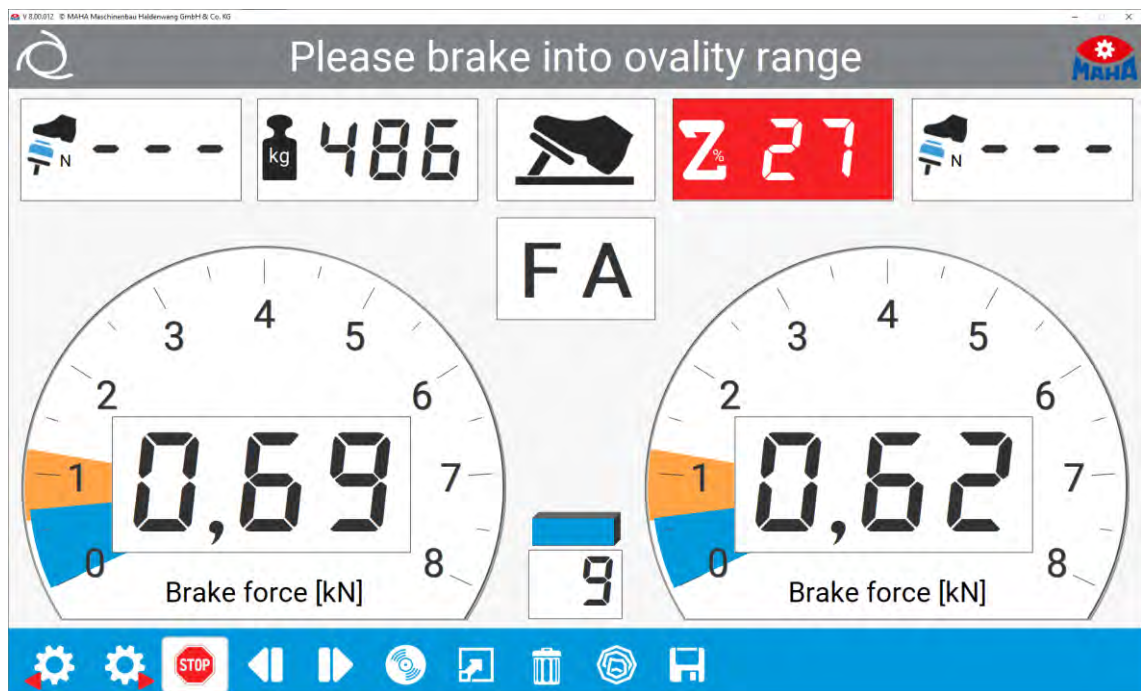
Always pay attention to the indicated brake to be tested – front axle or rear axle. If necessary, use the function keys to switch to the desired axle.

Intervention in the automatic test sequence and the correct method for storing data are described after the ovality test and the brake efficiency test.

Drive slowly and straight into the roller set. Both sensing rollers must be depressed. Move the gearbox to the zero position and release the brake.

6.3.1 Ovality Test

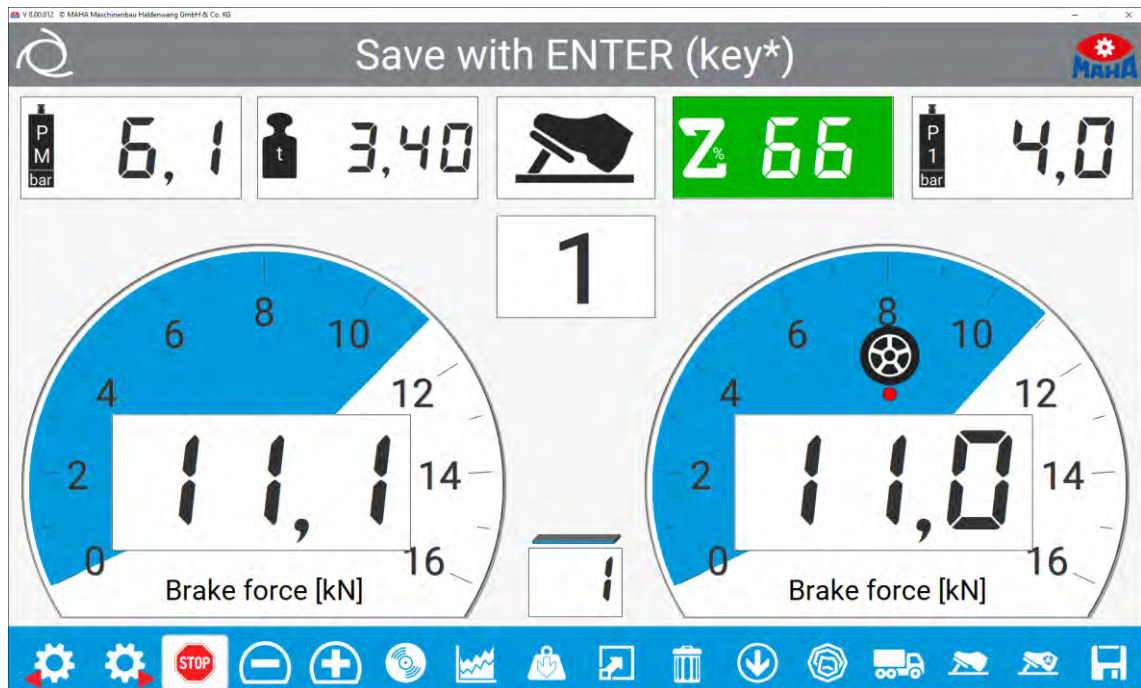
- 1 In the field in the middle, <FA> appears for front axle
- 2 A yellow sector for the ovality measurement is shown in the analogue displays
- 3 Now brake slowly until the braking force is in the yellow ranges and hold it there.
- 4 Now wait until the timer has run out. The ovality values are stored in the temporary memory.



The settings for the braking range of the ovality measurement and the timer are predefined. The timer runs out in a period corresponding to one wheel revolution. Changes to these settings may only be made by the MAHA Service Center. The brake efficiency test is carried out directly after the ovality test.

6.3.2 Brake Efficiency Test

- 5 Depress the brake pedal slowly until about 90 % of the possible braking force has been achieved. Braking until the slip cut-off is not necessary.
- 6 The motors will now stop. The measured maximum braking force appears on the display and is stored in the temporary memory too. The corresponding button now appears in green.
- 7 Release the brake pedal immediately. The test stand is now ready for the next test and the motors start up again.
- 8 With the motor running, drive the vehicle to be tested forwards out of the roller set.



(Automatic mode active)

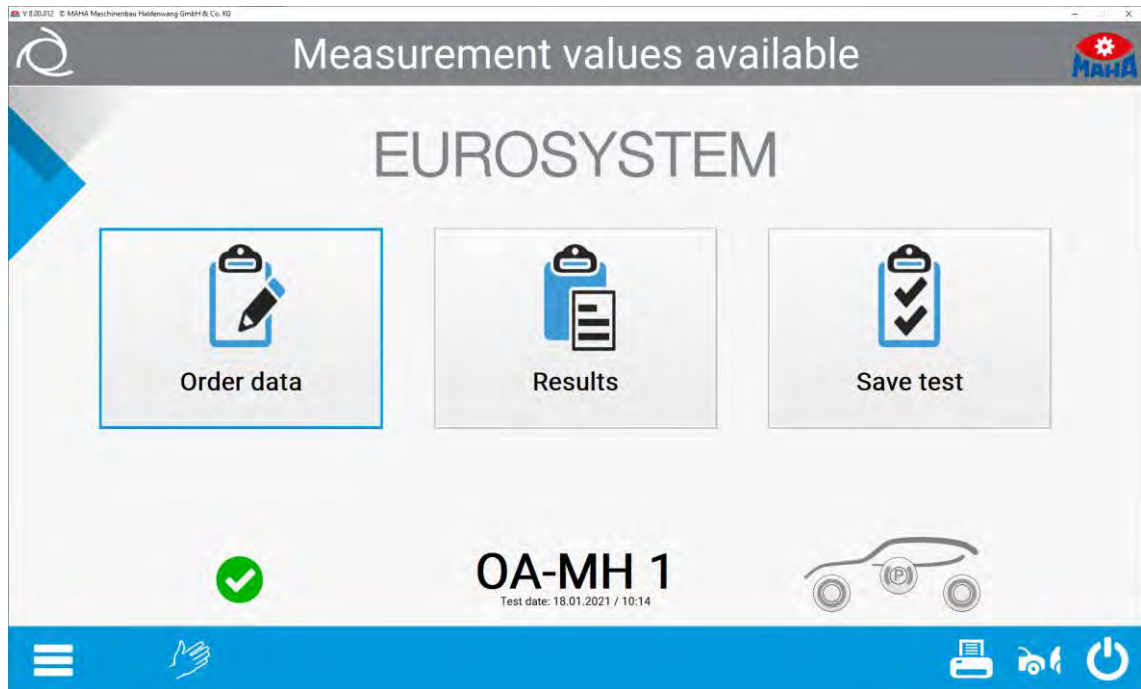
After the **ovality and brake efficiency test of the front axle**, the side slip test and the shock absorber test of the rear axle are carried out. Then drive the rear axle into the roller set of the test stand.

Then the **brake efficiency test for the parking brake <FB>** is performed. This runs in the same way as the brake efficiency test of the front axle. Follow steps 5 and 6. Finally, **ovality and brake efficiency tests are performed for the rear axle <RA>**. The procedure is the same as that of the tests on the front axle. Follow steps 1 to 7.

6.4 Leaving the Test Lane or the Test Stand

The automatic test sequence is now complete. The display returns to the main menu.

- 9 Please wait until the motors of the test stand have switched off.
- 10 If possible, exit the test lane forwards, otherwise quickly drive over the roller set of the test stand and the test plates of the shock absorber test stand and the side slip tester in reverse.








(Manual mode active)

- 11 Save the measured values. Description in the section "Saving the measurement".

6.5 Intervention in the Automatic Test Sequence

Enter the test stand slowly and straight with the axle to be tested again. Both sensing rollers must be depressed. Set the gearbox to the zero position and release the brake.

- 1 Select the <FA>, <PB>, <RA> (or ) buttons to switch between the front axle, rear axle or parking brake displays.
- 2 The field in the middle shows which brake you can repeat the test for.
- 3 The ovality test is repeated with . Wait until the timer has run out.
- 4 Press  to delete the temporary memory.
- 5  sets the displayed measured value as the max. measured value if, for example, the vehicle does not reach the specified slip.
- 6  stores the displayed measurement value for the brake that is displayed in the temporary memory.



Changing measured values in the way described above can only be done as long as the measured values are still available in the temporary memory.

If the measurements have already been saved with customer and vehicle data after the test procedure (see section "Saving the measurement"), subsequent changes are no longer possible. In this case, run the test again.

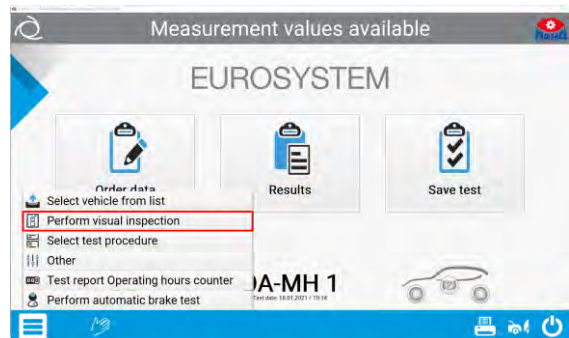
7 Perform Visual Inspection

7.1 Entering and Saving Visual Defects

The inclusion of visual defects in the assessment of a vehicle is at the discretion of the user. The entry can be made before or after the test sequence. Even if the measured values are displayed again, it is still possible to enter defects.

EUROSYSTEM's catalogue of defects corresponds to the assessment catalogue for the vehicle roadworthiness test as defined under §29 of the German Road Traffic Licensing Act (StVZO).

From the burger menu on the start page, select **<Perform visual inspection>**.



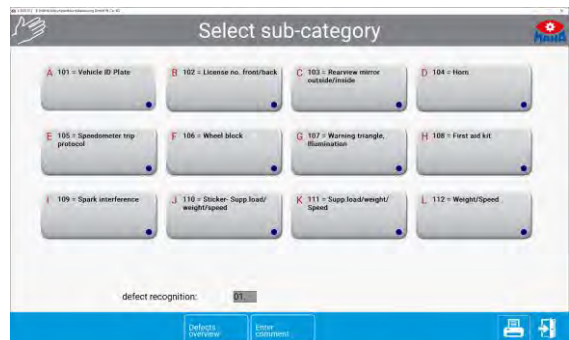
1 An assessment catalogue now appears.

⇒ Defect category



2 Select the defect category. Subdivisions of the defect category then appear (here, for example, "brake system"):

⇒ Select defect



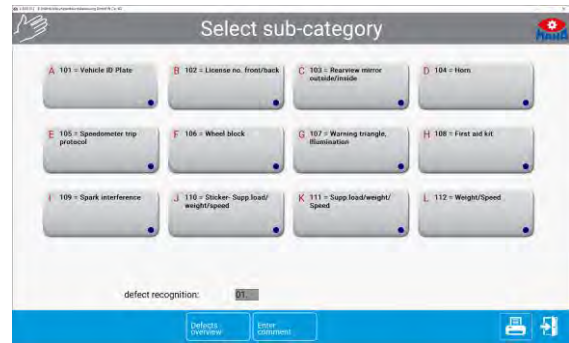
3 Select the defect.

This is followed by the screen for determining the location and evaluating the defect (next screen).

If defect groups consist of several pages, you can scroll through them using Page down or Page up.

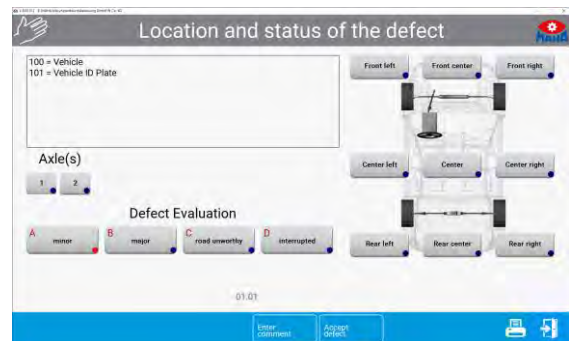
After performing steps 1 to 3, the screen shown below appears.

⇒ Specify the location and assessment of the defect



4 Select the location of the defect.

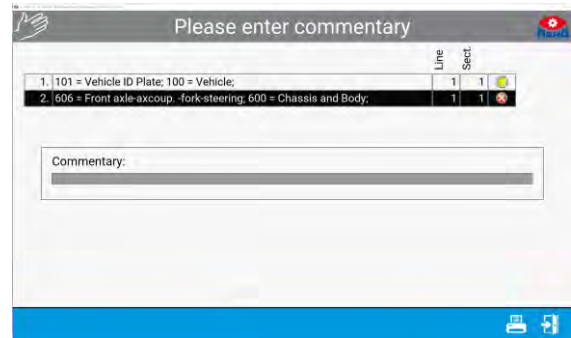
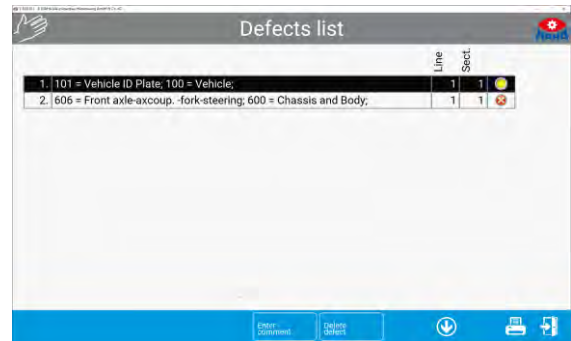
The blue dot at the bottom right of the respective button turns red (defect selected). By pressing the button again, the marking can be "switched off" again.



- 5 Now assess the defect(s). After selection and an exact determination of the defect, it must be saved with **<Accept defect>**, otherwise your entries will be lost.
- 6 With the button **<Enter comment>** it is possible to link individual comments to the defect.
- 7 An input window appears in which additional comments of max. 40 characters in length can be entered.
- 8 Press **<Return>** to accept the entry
- 9 After accepting the defect and the comments, the display automatically returns to the screen with the defect categories. You can now create further defects using the procedure described.
- 10 Enter all other defects in the manner described.

7.2 Displaying the Listed Defects

- 1 To display the overview, press the button in the <Defect overview> toolbar
- 2 It is also possible to make or change notes and comments later in the overview.
- 3 To do this, select the desired defect so that it is highlighted.



8 Save Measurement

To save the entire measurement, a corresponding customer with vehicle must be assigned. The stored measurement results are managed in the measurement database. From this database the measurements can be displayed again at any time.



A customer or vehicle can be assigned and linked before or after an inspection.

The measurement database also includes customers who are in a queue for testing. Customers are added to the queue using **<Create measurement>**.

After the automatic test sequence has been completed, the main menu reappears on the screen. Proceed as follows:

Measured values available (save)

You have already left the test lane for this purpose.

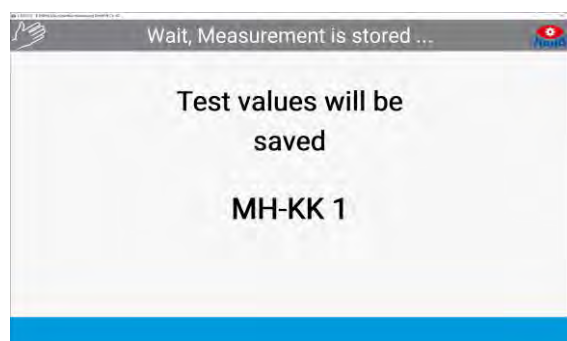
- 1 Please select **<Save test>**. Where a vehicle has been assigned before the start of the test, select **<Select vehicle from list>** in the burger menu. A selection from the measurement database now appears:

License plate	Test date	Inspector	Vehicle manufacturer	Company / Name	City
MH-KK 1	18.01.2021				
MM-PR 34	18.01.2021				
NLR-KENNZ	15.01.2021				

- 2 Via touch display or interaction with the mouse, the corresponding vehicle can now be assigned. It is also possible to filter the database with a search term/attribute (e.g. indicator) in the top line.
- 3 Confirm with **<Load data>**. Depending on the assignment of the vehicle before or after the test, the following now happens:

8.1 Assignment after the Test

The screen confirms that the acquired measured values are stored as a data record with the assigned customer/vehicle. This coincides with the completion of the vehicle inspection, i.e. when the screen returns to the main menu after approx. three seconds, the system is ready for a new measurement.



8.2 Assignment before the Test

You have selected a vehicle from the queue (open list) to start testing now.

- 1 The main menu appears and displays the vehicle registration number. The system is now ready to acquire the measured values for the active vehicle.

⇒ The operator guidance now signals: "Vehicle inspection can begin ..." The test lane or test stand can now be driven onto.



- 2 After the vehicle test has been completed, the operator guidance system displays the following message: Measured values available (save) ...
- 3 The operator now has two options:
 - a Perform further tests with the active vehicle.
 - b Save the measured values with and end the vehicle test.

8.3 Prepare New Vehicle Inspection

Before starting a new test sequence, please ensure that the temporary memory is empty and that the message "Ready for test" is displayed in the operator guidance

<Vehicle inspection can begin>

After the test values have been saved correctly, test standby mode automatically reappears in the operator guidance. However, a message other than the ready message may also be signalled in the operator guidance, or that a test is to be aborted and started from the beginning.

- 1 To do this, please press the **<Discard measured values and new vehicle>** button in the main menu.



9 Customer and Vehicle Management

In customer and vehicle management, stored customer and vehicle data can be organised. A customer is stored as a data record in connection with a specific vehicle registration number.

Once customers have been saved, they can be called up again and again in order to assign measured values from tests that have been carried out to them. In this way, for example, tests carried out at different times can be compared.

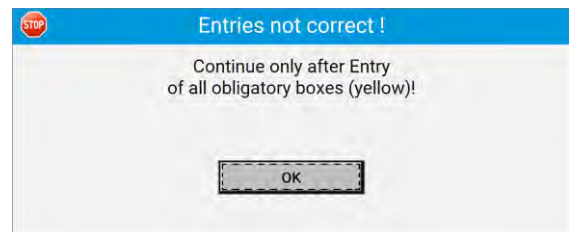
9.1 File Specification

You can switch between the input fields with the cursor key or the return key if no touch screen is used. Data entry is restricted to numeric or alphanumeric entries for individual fields.

- 1 To do this, select **<Order data>** from the main menu using the button. The following screen appears.

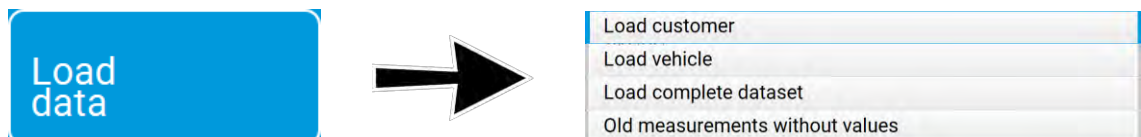
- 2 When entering the data, the mandatory fields shown in yellow must be filled in. The customer is free to fill in the remaining fields.

⇒ If the coloured mandatory fields are not filled, this error message appears:



9.2 Load Master Data

To simplify data entry, existing data records can also be loaded into the input window:



- **<Load customer>** retrieves an existing customer and the customer database appears.
- **<Load vehicle>** assigns a vehicle to the customer and the vehicle database appears.
- **<Load complete dataset>** loads a complete dataset. Here vehicle and owner data incl. all measured values.

- With **<Old measurement without measured values>**, a past measurement is loaded. Here incl. all vehicle and owner data, but without measured values.

9.3 Complete Data Entry



After completing the data entry, the following options are available:

- With **<Start measurement>**, the upcoming vehicle inspection can be started immediately. The system immediately switches to the main menu. The operator guidance reports "Vehicle inspection can begin..."
- **<Save data>** saves the record to the server. The input window is cleared and a new vehicle can be created.
- With **<Change current data>**, the data currently listed can be changed or corrected.
- With **<Delete input mask/new>**, all listed inputs and data are discarded.

9.4 Delete Measurements

See section "Administration / Database (Administrator)".

9.5 Redisplay Measurements

When redisplaying measurements, the following distinction must be made:

- Display of a currently performed measurement, i.e. the corresponding customer/vehicle is still active.
- Display of a measurement whose acquisition has already taken place some time ago, i.e. the desired measurement must first be loaded.

- 1 From the main menu, select **<Results>**.
The measurement database appears from which the desired measurement is selected:

License plate	Test date	Inspector	Vehicle manufacturer	Company / Name	City
BUK 177	18.01.2021	George Jack	Mercedes	Sturms	Boston
U-VT 211	18.01.2021	George Jack	Mercedes	Sturms	Liverpool
HH-MK 76	18.01.2021	Smith	Bairler		BOSTON
MM-KR 123	18.01.2021	George Jack	Mercedes Benz	MAHA Maschinenbau Haldenwan/Boston	

Select the vehicle to be examined, then the screen from b.) appears

- b Once a test has been performed, the overview of all measurements performed appears immediately:



- 2 Select the desired piece of testing equipment. If the test was passed, the buttons appear with a green frame, otherwise with a red frame.

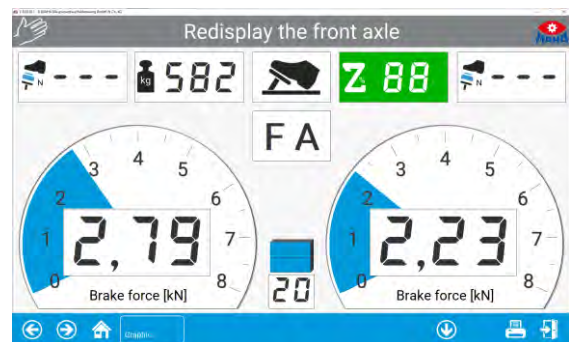
10 Brake Test

Although the following illustrations only ever show values recorded for a front axle, the description of the brake test re-display procedure applies equally to the parking brake and rear axle.

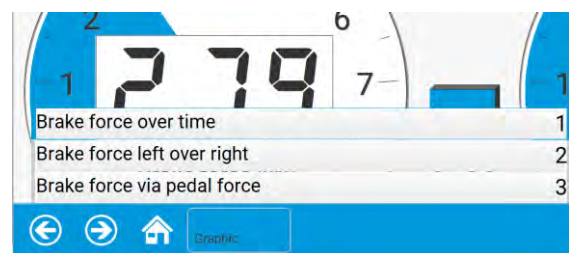
- 1 Select the <Brake tester> button.
- 2 Here you can choose between the front axle, the parking brake or the rear axle to visualise the respective measured values.



- 3 Likewise, a diagnostic log can be opened in the respective display. This is done by pressing the printer symbol.
- 4 You can then navigate through the individual axles in the respective graphical axle evaluation.

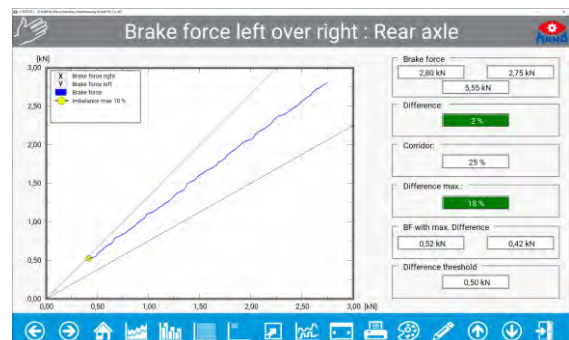


- 5 Furthermore, various graphs are offered in the individual view for detailed visualisation.
- 6 The example shows <Braking force left over right>.



Here the braking force is shown left over right. The values are given on the right in kN and their difference can be read in per cent.

The curve should be within the boundary lines (corridor). The corridor can be changed in the variable list.



The following buttons are available for the graphic displays:



Choose graph



Show / hide application pressure



Show / hide guides



Show / hide legend



Constant (maximum) scaling



Smooth curves



Show graph whole page / show measured values



Change background colour of the diagram



Change line thickness

10.1 Final Evaluation of Brake Test

10.1.1 Total weight has already been recorded

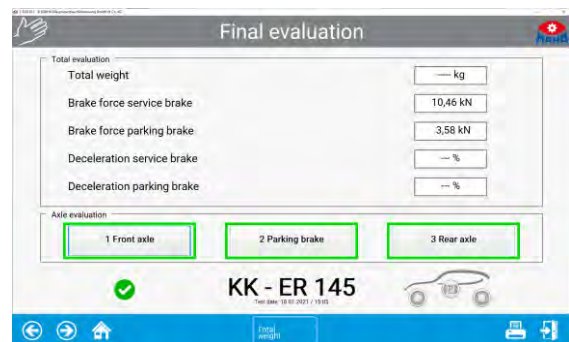
All braking values and the resulting deceleration are displayed.



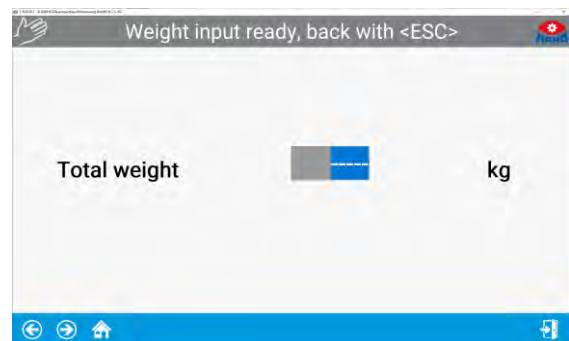
10.1.2 Total weight has not been recorded

For example, the brake test was the only test carried out on a plate brake tester without drive-over scales.

- 1 The following screen appears. This shows only the measured braking forces, but this display is supplemented by the **<Weights>** button.



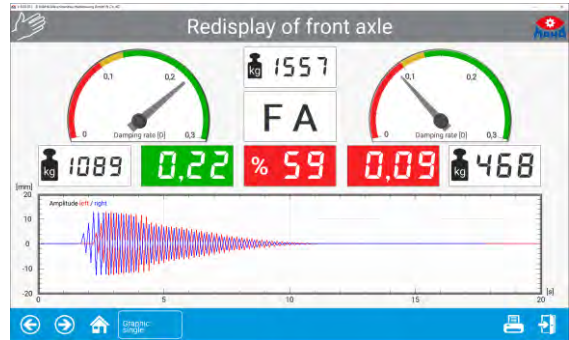
- 2 When the **<Weights>** button is pressed, the display changes to the weight input screen.



- 3 Now enter a weight in kg (see vehicle registration document) and confirm the entry. Subsequently, the final evaluation is issued in relation to the weight.
Alternatively, you can also dispense with entering the weights. The final evaluation will then appear without the percentage deceleration.

11 Shock Absorber Test

- 1 Select <Axle damper>
- 2 You can switch between the front and rear axle displays using the cursor or return key if you are not using a touchscreen.

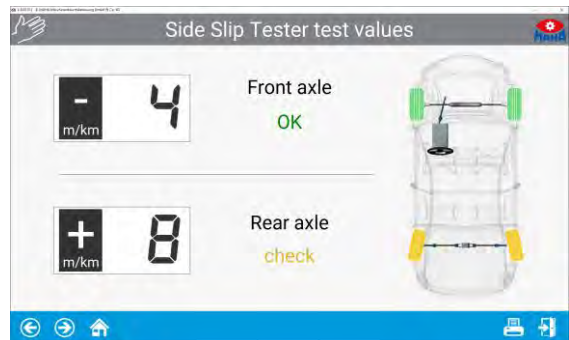


The test stand measures the overall axle damping, not the quality of the shock absorbers. The manufacturer shall not be liable for any costs or damage incurred as a result of the incorrect assessment of shock absorbers.

12 Side Slip Test

Select <Side slip tester> to display the side slip tester test values again.

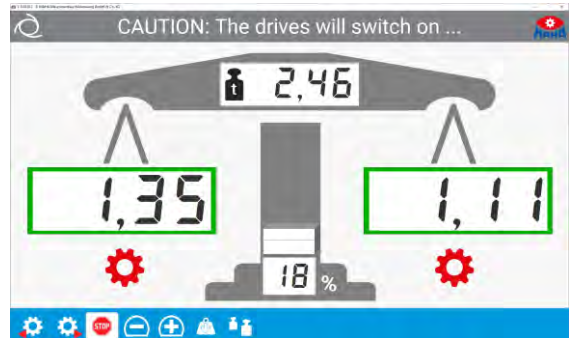
⇒ The display for the side slip test appears, the results of which are already known from the test procedure. Measured values outside of the specified limit values are displayed in red.



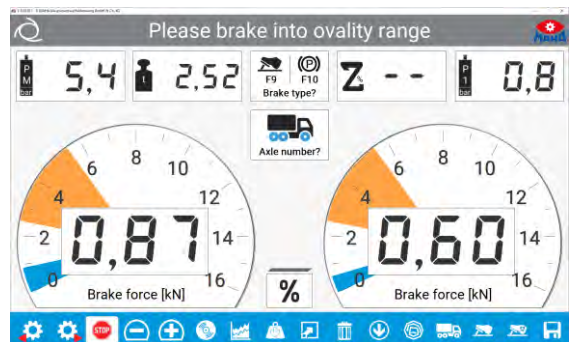
13 Test without Predefinition

To start the test sequence, the monitor must show the main menu. The test lane is now ready to be driven onto.

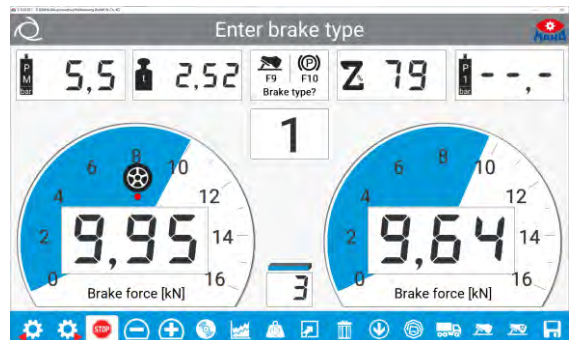
- 1 After moving onto the roller set, activate the pointer stop with <F8> on the FFB 3. (Only 1x per vehicle required.)



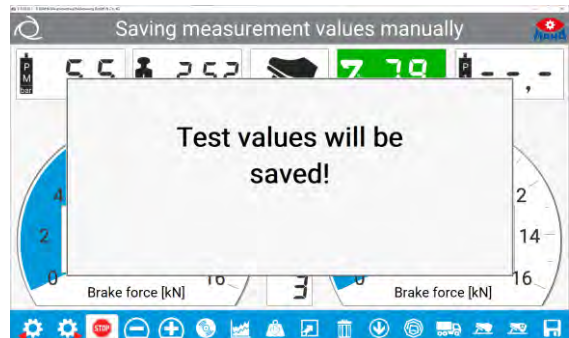
- 2 Apply the brake when prompted.
⇒ The max. measured values are displayed.



- 3 Enter the axle number and brake type, press the <*> button on the remote control to save the measurement.



- ⇒ Measured values are stored

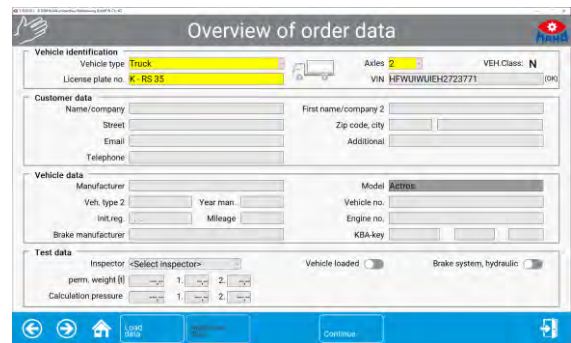


- 4 If necessary, change the axle and repeat the procedure for other brakes.
- 5 Exit roller set

- 6 Press the **<Order Data>** button to open the Vehicle/owner data screen.



- 7 Enter data (mandatory fields are highlighted in **yellow**), then confirm with **→** or press **<Next>**.



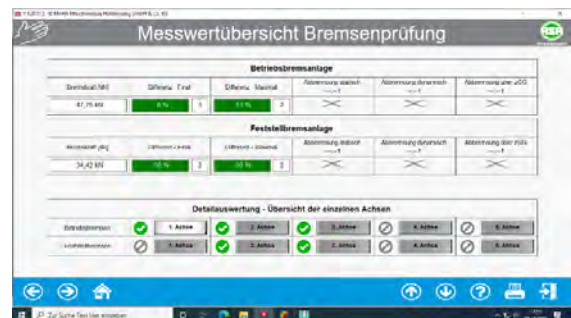
⇒ The newly created vehicle appears on the main screen.



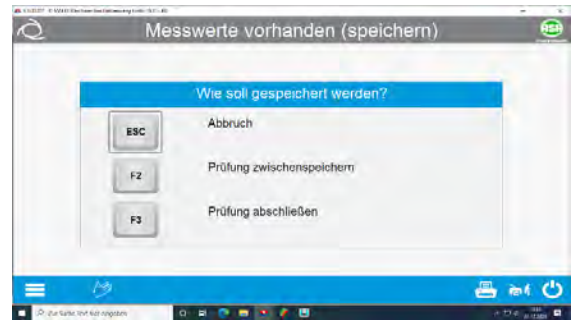
- 8 The **<Results>** button on the main screen can be used to open the measured values overview.



Brake evaluation: Individual measured values can be selected and displayed. The printer icon can be used to open the printer menu for printing the results.



In the main menu press the button **<Save test>**, then an intermediate query will appear asking you how you wish to save.



9a The **<F2/ Cache>** button in the pop-up window is used to cache the measurement. The vehicle is then visible in the open list, and the measured values can be changed again later.



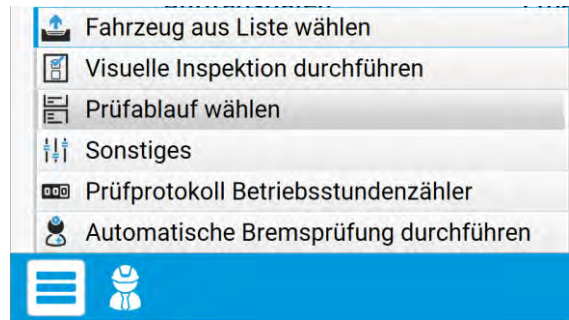
9b The button **<F3/ Finish test>** in the pop-up window finished and saves the measurement. The vehicle is removed from the open waiting list, and the measured values can no longer be changed.

With button **<Select vehicle from list>** in the burger menu, the vehicle can later be selected from the list, retested and the previous measured values overwritten.



14 Safety Inspection

1 In the burger menu, navigate to the item **<Select test procedure>** and confirm this.



2 Select **<Safety inspection>** here

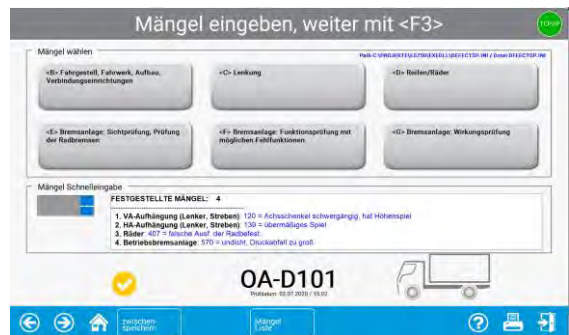


3 Then select the desired test sequence **<1 - 9>**.

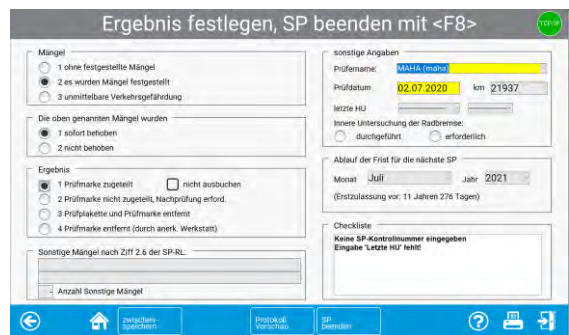
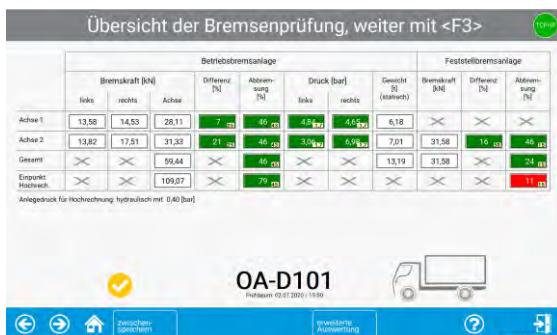


4 Enter data or load vehicle accordingly.

5 Subject vehicle to inspection and note defects as appropriate.



6 Finally, determine the result of the safety inspection and conclude it. Changes are not possible after that.



15 Define Automatic Measurement

1 In the burger menu, navigate to the item **<Select test procedure>** and confirm this

2 Select **<Define automatic measurement>** here



3 Define vehicle manually or load definition.

Fahrzeug definieren, weiter mit <F8>

Achse	Bremsanlage				Liftachse	Sensor	
	BTB	FSB	HBA A	HBA B		links	rechts
1.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1
2.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	2
3.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	3
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	2
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	3
7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1
8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	2
9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	3

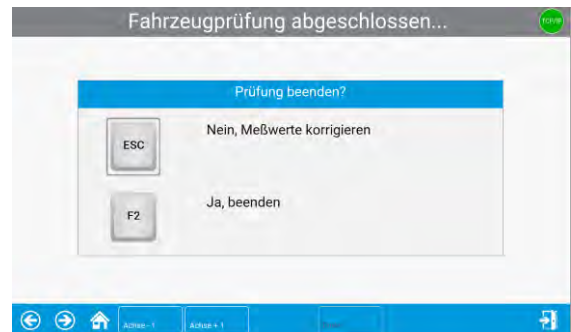
Tabelle

Definition laden | Definition speichern | Auswahl löschen | Weiter

4 Move to test stand, perform inspection.



5 After completion of the inspection, the measured values can be corrected or the vehicle can be terminated.

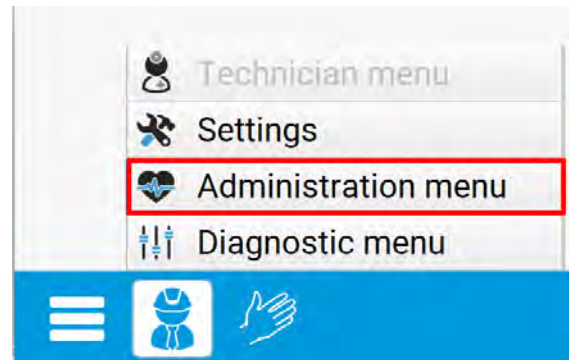


16 Administration



Only functions that apply to users without extended access rights are described below.

- 1 Under Options, Settings and Administration, activate the menu item **<Administration>**



16.1 Database (Administrator)

The **<Database (Administrator)>** menu item can be used to delete measurements and open tests and to save, export and import data.



The following options are available for database maintenance:

- Delete individually
- Delete via date range
- Delete via IDs
- Delete open tests
- Backup
- Restore
- Transfer data from external EDP
- Table export / import / delete
- Change settings
- Save settings
- Compress database

16.2 Delete Measurements Individually

- 1 In the database menu, select **<Delete individually>**
- 2 Mark the measurement to be deleted in the table
- 3 Then select **<Load data>**

License plate	Test date	Inspector	Vehicle manufacturer	Company / Name	City
IK-13 145	18.01.2021	George Jack	Opel	Jeanmi	London
ZU-BR 12	18.01.2021	George Jack	Opel	Jeanmi	London
LI-VT 211	18.01.2021	George Jack	VW	MAHA	Manchester
55-GR 19	18.01.2021	George Jack	VW	MAHA	Manchester
HH-MK 76	18.01.2021	Smith	Daimler	MAHA	BOSTON
MM-KR 123	18.01.2021	George Jack	Mercedes Benz	MAHA Maschinenbau Haldenwar	Boston

⇒ Before deleting the data record, a confirmation prompt appears:

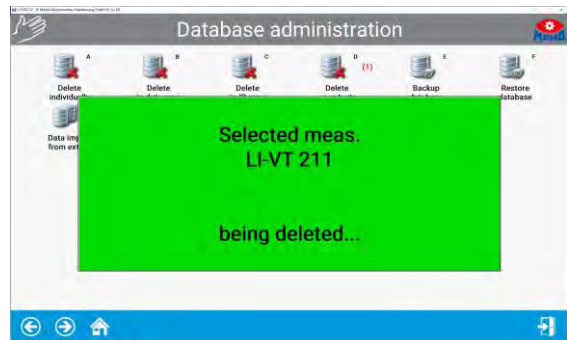
Delete data record?

ESC No

F2 Yes

- 4 Select **<F2>** to delete the measurement or exit the screen with **<ESC>** if you do not want to delete the record.

⇒ After deletion, the database administration screen appears again:



16.3 Delete Measurements via Date Range

- 1 In the database menu, select **<Delete via date range>**
- 2 Enter the desired period for which measurements are to be deleted in the two input fields.

Delete measurements via date range

Enter date <from> <to>:

Date from: 27.10.2020 Date to: 18.01.2021

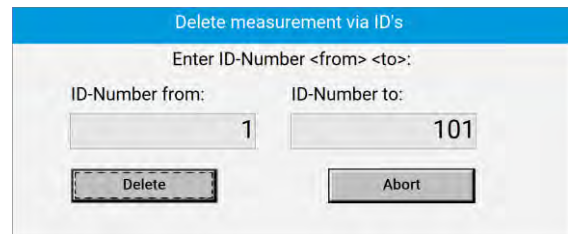
Delete Abort

- 3 Select **<F2>** to delete the measurements or exit the screen with **<ESC>** if you do not want to delete.

⇒ After deletion, the database administration screen appears again.

16.4 Delete Measurements via ID Number Range

- 1 In the database menu, select **<Delete via IDs>**
- 2 Enter the desired ID number range for which measurements are to be deleted in the two input fields.

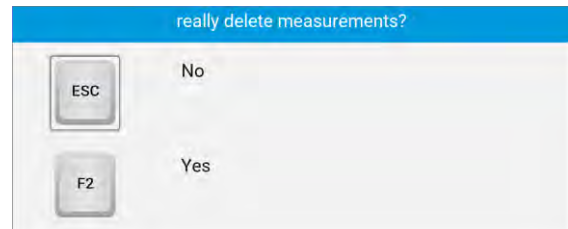


- 3 Select **<F2>** to delete the measurements or exit the screen with **<ESC>** if you do not want to delete.
- ⇒ After deletion, the database administration screen appears again.

16.5 Delete All Open Tests

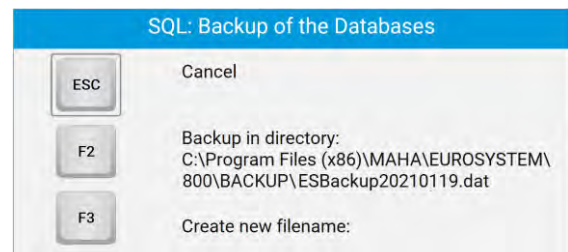
- 1 In the database menu, select **<Delete open checks>**
- 2 Select **<F2>** to delete open tests or exit the screen using **<ESC>** if you do not want to delete.

- ⇒ After deletion, the database administration screen appears again.



16.6 Backup of the Database

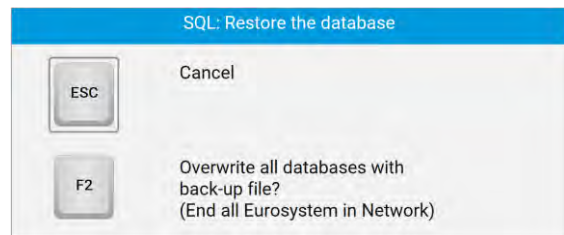
- 1 In the database menu, select **<BACKUP>**
- 2 Select **<F2>** to create a backup in the suggested directory, or use **<F3>** to select the backup file itself. Alternatively, exit the screen with **<ESC>** if you do not want to create a backup at all.



- ⇒ After the backup, the database administration screen appears again.

16.7 Restoring the Databases

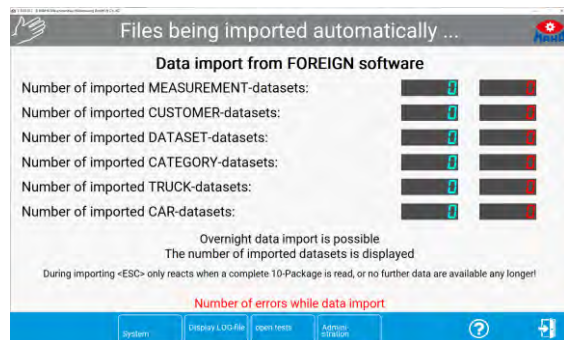
- 1 In the database menu, select **<RESTORE>**
- 2 Select **<F2>** to overwrite all databases with the backup file, or exit the screen with **<ESC>** if you do not want to perform a restore.



⇒ After the restore, the database administration screen appears again.

16.8 Transfer Data from an External EDP

- 1 In the database menu, select **<Transfer data from external EDP>**
- ⇒ The files are automatically transferred from the third-party EDP. The number of data records read in is displayed.
- ⇒ After the data transfer, the database administration screen appears again.



16.9 Table Export / Import / Delete

- 1 In the database menu, select **<Table export / import / delete>**.
- 2 Select the desired tables and then **<Delete>** or **<Table export>** or **<Table import>**.
- 3 Confirm the corresponding confirmation prompt.



16.10 Test Equipment (QA Representative)

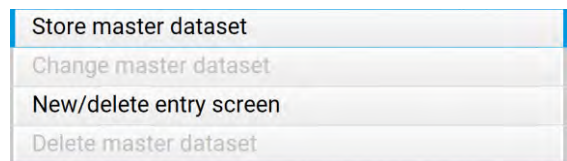
Via the menu item <Test equipment>, the test equipment and the calibration periods can be displayed, changed and printed out.

- 1 Select administration menu <Test equipment (QA Representative)>

⇒ The following screen appears:



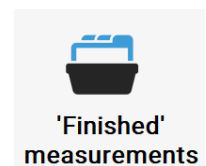
- 2 Enter the test equipment. Entering the test equipment name is mandatory, all other input fields are optional.
- 3 <Load master data> allows test equipment data which has already been created to be loaded.
- 4 <Calibrate = manufacturer> adopts the manufacturer's specifications.
- 5 With <Work order>, a work order can be created for the test equipment.
- 6 Press <Next> to open this menu and select a menu item.v



16.11 Old Measurements

Any measurements from the measurement database can be selected and loaded via the menu item "Old measurements".

- 1 Select menu item <Old measurements>.



The following screen appears:

License plate	Test date	Inspector	Vehicle manufacturer	Company / Name	City
MB1 7250	18.01.2021	George Jack	Opel	Skarpm	London
ZU-BR 12	18.01.2021	George Jack	VW		Manchester
K-BR 9	18.01.2021	George Jack	VW		BOSTON
HH-MR 76	18.01.2021	Smith	Daimler		
MM-KR 123	18.01.2021	George Jack	Mercedes Benz	MAHA Maschinenbau Haldenw	Boston

- 2 Mark the desired measurement in the list
- 3 Select <Load data>

16.12 Export Measurements

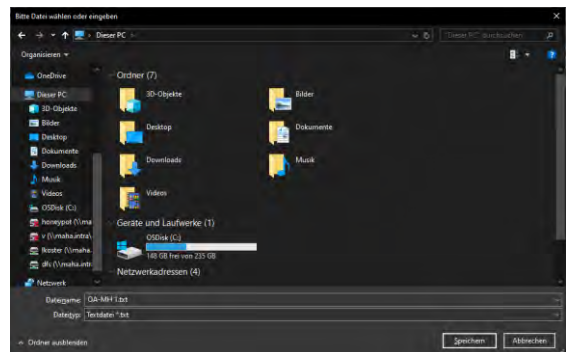
- 1 Select menu item <Export measurement>.



The following screen appears:

License plate	Test date	Inspector	Vehicle manufacturer	Company / Name	City
Ka ER 146	18.01.2021				
ZU BR 12	18.01.2021	George Jack	Opel	Jeanmi	London
K BR 9	18.01.2021	George Jack	VW		Manchester
H4 MK 76	18.01.2021	Smith	Daimler		BOSTON
MM KR 123	18.01.2021	George Jack	Mercedes Benz	MAHA Maschinenbau Haldenw	Boston

- 2 Now mark the desired measurement in the list here
- 3 Then select <Load data>
- 4 Select the desired export directory in the file search field and confirm with <Save>



16.13 Import Measurements

- 1 Select menu item <Import measurement>



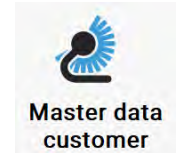
- ⇒ Select the desired import file in the file search field and confirm with <Open>.



The file is transferred to the measurement database

16.14 Customer Master Data

- 1 Select menu item <Customer master data>.

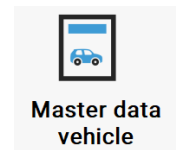


The following screen appears:

- 2 Enter the customer data. The coloured fields must be filled in.
- 3 Use <Next> to open the pop-up menu and select a menu item.

16.15 Vehicle Master Data

- 1 Select menu item <Vehicle master data>



The following screen appears:

- 2 Enter the vehicle data. The fields with a coloured background must be filled in
- 3 Use <Next> to open the pop-up menu and select a menu item.

16.16 Complete Vehicle Master Data

- 1 Select menu item <Complete Master data>



Master data
complete

The following screen appears:

Enter data or load using <F5> then <F8>

Customer data
License plate no: **GA-MH 1**
Name/company: _____
Street: _____
Email: _____
Telephone: _____
First name/company 2: _____
Zip code, city: _____
Additional: _____
Telefax: _____
Axiel: 2 PB to: 2 PB single:

Vehicle data
Manufacturer: _____ Model: _____
Veh. type 2: _____ Year man: _____ Vehicle no: _____
Inst. reg.: _____ Mileage: _____ Engine no: _____
VIN: _____ ChD: _____ VEH Ident. No. (start): _____ Seats: _____
Brake manufacturer: _____ pneumatic: hydraulic: Electric parking brake: double circuit:
KBA-key: _____ KBA-No: _____ Color: _____
Tire size: _____ Additional: _____

Test data
Expirat. Seadl: MI _____ ST: _____ ET: _____ Select inspectors: _____
Empty weight [kg]: _____ perm. weight [kg]: _____ traction weight [t]: _____ empty: loaded:
Fuel type 1 No fuel: _____ Fuel type 2 No fuel: _____ Systems: 3 Type: _____ Turbo: R-cat:

Vehicle type and class
Vehicle type: 2 Car VEH Class: M1

Navigation: [Back] [Next] [Home] [Load data] [Additional data] [Agree VEH type] [Continue] [Print] [Help]

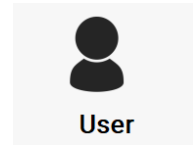
- 2 Enter the customer and vehicle data. The fields with a coloured background must be filled in
- 3 Use <Next> to open the pop-up menu and select a menu item.

Store complete dataset
Change complete dataset
Entry screen new/delete
Delete complete dataset

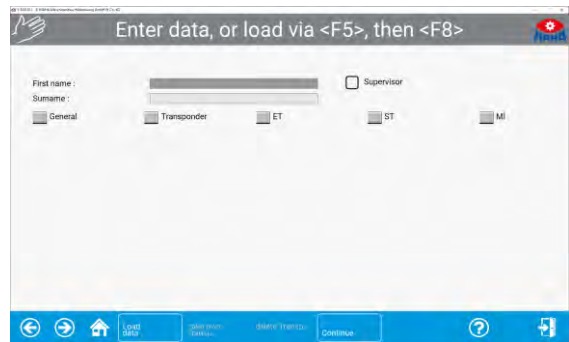
17 User

The supervisor can be created as the administrator. This user in turn can create other users and assign rights.

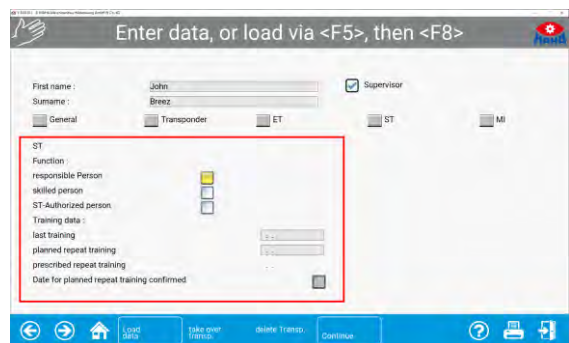
- 1 Select menu item **<User>**



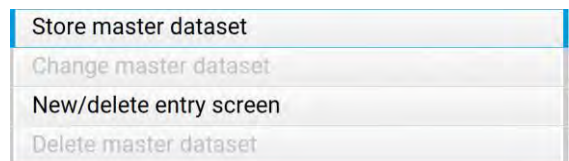
The following screen appears:



- 2 Please enter a username.
- 3 Check one of the boxes according to the user's field of application.
- 4 Fill in the additional input fields.



- 5 Use **<Next>** to open the pop-up menu and select a menu item.



18 Settings



Please note that improper modifications may cause functional errors that are not covered by the warranty.

The functions of the menu are nevertheless accessible to the user, but should only be activated under professional instruction. It is conceivable that medium and small malfunctions can be remedied by remote maintenance via Team-Viewer through our Service Center +49 8374 585 100.

In addition to the system settings, software adjustments for test stands and measuring devices subsequently integrated into the test lane can be carried out here too. The user can also select the language and choose an interface design.

- 1 Starting from the main menu, navigate to **<Settings>**



- 2 Select **<Settings>**
- 3 The setting menu now appears.



19 Diagnostics

The diagnostics menu provides all program and system information. The connected devices can be checked for proper functioning.

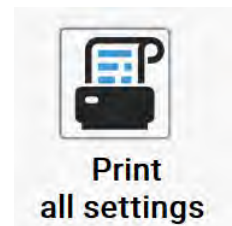
- 1 Starting from the main menu, navigate to **<Diagnosis>**
- 2 Now select the **<Diagnosis menu>**

The diagnosis menu appears:

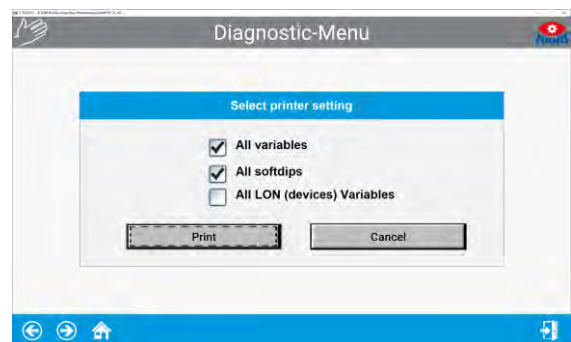


20 Print All Settings

- 1 Select menu item **<Print all settings>**



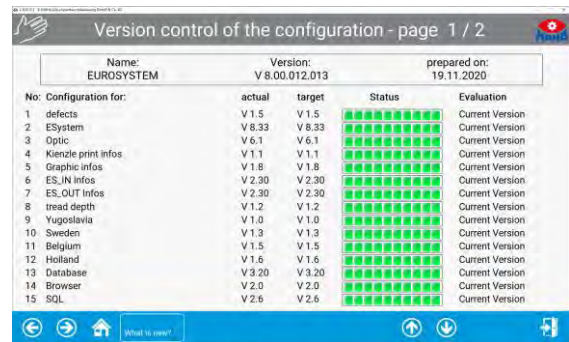
- 2 Select the desired category and start the printout.



21 Version Control

- 1 Select menu item **<Version control>**.

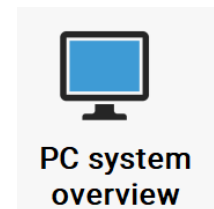
The configuration is checked to ensure it is up to date by comparing actual and target versions and evaluated accordingly.




No.	Configuration for:	actual	target	Status	Evaluation
1	defects	V 1.5	V 1.5	■■■■■■■■■■	Current Version
2	ESystem	V 8.33	V 8.33	■■■■■■■■■■	Current Version
3	Optic	V 6.1	V 6.1	■■■■■■■■■■	Current Version
4	Kienzle print infos	V 1.1	V 1.1	■■■■■■■■■■	Current Version
5	Graphic infos	V 1.8	V 1.8	■■■■■■■■■■	Current Version
6	ES_IN infos	V 2.30	V 2.30	■■■■■■■■■■	Current Version
7	ES_OUT infos	V 2.30	V 2.30	■■■■■■■■■■	Current Version
8	tread depth	V 1.2	V 1.2	■■■■■■■■■■	Current Version
9	Yugoslavia	V 1.0	V 1.0	■■■■■■■■■■	Current Version
10	Sweden	V 1.3	V 1.3	■■■■■■■■■■	Current Version
11	Belgium	V 1.5	V 1.5	■■■■■■■■■■	Current Version
12	Holland	V 1.6	V 1.6	■■■■■■■■■■	Current Version
13	Database	V 3.20	V 3.20	■■■■■■■■■■	Current Version
14	Browser	V 2.0	V 2.0	■■■■■■■■■■	Current Version
15	SQL	V 2.6	V 2.6	■■■■■■■■■■	Current Version

22 PC System Overview

- 1 Select menu item **<PC system overview>**



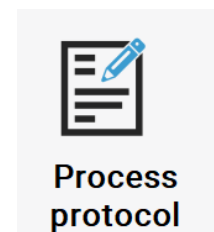
An overview of all technical data of the computer used appears:



Category	Value
Program	: V 8.00.012
KE-Visual	: V4.34.013 (32-Bit)
KEV-Standardtexts	: V1.11.000
Operating system	: Windows 10 Enterprise Professional (10.0.17763) x64
Printer	: PDF24 PDF at \\.\pipe\PDFPrint
Video information	: AMD Radeon R7 M270 1920x1200; Truecolour 32 bit; GDI+
Physical memory	: 8003 Mbyte
Free memory	: 1773 Mbyte
Largest memory block	: 2994 Mbyte
System resources	: 38%
User resources	: 38%
Number of serial ports	: 5
Number of printer ports	: 1
Processor	: Intel(R) Core(TM) i7-6820HQ CPU @ 2.70GHz (CPUID = 0x506e3, 2712 MHz; SC = 5000)
User name	:
Computer name	: DEHW0100NB16079
Order no	:
Customer	:

23 Process Protocol

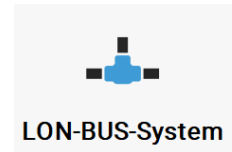
- 1 Select menu item **<Process protocol>**



- 2 The screen can be exited again with **<ESC>** without changing the existing settings.

24 LON Bus System

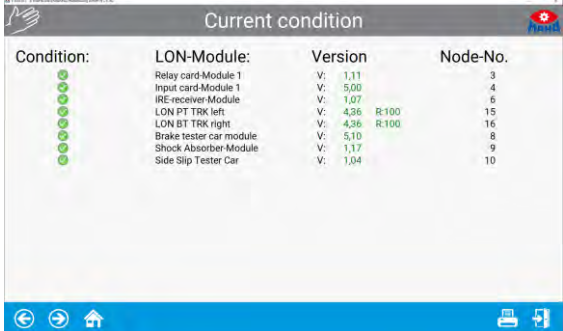
- 1 Select menu item <LON bus system>



The first cycle queries the versions of the individual components. In the third column, the version numbers are displayed one after the other.

The subsequent cycles query the readiness of the components.

In the first column the readiness is displayed with "OK" or "Not OK".



Condition:	LON-Module:	Version	Node-No.
OK	Relay card-Module 1	V: 1,11	3
OK	Input card-Module 1	V: 5,00	4
OK	IRE-receiver-Module	V: 1,07	6
OK	LON PT TRK left	V: 4,26 R:100	15
OK	LON BT TRK right	V: 4,26 R:100	16
OK	Brake tester car module	V: 5,10	8
OK	Shock Absorber-Module	V: 1,17	9
OK	Side Slip Tester Car	V: 1,04	10

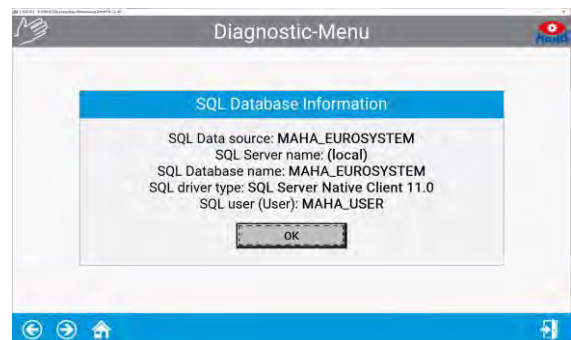
- 2 Press <ESC> to end the query and return to the diagnostics menu.

25 SQL Database

- 1 Select menu item <SQL database>



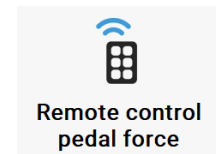
An information window about the SQL database appears.



- 2 Confirm with <OK>.
- 3 The screen can be exited again with <ESC>.

26 Remote Control and Pedal Force

- 1 Select menu item <Remote control/ Pedal force>.



- 2 The remote control and/or the pedal force meter can now be checked here.



27 Scale

- 1 Select menu item <Scale>.

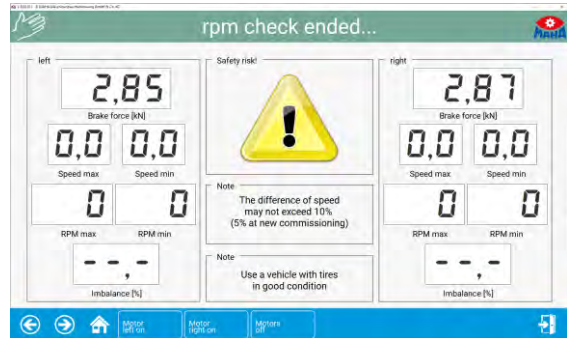


- 2 The scale can be tested with a test weight.



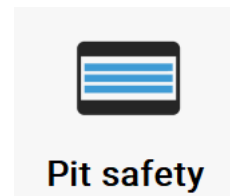
28 Check RPM Pulses

- 1 Select menu item <Check RPM pulses>.
- 2 The speed can be checked here.



29 Check Pit Safety System

- 1 Select menu item <Pit safety>
- 2 The pit safety can be checked with <F7>.



30 Calibration

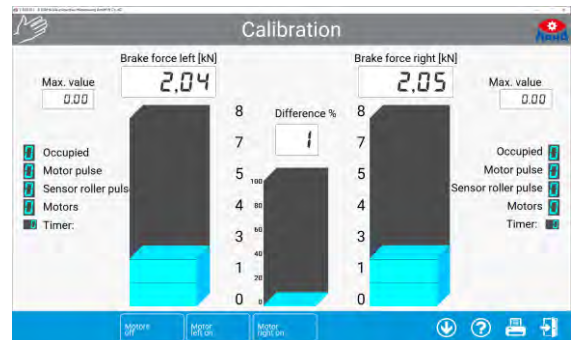
1 Select menu item <Calibration>



2 Select the testing equipment to be calibrated.

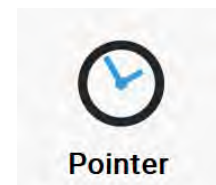


⇒ Example: Calibration of the braking forces.

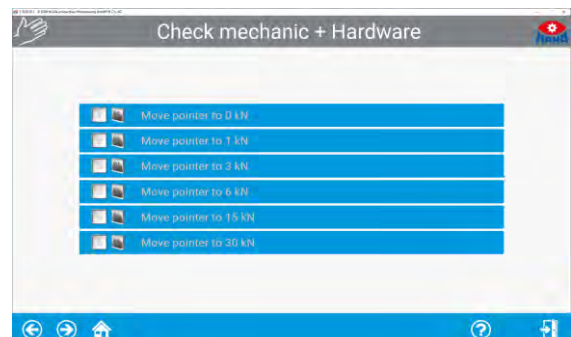


31 Pointer

1 Select menu item <Pointer>



2 Mechanics and hardware can be tested here (access only with installer rights).

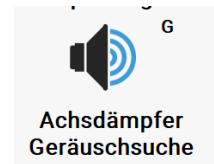


32 Additional Tests

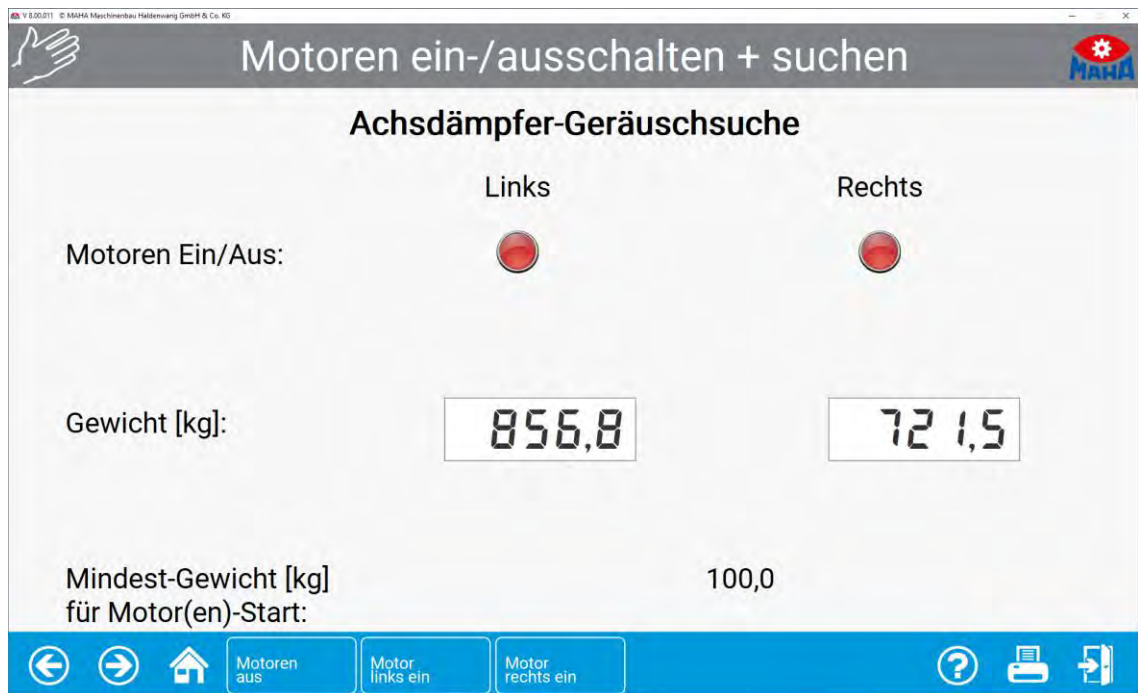
32.1 Noise Detection



The noise detection option can be enabled via the software (option #8).



Select noise detection



Start motors

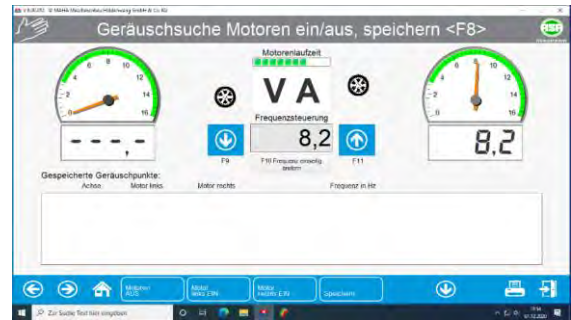
In the navigation menu each motor can be individually started and switched off.



Change frequency

Press <F9> or <F11> to reduce or increase the frequency of the test plates.

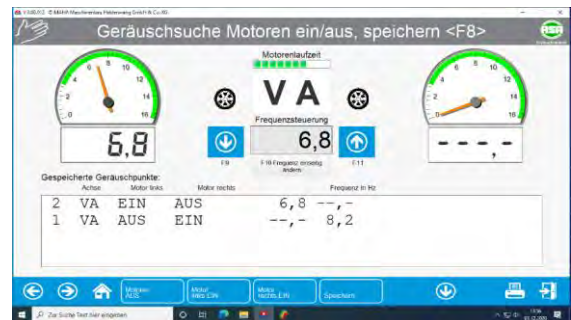
With <Save> one side can be set for modification.



Save noise points

After setting the frequency, the sound point can be stored with <Save>.

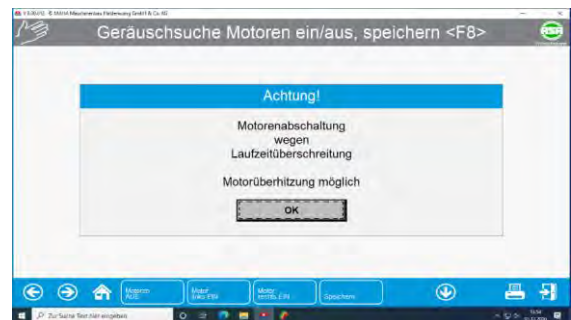
A list of the saved noise points is displayed.



Automatic shutdown

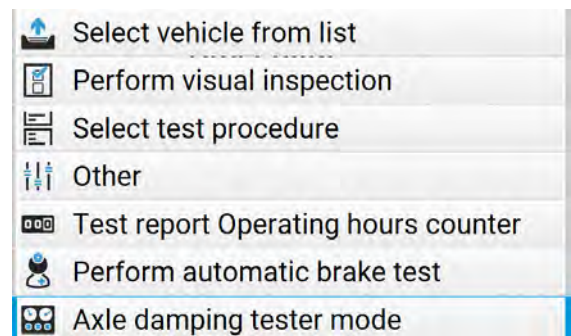
To protect against overheating, the motors are automatically switched off after a set running time.

⇒ This message is displayed to the tester for confirmation in the event of overheating.

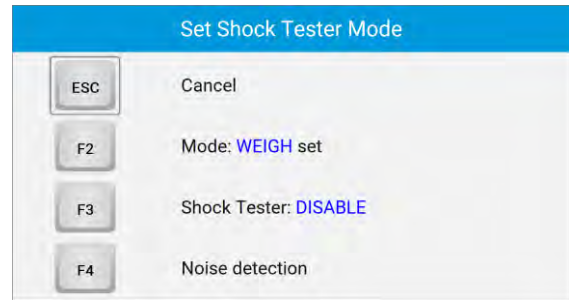


Weighing mode

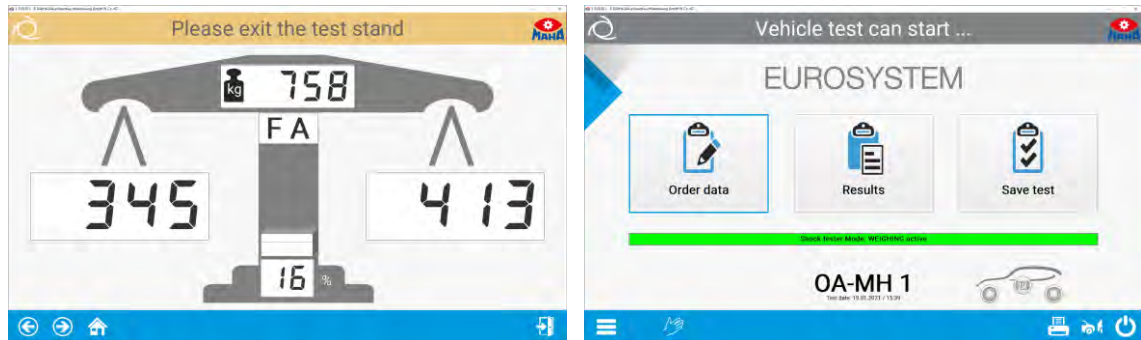
Select <Axle damper mode> from the burger menu.



The following dialogue box will now appear:



Here you can now choose between the different test modes. The left and right weights and the total axle weight are displayed.



Pit safety system

If the brake tester is in operation, the pit safety device secures the entire pit or the safety area around the test stand. If a person, an object or a movement is registered here, the test stand is switched off by the pit safety system.

If the pit safety device has been triggered in the drive state, it must be unlocked after removing the trigger object. To do this, press the button on the console housing.

32.2 Load Simulation

Pull-down device with proportional valve



The pull-down device is activated on the measuring screen after driving onto the roller set.

- 1 Drive onto the test stand. The weight and rolling resistance are displayed. The display then changes to the measurement screen.
- 2 Activate the pull-down mode via the <Load simulation> icon below.



The motors of the brake tester switch off and the screen changes to a weight display.

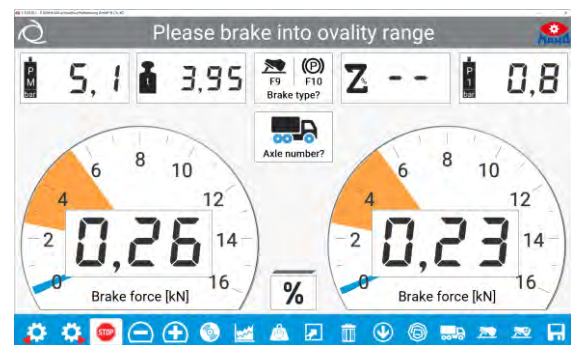
- 3 Pull the vehicle down,
 - a using the switch box for the pull-down device, or
 - b with option LON-TRAN board with the remote control using the keys 'Up' or 'Down' while pressing the 'Shift' key until the desired weight is reached. (Separate operating instructions must be observed for the pull-down device)
- 4 Press the <ESC> key to disable the pull-down device. The weight screen is exited. The message <<After return, motors are switched on again>> appears.
- 5 Press the <Return> button. The motors are switched on again. The measurement screen is displayed again on the monitor and the vehicle test can be carried out.

⇒ When the brake testing screen appears:

- 1 Open the load simulation screen with the icon below.



- 2 Attach chains to the vehicle.
- 3 Enter the target weight.



No entries are accepted that are greater than the maximum end load that was preset with the key switch on the hydraulic unit.



The values of the key switch are defined in the variables of the load simulation.

Technician menu > Load simulation:

Lastsimulations Variablen		
1	PROP/Ventil Steuerung maximales Niederzieh-Gewicht 1 Default: 8000 kg	8000
2	PROP/Ventil Steuerung maximales Niederzieh-Gewicht 2 Default: 10000 kg	10000
3	PROP/Ventil Steuerung maximales Niederzieh-Gewicht 3 Default: 12000 kg	12000
4	PROP/Ventil Steuerung maximales Niederzieh-Gewicht 4 Default: 14000 kg	14000
5	PROP/Ventil Steuerung maximales Niederzieh-Gewicht 5 Default: 20000 kg	20000
6	Typ der Lastsimulation: 0 = Keine, 1 = Niederziehvorrichtung, 2 = automatische Rollensatzanhebung, 3 = automatische Niederziehvorrichtung, 4 = manuelle Rollensatzanhebung	0



When simulating 12 / 14 / 20 t loads, a minimum distance of 1 m must be maintained between the cylinders.

The screenshot shows the load simulation interface with the following callouts:


- Entered target weight:** Points to the 'Sollgewicht [t]' field showing 6,00.
- Load currently applied by MLS:** Points to the 'Gewicht [t]' field showing 0,70.
- LED display of preset weight:** Points to the 'Niederziehwicht' list on the right, where 10,00 t is selected.
- Current weight of left wheel:** Points to the left wheel weight display showing 2,49.
- Current weight of right wheel:** Points to the right wheel weight display showing 2,37.
- Current total axle weight:** Points to the central weight display showing 4,86.

Other interface elements include: 'Ziehen aktiviert, warten bis Sollgewicht erreicht...', 'Zeit zum Lösen in [s]: 15', and buttons for 'START Ziehen', 'START lösen', and 'NOTAUS'.

- 4 Start load simulation with the button <Start pulling>
- 5 Once the target weight has been reached, press <ESC> to return to the brake testing screen.
- 6 Confirm the query with <Enter>.

7 Perform brake test.



8 After completing the brake test, open the load simulation screen again with the button .

9 Release chains with <Start release>.

⇒ The time to release is displayed in the lower right corner. The value can be set in the variable list.



10 Remove the chains from the vehicle.

If the chains are still under tension and cannot be removed, repeat the procedure with <Start release>.

11 Press <ESC> to return to the brake testing screen.

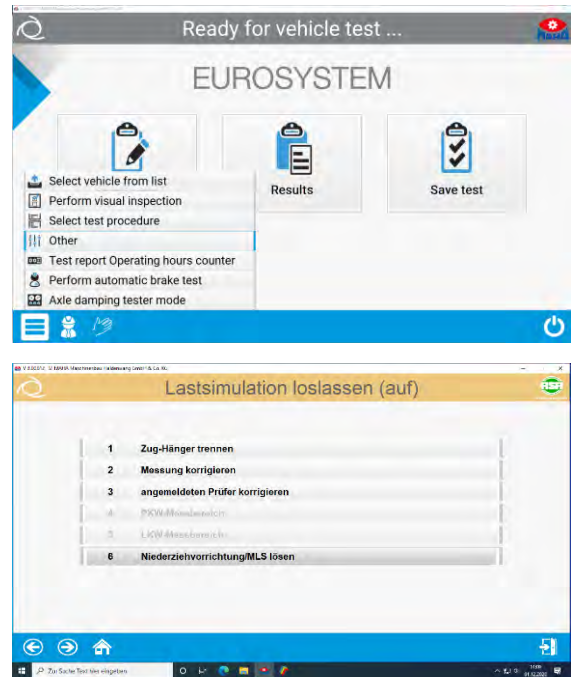
12 Confirm the query with <Enter>.

⇒ Motors switch on automatically.

13 Change the axle or leave the test stand.

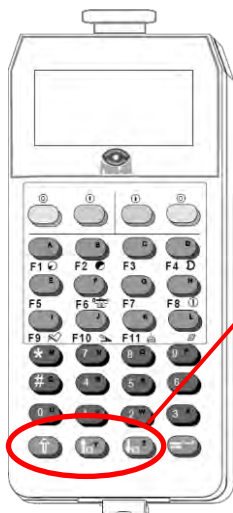
32.2.1 Load simulator cannot be released?

- 1 From the burger menu, select the <Other> button.
- 2 <Release pull-down device (MLS)>.



Roller set lift

- 1 Switch on the brake tester.
- 2 Drive the desired axle into the roller set.
- 3 Raise or lower the roller set using the buttons on the remote control:



Shift



Roller set UP



Roller set DOWN

Press the Shift key (Shift symbol appears in the display)

Press the corresponding arrow key

- 4 Perform brake test.



The height adjustment of the roller set is terminated by releasing the buttons. There is no automatic limit stop.

	HINWEIS ZUR PRÜFUNG DER FESTSTELL- BREMSE MUSS DAS FAHRZEUG GEGEN WEGROLLEN GESICHERT/ FESTGEZURRT WERDEN.
	NOTICE VEHICLE MUST BE CHOCKED AND/OR SECURED FOR PARK BRAKE TEST.

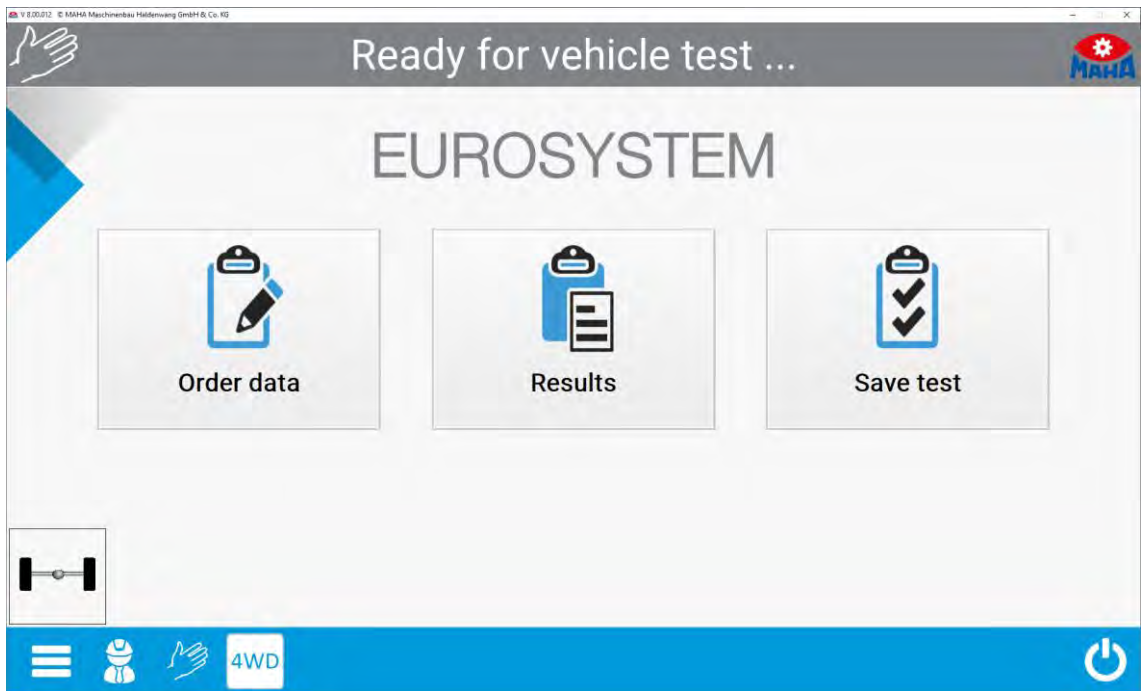
32.3 Four-Wheel / ASR / ASD Test

The brake test stands of the safety test lane can optionally be equipped with an all-wheel mode. This mode allows brake testing of vehicles with "rigid" or viscous all-wheel control, as well as ASR (anti-slip regulation) and ASD (automatic limited slip differential) testing.

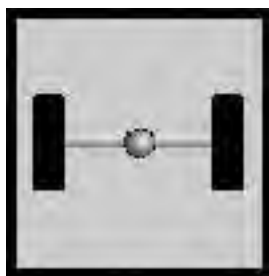


For braking tests on four-wheel drive vehicles, a distinction should be made between "rigid" and viscous four-wheel drive control. Viscous all-wheel controls can be further categorised into hard and soft versions.

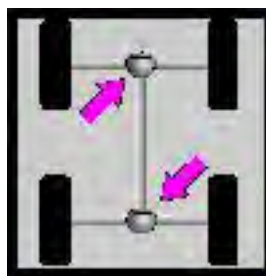
Before performing the brake test, connect the pedal power gauge cable to the remote control and attach the pedal power gauge to the shoe or brake pedal.



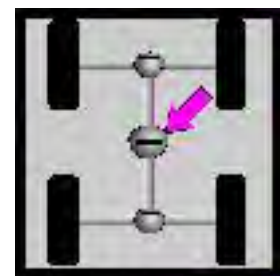
- 1 Use four-wheel drive <4WD> to switch between different modes.
The different modes are displayed as follows:



Standard



Rigid



Viscous

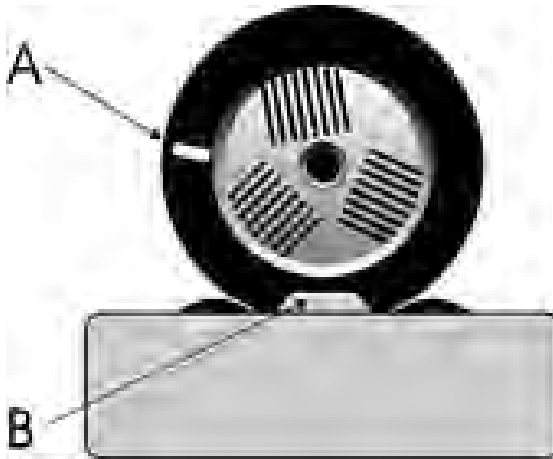
32.3.1 Four-Wheel Brake Testing

For braking tests on four-wheel drive vehicles, a distinction should be made between "rigid" and viscous four-wheel drive control. Viscous all-wheel drive controls can be further categorised into hard and soft versions.

Before performing the brake test, connect the pedal power gauge cable to the remote control and attach the pedal power gauge to the shoe or brake pedal.

If vehicles with "rigid" or hard viscous all-wheel control are tested, reflective strips should be affixed to the vehicle tyres before the test.

A light barrier integrated into the brake tester then detects exactly one wheel rotation on the basis of the reflective strips.



A Reflective stripes

B Light barrier

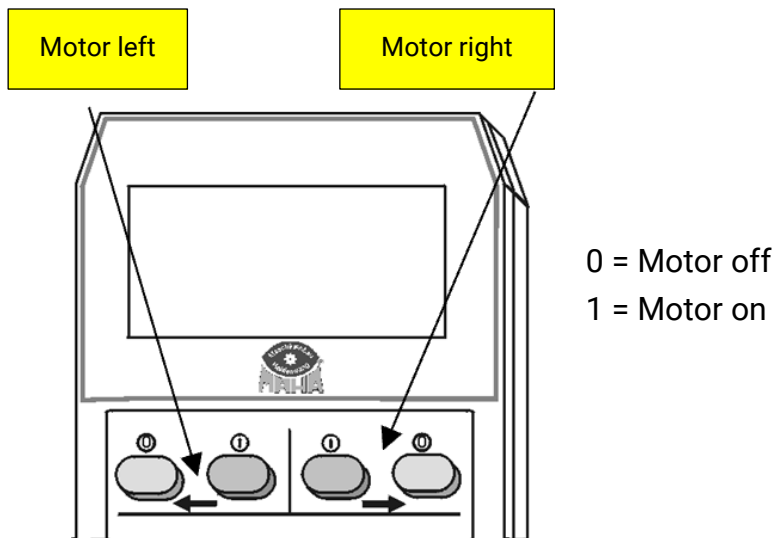
The motor control detects the exact speed of the forward rotating rollers and transfers this to the reverse rotating rollers. This avoids both the transmission of power to the second axle and torque to the drivetrain.

During four-wheel testing, the brakes of the wheels are tested individually:

- 1 Front axle, left wheel
- 2 Front axle, right wheel
- 3 Rear axle, left wheel
- 4 Rear axle, right wheel

Test procedure

- 1 Activate ASR/ASD mode
Select the desired all-wheel drive mode with <4WD>.
- 2 Prepare brake test
 - a Drive onto the brake test stand with the front axle.
Both sensing rollers of the roller set must be depressed.
 - b Release the brake.
 - c Press the clutch or put the gearbox into neutral.
Set automatic transmission to neutral (N).
- 3 Brake efficiency test left
 - a Start the left roller set by pressing the motor on button on the remote control.
⇒ The left roller set starts forward, the right roller set starts backward.



- b Ovality test (if required) see section "Ovality test" section.
 - c Slowly depress the brake pedal until approx. 90 % of the possible braking force is reached. Do not brake until the slip cut-off!
⇒ The roller drive switches off.
⇒ The maximum braking value is indicated by the left bar.
 - d Release the brake pedal immediately.
⇒ The measured maximum braking force is indicated by the left bar.
⇒ The right bar remains at zero.
- 4 Brake efficiency test right
 - a Start the right roller set using the motor on button on the remote control.
⇒ The right roller set starts forward, the left roller set starts backward.
 - b Slowly depress the brake pedal until the noted pedal force is reached.
⇒ The roller drive switches off.
⇒ The maximum braking value is indicated by the right bar.

- c Release the brake pedal immediately.
 - ⇒ The measured maximum braking force is indicated by the right bar.
 - ⇒ The left bar shows the braking force of the left side.

5 Save measured values

To be able to save, the vehicle must be in the roller set. If the vehicle is lifted out of the roller set during the brake test, the roller set must be driven onto again in order to save the measured values.

- ⇒ Save button on the IFB3 remote control



6 Leaving the brake tester.

- a Wait until the rollers have stopped.
- b Slowly drive the vehicle forwards out of the roller set.

7 Switch back to standard mode.

Select Standard mode with the <F9> button on the remote control.

32.3.2 Check ASR / ASD

When checking ASR or ASD, the situation of a "gripping" and a spinning tyre is simulated, e.g. when the vehicle is on a dry road with one tyre and on an icy surface with the other.

During the test, one set of rollers is blocked (dry road surface), the other is allowed to run free (icy surface). If ASR (or ASD) is functioning during the test, it is possible to drive the vehicle off the test stand.

Test process

1 Activate ASR/ASD mode

Select the desired all-wheel drive mode with <4WD>.

2 Prepare function test

- a Drive onto the brake tester with the axle being driven.
 - Both sensing rollers of the roller set must be depressed.
- b Press the clutch or put the gearbox into neutral.
 - Set automatic transmission to neutral (**N**).

3 Function test left.

- a Select the left roller set using the motor on button on the remote control.

⇒ The selected (left) roller set is blocked.

- b Engage the gear and drive slowly out of the roller set.

⇒ With the ASR (or ASD) in working order, it is possible to drive out of the roller set.

⇒ The blocking is released when the sensing rollers are no longer depressed.



There is a risk of damage to the roller drive:

If the ASR (or ASD) is defective, the free-running roller set is accelerated. Do not accelerate beyond 11 km/h.

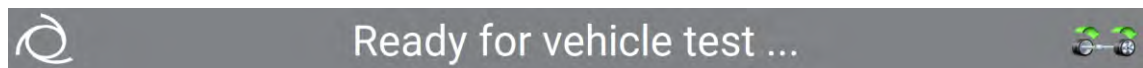
32.3.3 Pseudo Four-Wheel

In this mode, the vehicle is tested in manual mode. This means that if the option "Pseudo four-wheel" is activated via softdip #38, the test stand switches to manual measuring mode. Switching to automatic mode is not possible here.

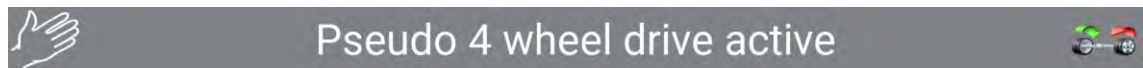


During the test (before starting the motors), pseudo four-wheel measurement can be activated using the <4WD> icon.

Before pressing the 4WD icon:



After pressing the 4WD icon and the option is active:



After pressing the 4WD icon again, the test stand is now in automatic measurement mode again and the all-wheel drive option is inactive:



32.3.4 Drive Control Pro – Simple Test Procedure

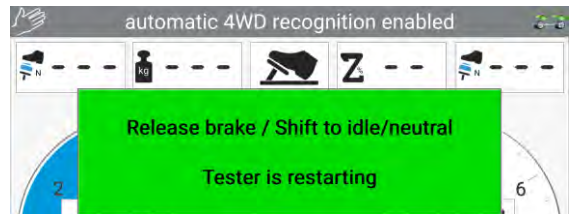
With this option, the all-wheel test is performed in automatic mode.

- 1 As soon as the tester has driven onto the test stand, the left drive is switched on to detect whether the vehicle is a four-wheel drive vehicle.

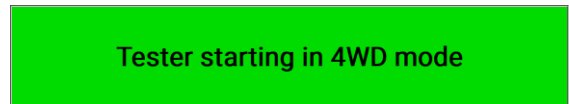
This is visualised to the tester in the status bar, as follows:



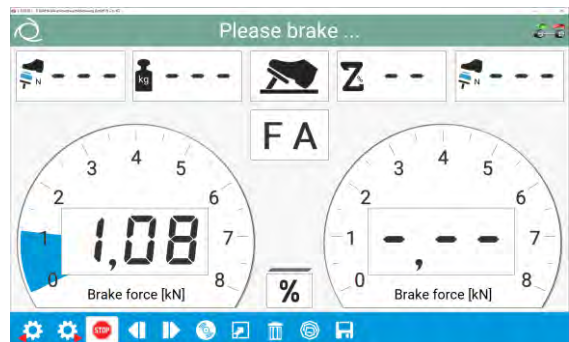
- 2 The test stand will now retest for reliable identification of the four-wheel drive vehicle.



- 3 If the same result is obtained during the second resistance test, the test stand starts in all-wheel mode.



- 4 The test is performed in single wheel mode. The front left wheel is tested in the direction of travel first. Then the front right wheel is tested against the direction of travel until the slip cut-off.



33 Set up Database Connection

EUROSYSTEM can be coupled with a local server (workstation) or a server located in a network.

The following settings are required for this:

- 1 Open the technician menu in the main menu
- 2 Select <Settings> button
- 3 Call up menu item <Database>

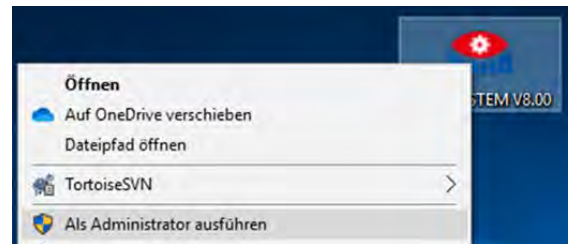


EUROSYSTEM is connected to the local server by default.

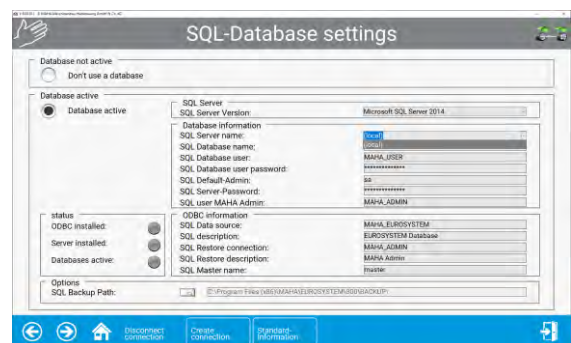


EUROSYSTEM must be started as administrator.

To do this, right-click on the V8 icon on your desktop and select **<Run as administrator>** from the context menu that opens.



- 4 Disconnect the existing ODBC connection by clicking **<Disconnect>**.



The following status message then appears:

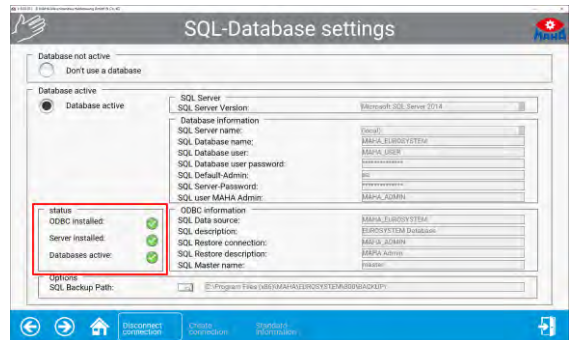


- Now you can select the server to be connected in the drop-down menu.



- As a final step, establish the ODBC connection to the selected server.

- All three LED status indicators should now indicate that the connection is OK



- Exit the settings menu and then restart the software.

34 Multi-User Capability

Multi-user capability is required if a test lane is to be extended to become a test track. This may for instance be the case when different vehicle tests are to be segregated. Otherwise, there would be a bottleneck in the test lane in question.

In most cases, the test lane is extended into a three-section test track.

- Section I: Emission measurement and headlight adjustment testing
- Section II: Side slip testing, shock absorber test and brake testing
- Section III: Visual defects

The diagram below shows the requirements for this:

- Three computers with EUROSYSYSTEM installed

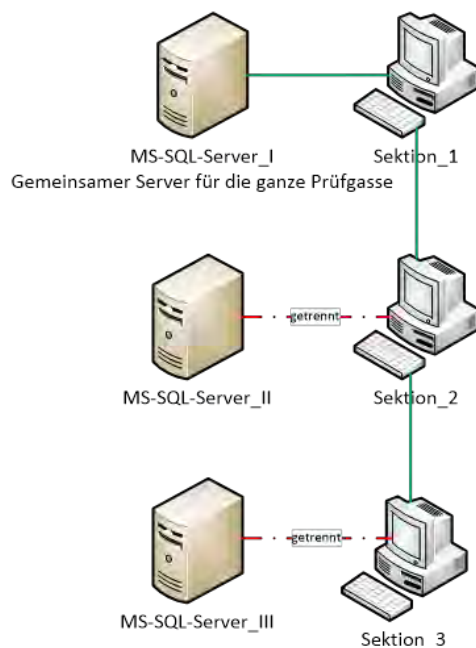


The MAHA EMISSION SOFTWARE (MES) is required for emissions measurement in section 1.

Option #3: <Multi-user capability>

Section 1:

- EUROSYSYSTEM V8 with licence [VZ911376]
- Option #3: Multi-user capability [VZ911276]



Section 2:

- EUROSYSYSTEM V8 without licence [VZ911376]
- Connected to central server
- Separate server is disabled or was not installed

Section 3:

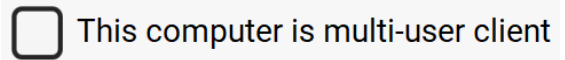
- EUROSYSYSTEM V8 without licence [VZ911376]
- Connected to central server
- Separate server is disabled or was not installed

Procedure for changing settings:

- 1 Option <Multi-user capability> is active on the computer in section I. See this under **Administration menu > License management**.

(03) Multi-user capability

- 2 A shared server for the test track is active in section I. In section II and section III, installation was carried out without an SQL server or alternatively it was disabled.
- 3 The setting <Multi-user client> is active in section II & section III. This can also be found under **Administration menu > License management.**



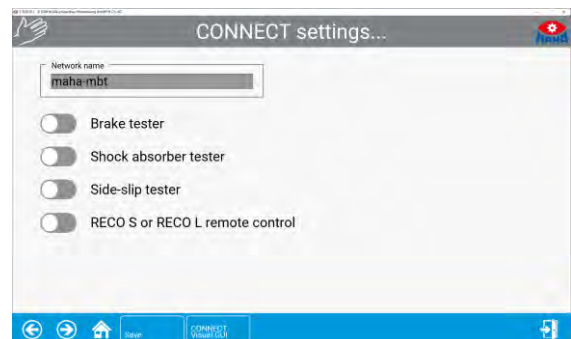
35 Hybrid System

The hybrid system consists of the CONNECT brake tester and V8 software. Both systems work together as a hybrid system. The V8 communicates via the test stand's web socket. To connect the V8 to the Connect test stand, the following settings are required in the V8:

- 1 In the main menu, please navigate via the technician icon to the installer menu.
- 2 In the installer menu, the <**CONNECT**> icon is located in the footer. Press this now.



- 3 The settings menu for the CONNECT system shown below will then open.
- 4 In the <**Network**> field, please enter the test stand's SSID. The default factory address is <**maha-mbt**>. If a custom address has already been assigned, such as <**maha-mbt-138** o. **teststand1**>, it should be listed here.



- 5 Finally, please activate the softdips that correspond to the current test stand configuration (stand-alone, test lane etc.).



A test lane always consists of the following configuration: Brake tester (C_MBT), axle damping tester (MSD 3000), side slip tester (MINC).

- 6 If all settings have been entered correctly, please click on the <Save> button and then restart the software.

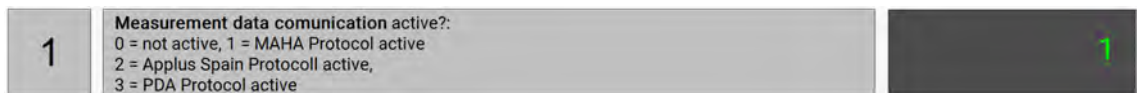
36 Forward

The function Forward is required to ensure the exchange of data between the individual sections as well as to an external system (control station) via ES_IN/ES_OUT interface. These include the vehicle and owner data as well as measurement results and limit values. Typically, the test order is imported via ES_IN to section I by the control station system or the office section (0 = Office). Once the test has been completed in the section, all relevant values are then passed on to the next section in order to automate the vehicle test.

The tester can now continue the vehicle inspection in section II without having to stop to enter data etc., thus benefiting fully from the added value.

Procedure for settings:

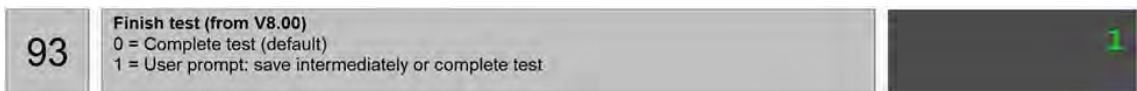
- 1 The communication between the sections (internal) takes place via TCP/IP. For this, please set the variable 1 "Measurement data communication active?" to the value "1" under **Settings > TCP/IP measurement data communication** (= MAHA protocol active).



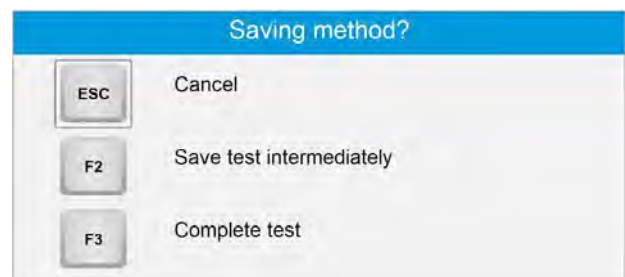
If communication is active and works without errors, the green TCP/IP logo appears in the top right corner of the software.



- 2 Set the variable 93 "Finish test" to the value "1" (= user prompt whether test should remain open or be completed) under **Settings > Variables (Customer)**.



This setting causes a prompt to appear after the button **<Save test>** in the main menu is pressed.



If vehicle and customer data and the recorded measurement values should be forwarded to the next section, the prompt must be confirmed with **<Save test intermediately>**.

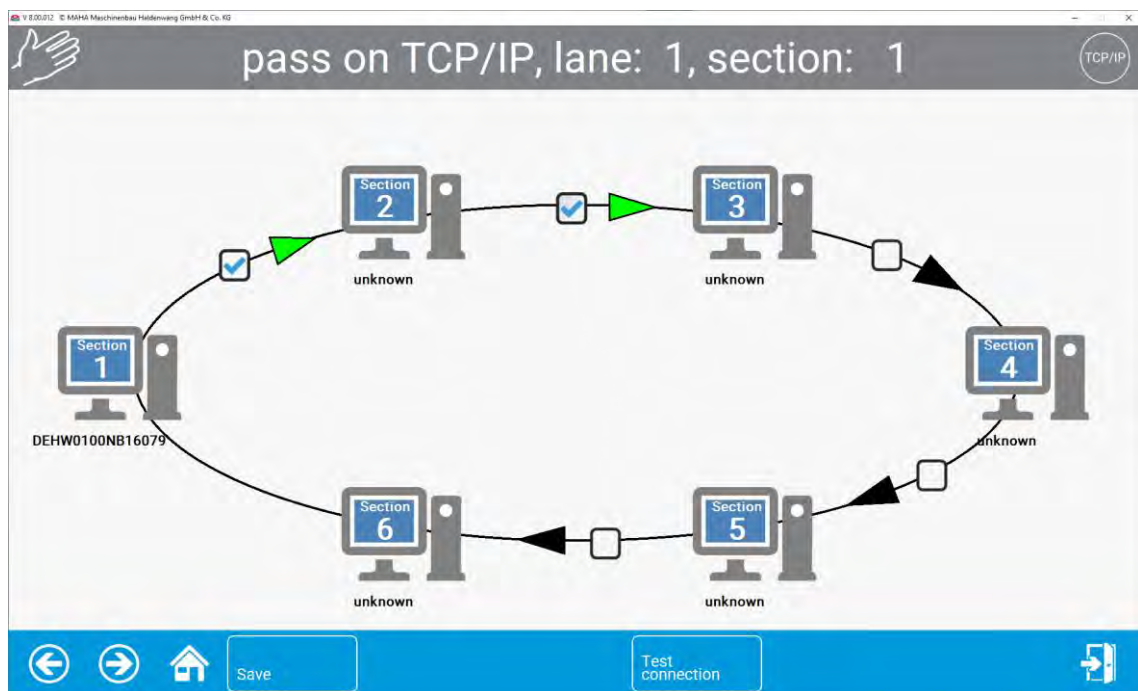
If option **<Complete test>** is selected, the measurement is completed and saved on the server.

- 3 Now assign the corresponding section and track to each section (all computers). To do this, navigate to the respective section under **Settings >**

Section, Track external devices . Now verify the corresponding section, e.g. section II as well as the corresponding track if several tracks are to be configured in one test centre. The example here shows track 1, section II - brake:

1	Section: 0=Office, 1=Section 1 (default), 2=Section 2, 3=Section 3, 4=Section 4 / Accident, 5=Section 5 / Mobile, 6=Section 6, 100=MLT3000/BFT3000, 101=THT Tool, 121=Data import, 152=MCTC, 160=EvoBus, 161=EvoBus Turkey, 202=MBT 2100 DEKRA, 203=MBT 4200/7200 LON DEKRA, 350=TAXI D	1
2	Test lane: Number of Test lane Default: 1	1

- 4 If the default settings have now been made correctly, the system setup must now be verified. To do this, please navigate to **Settings > Forward**.
- 5 Now select all active sections and connect them with each other. The example shows a three-section test track:



- 6 To verify functional stroke and correct communication, press the button **<Test connection>**. Data packets are then exchanged to confirm the existing communication.

**receive message from PC:
DEHW0100NB16079**

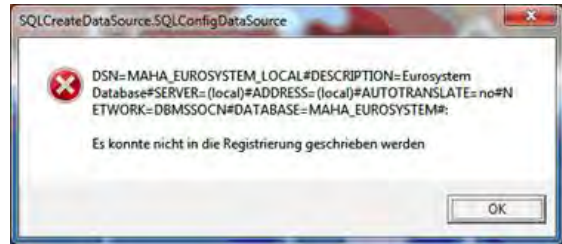
All connections work without errors and are ready to receive.

37 Troubleshooting

- **Case 1**

You receive the error message shown opposite when starting the V8.

After you confirm the message, further error messages are displayed.



Cause:

Upon initial launch, the V8 needs administrative rights to be able to create the ODBC data sources.

Solution:

Please start the V8 as described in the chapter "Installation and Configuration > Start Setup from DVD" with admin rights.

- **Case 2**

Various settings are discarded after a restart of the V8, or are not set to active.

Cause:

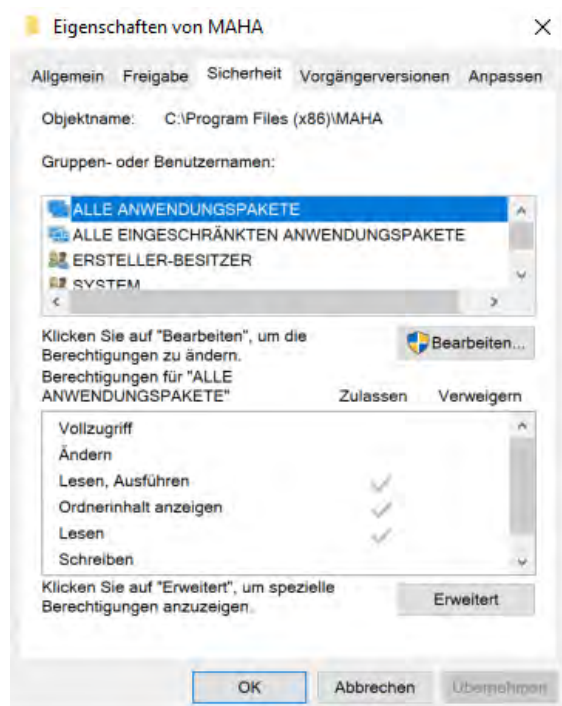
The rights to the system directory are not sufficient.

Solution:

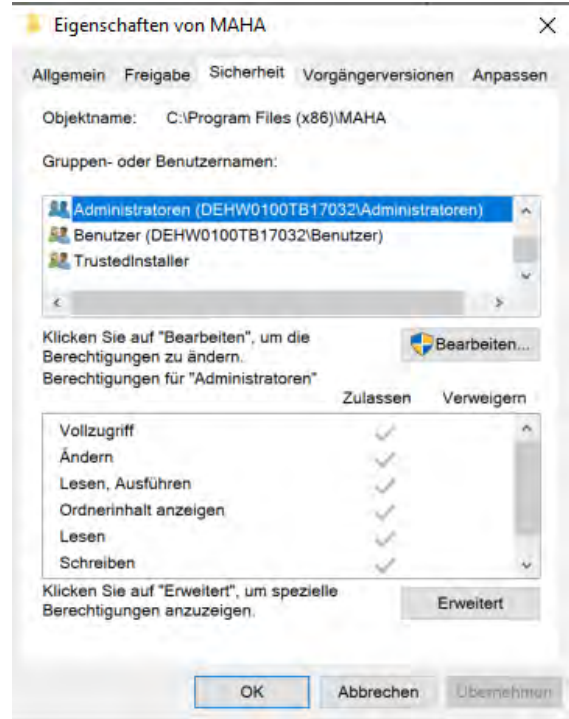
Assign the required rights to the system directory

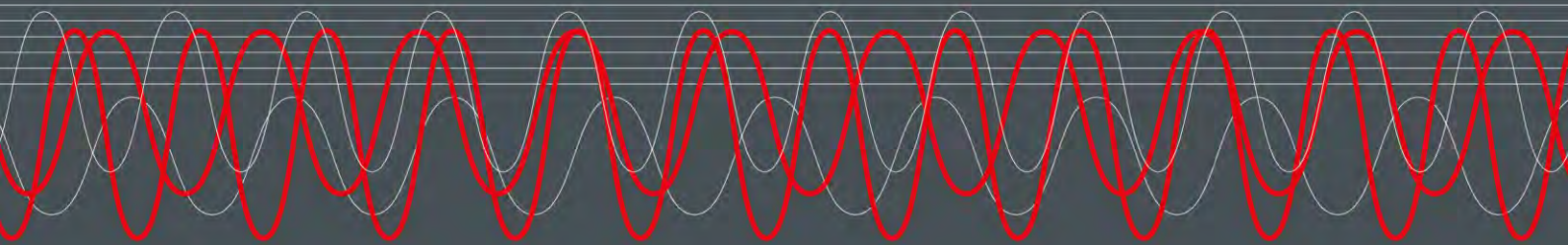
[C:\Program Files \(x86\)\MAHA](C:\Program Files (x86)\MAHA).

Right-click on the MAHA folder > Properties > Security.



Now assign the necessary read and write permissions as shown in the following illustration:





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✉ maha@maha.de
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