

# Manual: PBT-24-4757

BRAKES

F

R

0 %

0 %

0

0

0

0

HANDBRAKE

L

R

0 %

0

0

SCALES

F

R

0 %

0 %

0

0

0

0

WHEEL ALIGNMENT

F

R

0

0

SUSPENSION

F

R

0 %

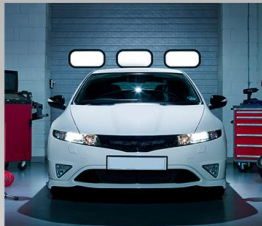
0 %

0




0

0

0



START TEST

DETAILS

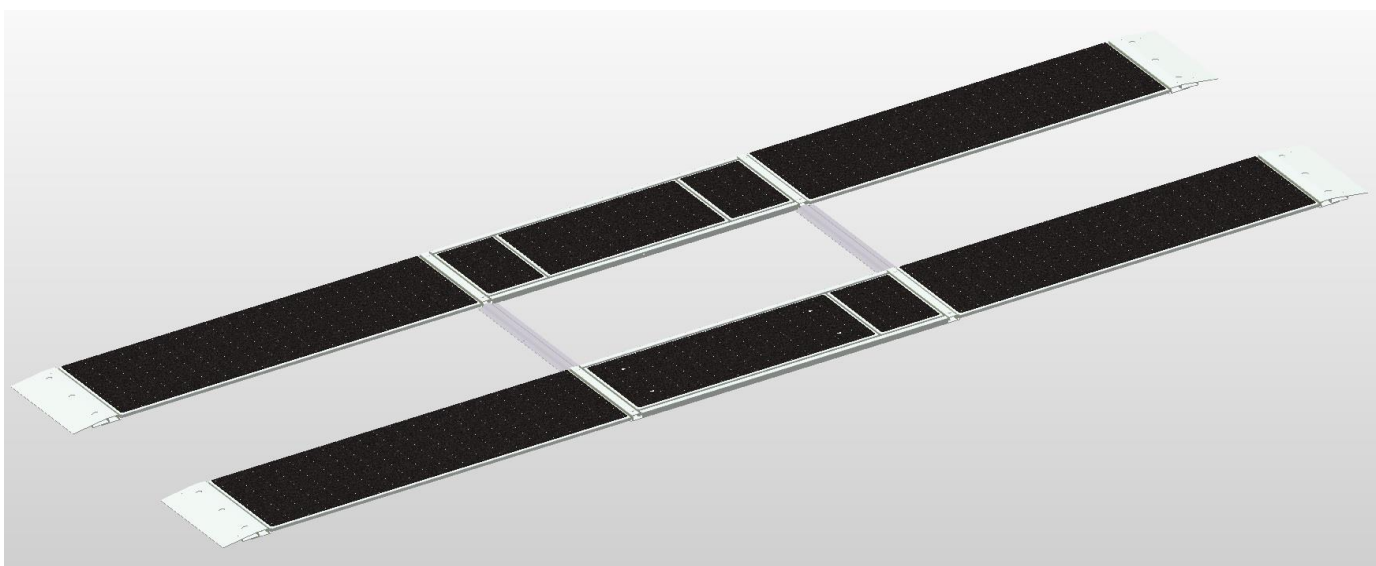
DETAILS

DETAILS

DETAILS

DETAILS

EN



Despite careful checking, errors in this publication cannot be completely excluded.

This manual was written for users with technical knowledge in vehicle testing.

Manual: PBT-24-4757  
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English

Address: STENHOJ Pty Ltd  
95 Darley Street  
Mona Vale, 2103 NSW

Phone: 0450-950234  
Web: [www.stenhoj.com.au](http://www.stenhoj.com.au)  
E-Mail: [info@stenhoj.com.au](mailto:info@stenhoj.com.au)

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## 1. Important Information

The included CD/USB-Drive contains four folders, the „Plate Brake Tester“ - program itself, the drivers folder, a folder for a freeware version of Adobe PDF Viewer (any other free PDF Viewer can be used - a PDF Viewer must be installed otherwise the „Test Report Sheets“ cannot be displayed) and Microsoft.Net. The fourth folder contains the manuals.

The program folder must be copied onto your computer desktop. Direct access to the program can be achieved with a shortcut (right-click on the program icon in the folder / send to / create desktop shortcut).

Before starting the application, ensure that the Computer/Laptop has an attached USB - Camera (or a built-in camera) and a logo of your Company is stored on your hard drive. Camera and logo are necessary for the „Test Report Sheets“. For printing a printer should be attached.

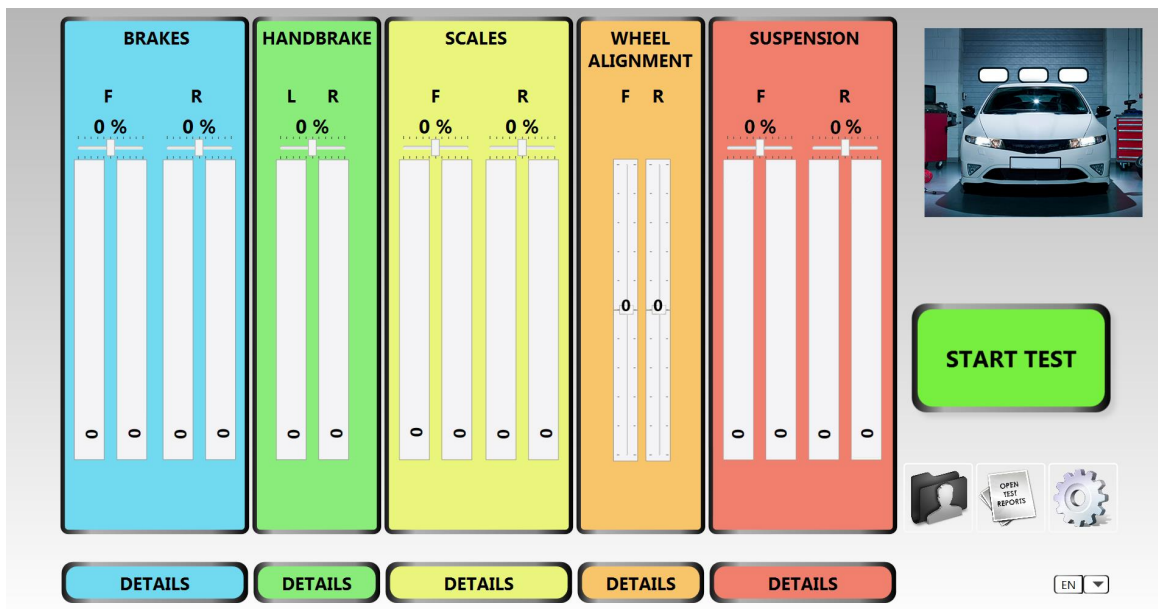
The program can only recognize the „Plate Brake Tester“ if the drivers for the USB Dongle from the drivers folder are installed. Pending on your Operating System, choose either the drivers for a x64 or x86 OS (Win7/8) and connect the USB-Dongle to a free USB port on your computer. At the first start-up of the application, a folder "Plate Brake Test - Report Sheets" will be created on your desktop. It may not be deleted or changed! This folder serves as a database where the „Test Report Sheets“ are stored.

## 2. Plate Brake Test - Program

### 2.1 Main Window

The application opens with the main window. In the upper right corner the "Waiting for Communication" window will be active and visible. It will disappear as soon as the computer is connected to the „Plate Brake Tester“ via the USB dongle.

The orange wire coming from the “Plate Brake Tester” must be connected with the black marked input on the USB-Dongle. The dongle then must be connected to an USB-port on your Computer/Laptop.



The five main elements

### **Brakes / Hand Brake / Scales / Wheel Alignment / Suspension**

display the measured values after a completed test procedure. Under each indicator, there is a „Detail“-button. When selected, a detail window pops up and lists the measured values on a vehicle model in detail.

**F** and **R** stands for Front and Rear axle. **L** and **R** stands for Left and Right side

The image from the attached camera is displayed at the top right corner.  
The camera must show the vehicle and the license plate in its picture.

#### **The main window:**

- Features all main elements and a live view of all sensor data
- Shows all test results
- Starts test procedure
- Customer data input
- Examiner data input
- Access to report sheets
- Access to service data
- Shows live camera data

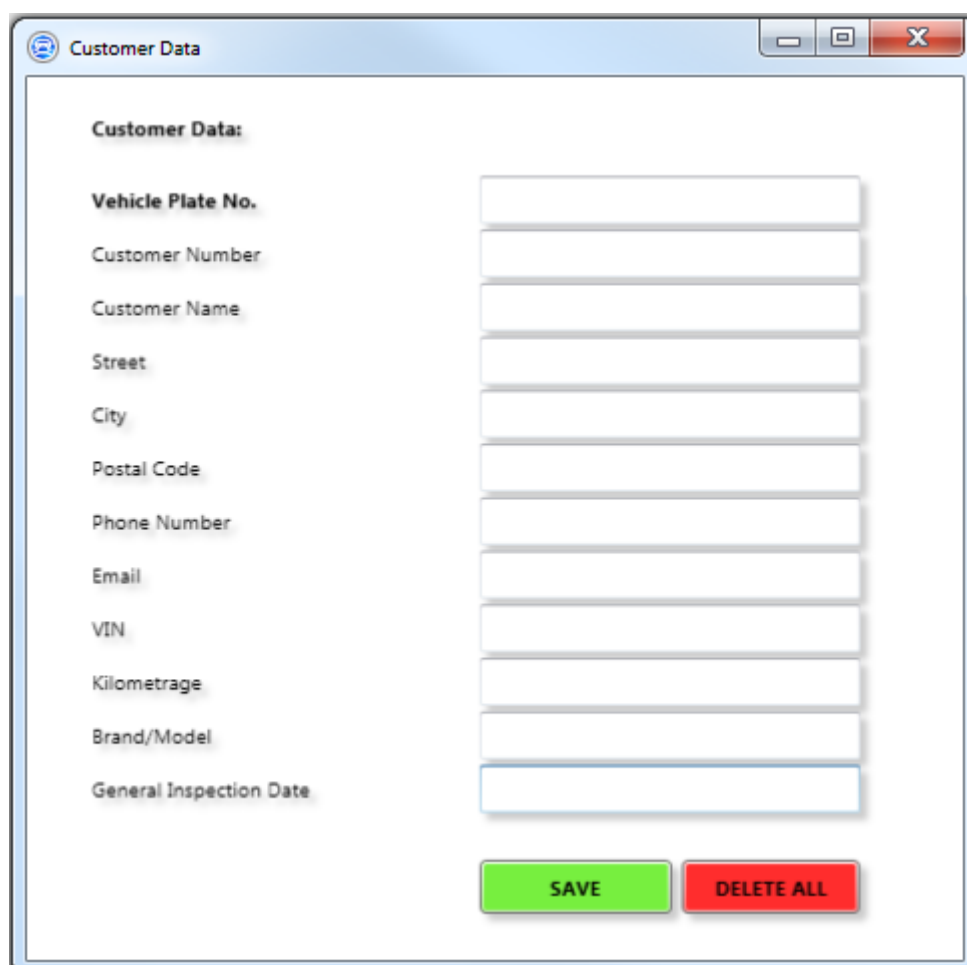
The three buttons at the lower right, from left to right are as follows:

### Customer Data | Test Report Database | Settings



## 2.2 Customer Data:

In this mask the customer information must be entered before each test procedure. Without this data a test cannot be started. You have to enter at least the vehicle plate number.



**Customer Data:**

Vehicle Plate No.

Customer Number

Customer Name

Street

City

Postal Code

Phone Number

Email

VIN

Kilometrage

Brand/Model

General Inspection Date

**SAVE** **DELETE ALL**

### 2.3 Test Report Database:

The database stores the report sheets. The most recent report is always displayed at the bottom. The name of a report sheet is composed as follows:

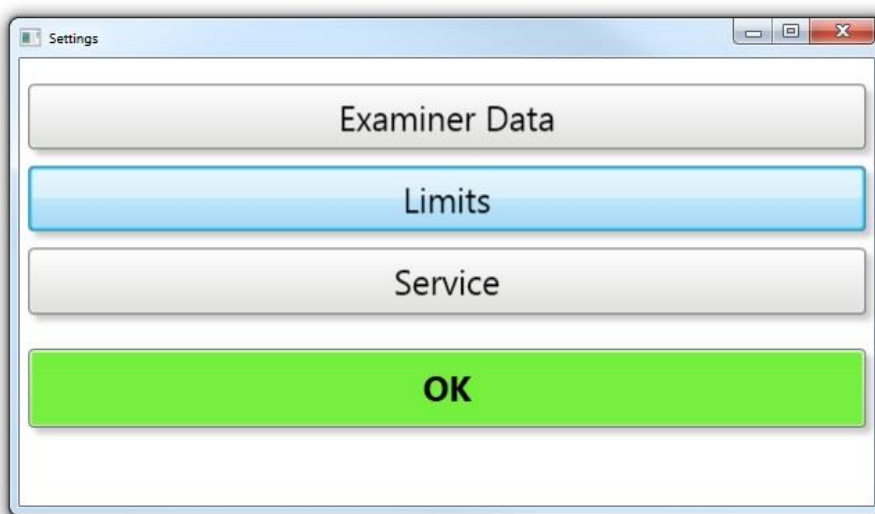
**Test Report Number – License Plate Number – Customer Name – Date – VIN**

To open a test report as a PDF you have to double click it in the database.

### 2.4 Settings:

In this menu further program settings can be made. You will find three selections:

**Examiner Data | Limits | Service**




#### 2.4.1 Examiner Data:

In this mask the examiners information must be entered. Without this data the test cannot be started. You have to enter at least the examiner number.

## 2.4.2 Limits

In this mask the basic limiting parameters are displayed. The mask shows the default values for your country. To edit the default values you need a password. Please contact the manufacturer or distributor.



The screenshot shows a software window titled "Limits" with various input fields for vehicle parameters. The fields are organized into several sections:

- Vehicle [%]**: Deceleration Peak (60), Deceleration Average (47).
- Left to Right Brake Imbalance [%]**: Front Axle (30), Rear Axle (30).
- Handbrake [%]**: Difference Brakeforce (50).
- Calibration Date**: Calibration Date (08/02/2015), Calibration Due (08/02/2016).
- SerialNumber**: (Empty field).
- Test Speed**: MIN (8), MAX (12).
- Pedal Force**: MIN (250), MAX (885).
- Front to Rear Brake Distribution [%]**: Front (60, 90), Rear (10, 40).
- Wheel alignment [mm/m]**: Front (MIN: -1, MAX: 3), Rear (MIN: 1, MAX: 4). Tolerance: Front (1), Rear (1).
- Shock Absorber [%]**: Difference per Axle: Front Axle (25), Rear Axle (25).
- Very Soft**: 50, **Soft**: 60, **Comfortable**: 70, **Firm**: 85, **Hard**: 90, **Extreme Hard**: 90.

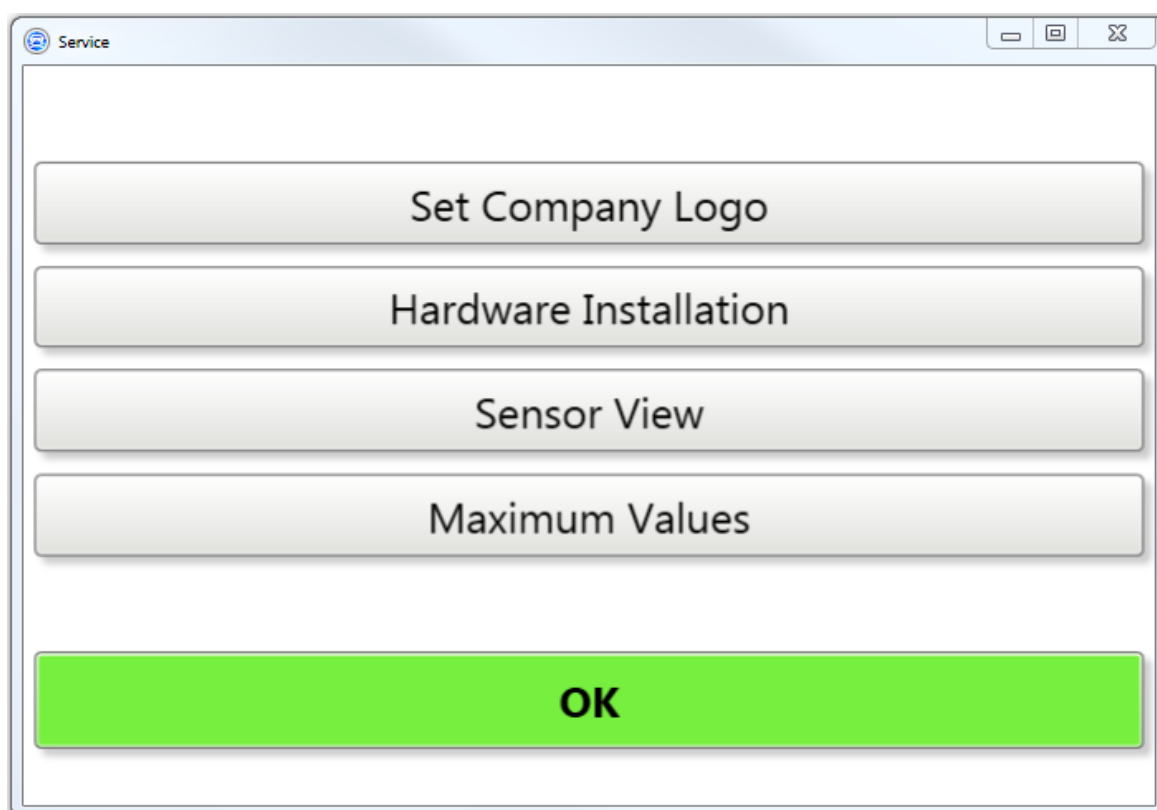
At the bottom of the window are two buttons: "OK" (green) and "EDIT" (blue).



### 2.4.3 Service Menu

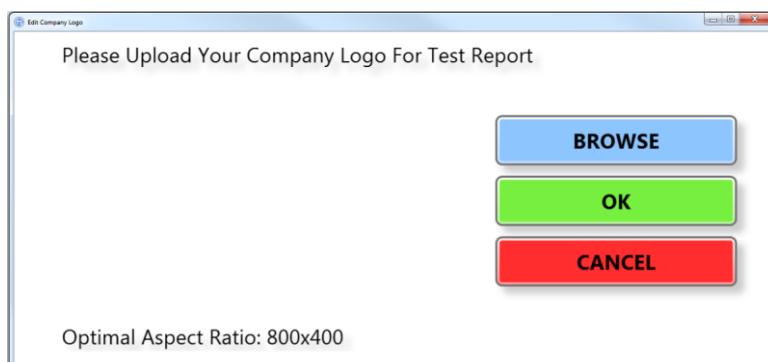
The service menu window shows four further menu items:

**Set Company Logo | Hardware Installation | Sensor View | Maximum Values**



#### 2.4.3.1 Set Company Logo:

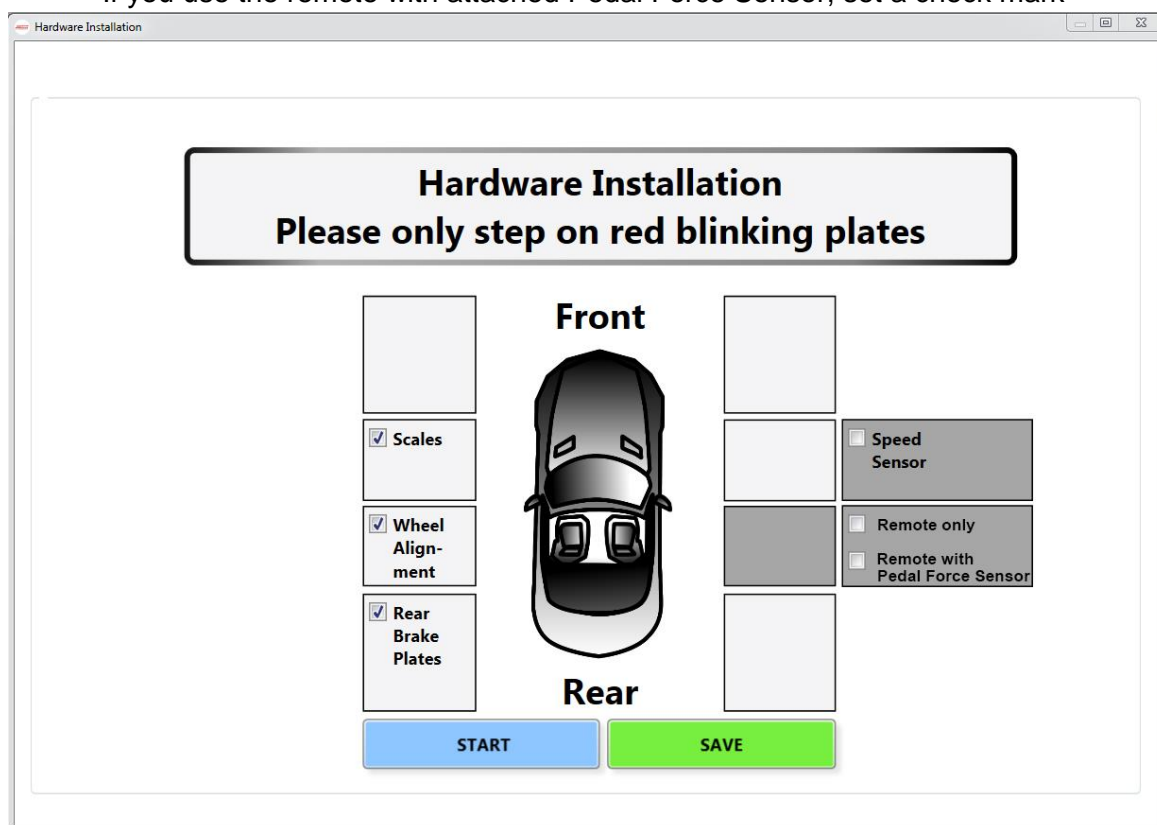
You can select your company logo in this mask. It will be displayed in the upper right corner of the „Test Report Sheet“.



#### 2.4.3.2 Hardware Installation:

Before you can use the “Plate Brake Tester” you have to perform an initial start-up! In this mask you select your “Plate Brake Tester” hardware configuration as well as reconfigure the available sensors. This option is also password protected.

- If you use a “Speed Sensor” please set a check mark.
- If you use just the remote, set a check mark
- If you use the remote with attached Pedal Force Sensor, set a check mark



**The Hand terminal (with or without pedal force sensor) MUST be switched off!**

After your selection please press the “START”-Button.  
You will be directed through the installation process (password protected).

**After this you are ready to go for testing!**

The menu points (Sensor View / Maximum Values) are only relevant for the service technician and are of no use for the examiner or the customer.

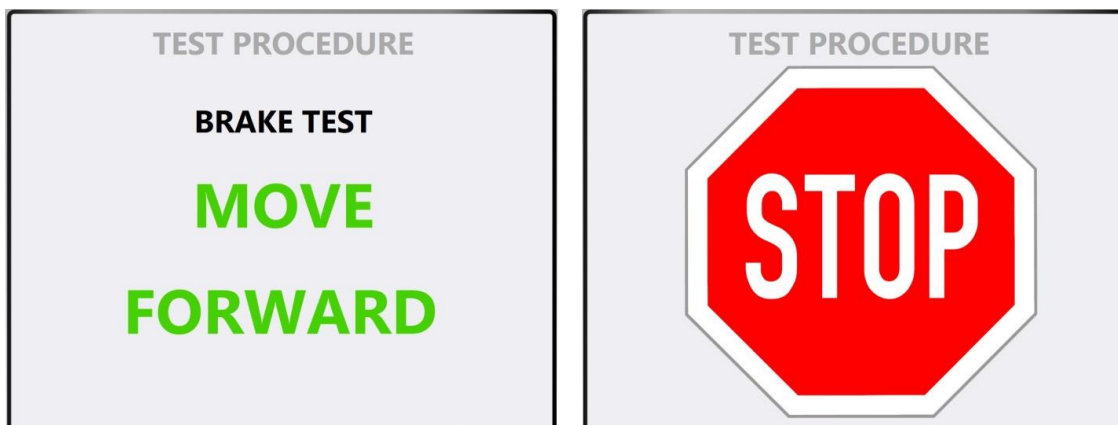
### 3. Test Procedure:

Before the test, your car must be moved in front of the "Plate Brake Tester".  
The camera image must clearly show the license plate number.

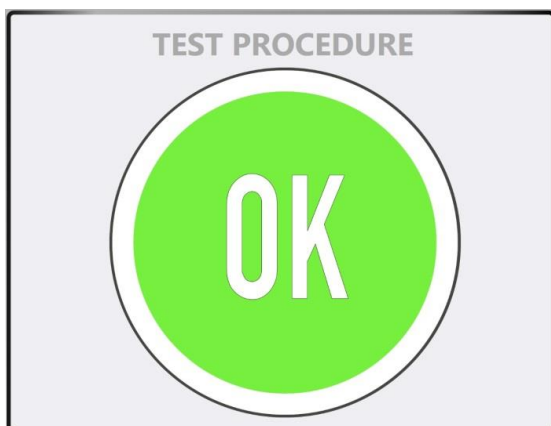
Pressing the **"Start Test" - button** starts the whole automated test procedure.  
(Additionally you can use the remote to start the test procedure - remote must be activated with a long press on the start button)

#### 3.1 First Test Step

Drive forward - the requested test speed is shown on the screen.  
Once the "Stop" - Sign is displayed, you have to step on the brakes and stop the vehicle immediately.



Once the vehicle is at stand still, the display will show the „OK“ - Sign:



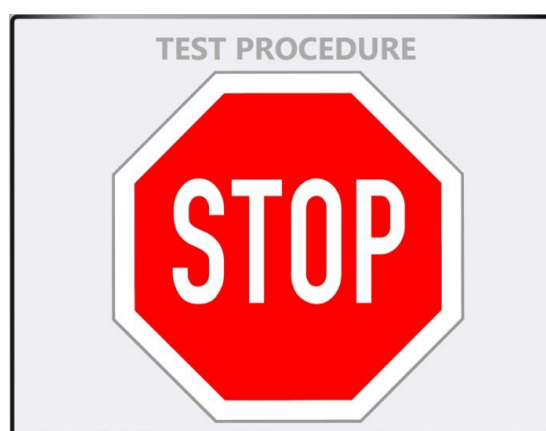
In the first test step following values are recorded:

- Front Wheel Alignment
- All four Brake Forces
- All four Shock Absorbers Values
- (Optional: Brake Pedal Force)
- (Optional: Test Speed)

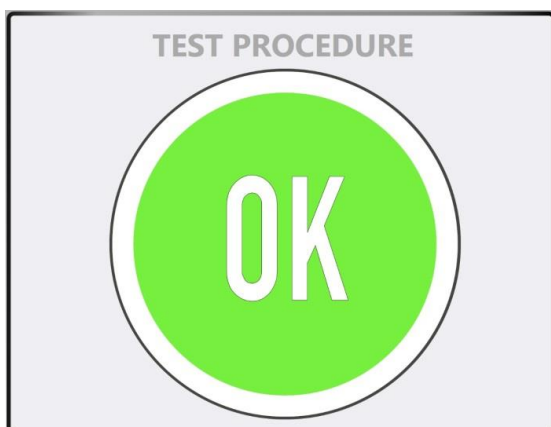
### 3.2 Second Test Step

Now keep driving forward - once the "Stop" - Sign is displayed, you have to stop the vehicle immediately with the hand brakes.

With manual transmission the clutch must be pressed - with an automatic transmission the neutral position must be selected.



Once the vehicle is at stand still, the display will show the „OK“ - Sign:



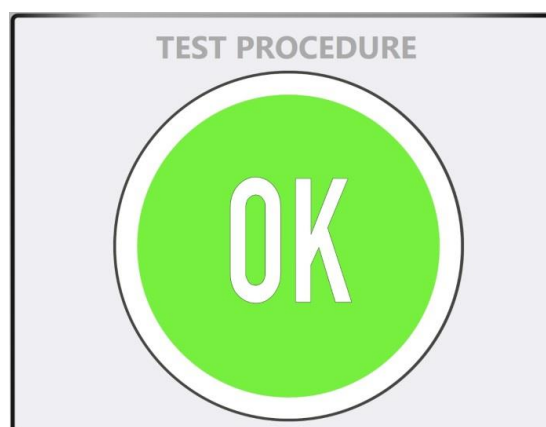
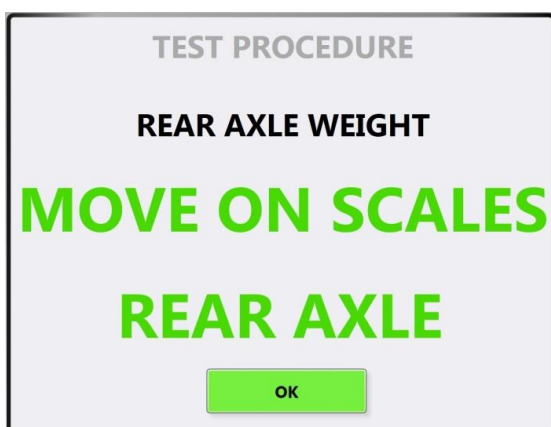
In the second test step following values are recorded:

- Rear Wheel Alignment
- Handbrake Forces

### 3.3 Third Test Step

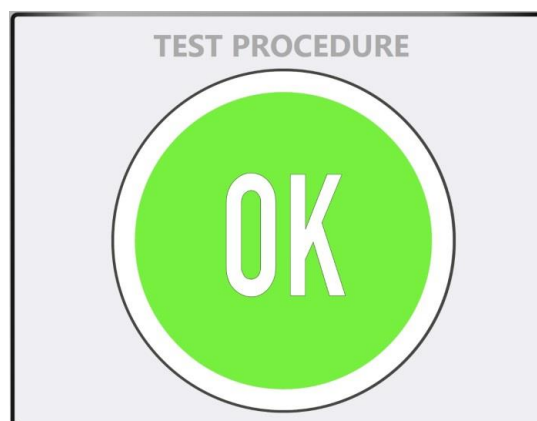
Drive backwards on the scales with the rear axle. Once you are sure that you are standing exactly on the scales with the rear wheels press the „OK“-button and an „OK“ - sign will appear.

(Additionally you can use the remote to click “OK”)



After that, you have to drive on the scales with the front axle. Once you are sure that you are standing exactly on the scales with the front wheels, press the OK-button and an „OK“-sign will appear.

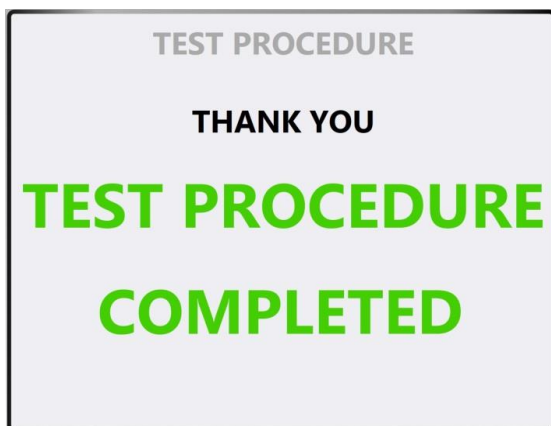
(Additionally you can use the remote to click “OK”)



In the third test step following values are recorded:

- Front and Rear axle weight

If the test procedure has been performed correctly, following sign will appear:



You can now leave the test lane!

After the test procedure is completed the „Test Report Sheet“-PDF will open.  
At the same time the report sheet is saved in the desktop folder "Plate Brake Test - Report Database". The saved reports can be opened either from this folder or directly from the button "Open Test Reports" in the main window.

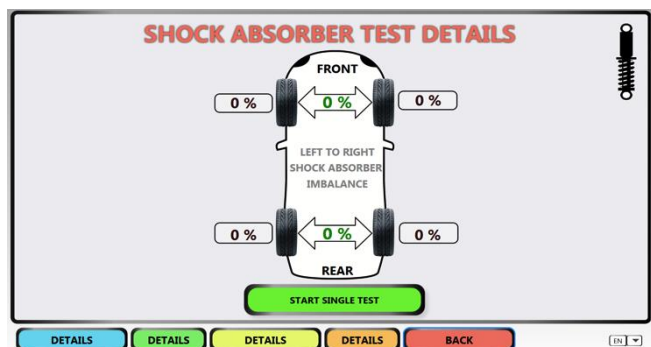
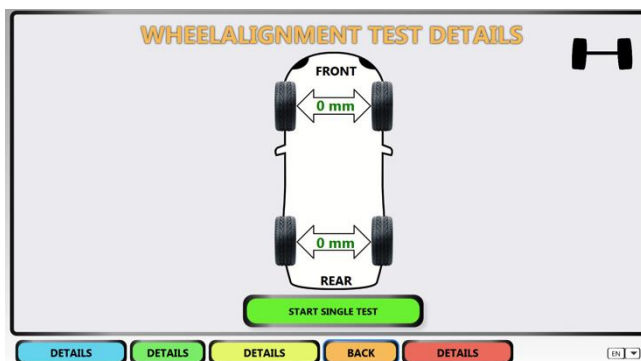
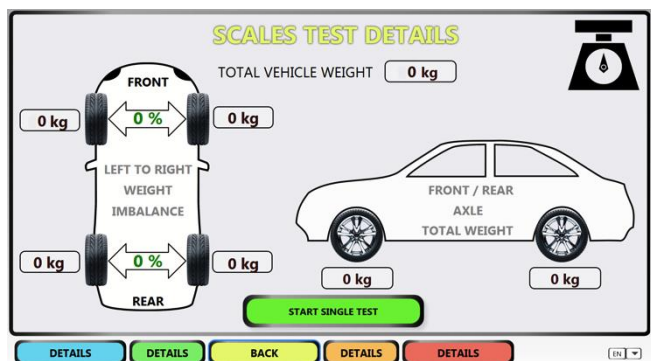
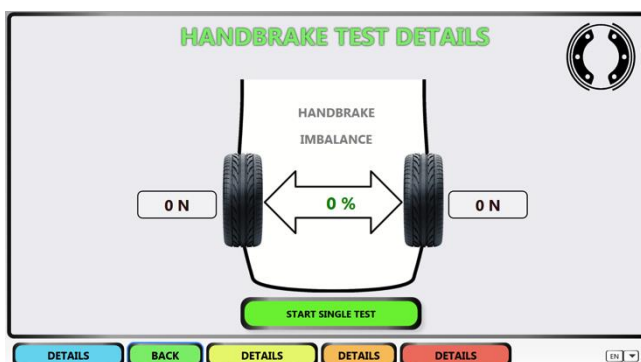
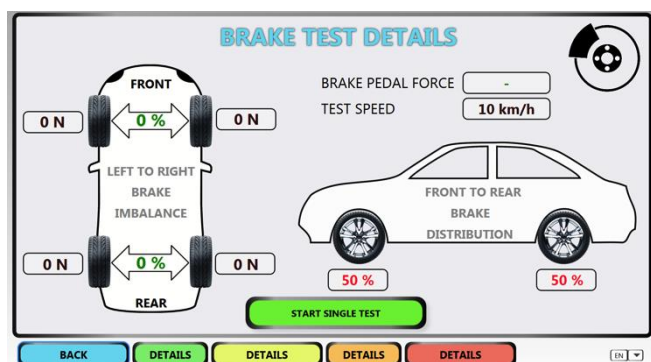
The recorded values are provided in the main window and in the detail windows until the red "Stop Test" - Button is pressed.

After you press the "Stop Test" - button the program resets and is ready to perform a new test sequence!

## 5. Single Test Procedure (Detail Windows)

The single test procedures can be performed from the five separate “Detail Windows”. The detail windows feature also detailed test results for better evaluation on a vehicle model.

It is possible to repeat a desired single test after you completed your whole test procedure or you can just perform a single test when a whole test procedure is not necessary!





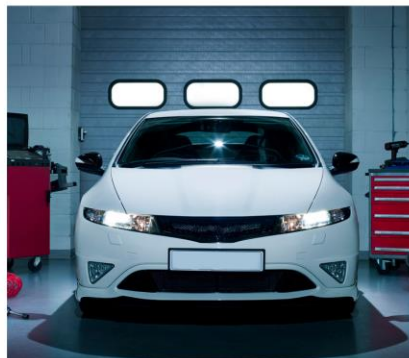
## 6. The Test Report Sheet





Company Name	Vehicle Plate No.
ExN: Examiner No.	CN: Customer No.
Examiner Name	Customer Name
Street	Street
City	City
Postal Code	Postal Code
Phone No.	Phone No.
Email	Email

Inspection Date: 30/10/2014

General Inspection Date

**TEST REPORT No.**



<b>TESTSPEED</b>							
<b>BRAKES</b>	<b>FRONT TO REAR BRAKE FORCE DISTRIBUTION</b>						
		FRONT	RANGE	REAR	RANGE	REMARK	
	DISTRIBUTION [%]						
	<b>LEFT TO RIGHT BRAKE FORCE IMBALANCE</b>						
		LEFT [N]	IMBALANCE [%]	RIGHT [N]	SUM [N]	RANGE	REMARK
	FRONT						
REAR							
HANDBRAKE							
PEDAL FORCE							
DECELERATION							
DECELERATION PEAK							
<b>WEIGHT</b>	<b>LEFT TO RIGHT WEIGHT IMBALANCE</b>						
		LEFT [kg]	IMBALANCE [%]	RIGHT [kg]	SUM [kg]	RANGE	REMARK
	FRONT						
	REAR						
	TOTAL						
<b>SHOCK ABSORBER</b>	<b>LEFT TO RIGHT SHOCK ABSORBER IMBALANCE</b>						
		LEFT [%]	IMBALANCE [%]	RIGHT [%]	RANGE	REMARK	
	FRONT						
	REAR						
<b>WHEEL ALIGNMENT</b>							
		SUM [mm]	RANGE	REMARK			
	FRONT			min -1 mm max 3 mm			
	REAR			min 0 mm max 4 mm			



**The report sheet shows:**

- Examiner details
- Customer and vehicle details
- Picture of the vehicle and plate number for test verification
- All test results for presenting to your customer, indication a pass or fail for each test
- Plate Brake Tester calibration date and serial number

## **7. Remote and Pedal Force**

- The remote control can be used alone or with an attached pedal force sensor. As soon as you switch the remote on, a green circle becomes visible in the low right corner of the main window.
- With a 1-second click on the button a Start/GO – Command is triggered. You can initiate and control the test procedure without leaving the vehicle.
- If you connect the pedal force sensor, the pedal force will be recorded alongside the brake procedure. With a double-click the sensor can be reset to zero.
- The operating range is approx. 30m
- With a 5-second click on the button you can turn the remote off. The green circle will become red, indicating no connection to remote.

**The remote control has 2 inputs :**

- The upper input is the connection for the battery charger

**The charger must only be connected at the upper input!**

- The bottom input is the connection for the pedal force sensor

