



i4WHEELS 618i Operators Manual

Version OPTO-Win 2.0
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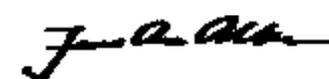
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Introduction

This manual provides operating instructions and information required to operate the OPTO-PLUS wheel alignment computer equipped with the version 3.1 graphical alignment software.

It is recommended to read the manual in the order presented. The 'Quick tour' chapter will provide the basic information needed to operate the aligner through a total four wheel alignment.

Throughout the manual a certain notation is used:

- ▶ All actions are printed as **bold type** so it is easily understood which action is required by the operator. Between the bold type items are illustrations and explanatory information to guide you through the operation.
- ▶ The manual assumes you are already familiar with the basics of wheel alignment. When reading the 'Quick tour' chapter, minimum information is provided about how to operate the aligner. More detailed information can be found by reading the sections referenced to in *italics*. These references should be read as needed for additional information to the instructions presented.

Safety precautions

Read and follow all cautions and warnings printed in this manual and on the equipment. Misuse of this equipment can cause personal injury and shorten the life of the equipment.

- ▶ This unit must be plugged in to properly grounded outlet. **Do not** cut off the grounding prong on the AC power cord. If using a ground adapter, be sure the pigtail is grounded to the power receptacle. If an extension cord is needed, use a three-wire type with the grounding circuit in good condition. Grounding this equipment is essential for its safe and correct operation.
- ▶ Use a separate outlet for the mains supply suited for computer equipment. Do not connect lifts, tire-changers, welding-machines etc. to the same outlet since this may cause the aligner to malfunction or cause seriously damage to the aligner.
- ▶ Turn off the power before moving the system cabinet. The aligner is equipped with a hard disk which may be damaged by vibration. When the power is off the read/write heads are parked and the unit may be moved safely.

- ▶ The equipment should be stored and kept in a dry condition.
- ▶ The equipment is not weatherproof and should not be used outside in rain or snow.
- ▶ Always use wheel chocks in front of and behind the left rear wheel after positioning a vehicle on the rack.

Power interruption

The equipment constantly stores the state of the measurement and the values recorded. If AC power to the system is interrupted, or if the unit is turned off, any measured alignment information will not be lost. When power is restored and the program is restarted, operation will resume from the point at which the power failed.

The basics

This chapter will familiarize you with the main components of the OPTO-PLUS screen and teach you a few basic skills you will use every time you work with the program. You will learn how to:

- ▶ Start the alignment program
- ▶ Interpret the contents of the standard screen layout
- ▶ Use the keyboard and push-buttons to select an item
- ▶ Initiate a guided tour through the alignment procedure
- ▶ Use on-line help

Starting the program

Turn on the power of the machine. After a few seconds the system initialisation messages appears on the screen. When the operating system initialisation is completed double click the OPTO-Win icon on the Desktop.

Exploring the screen

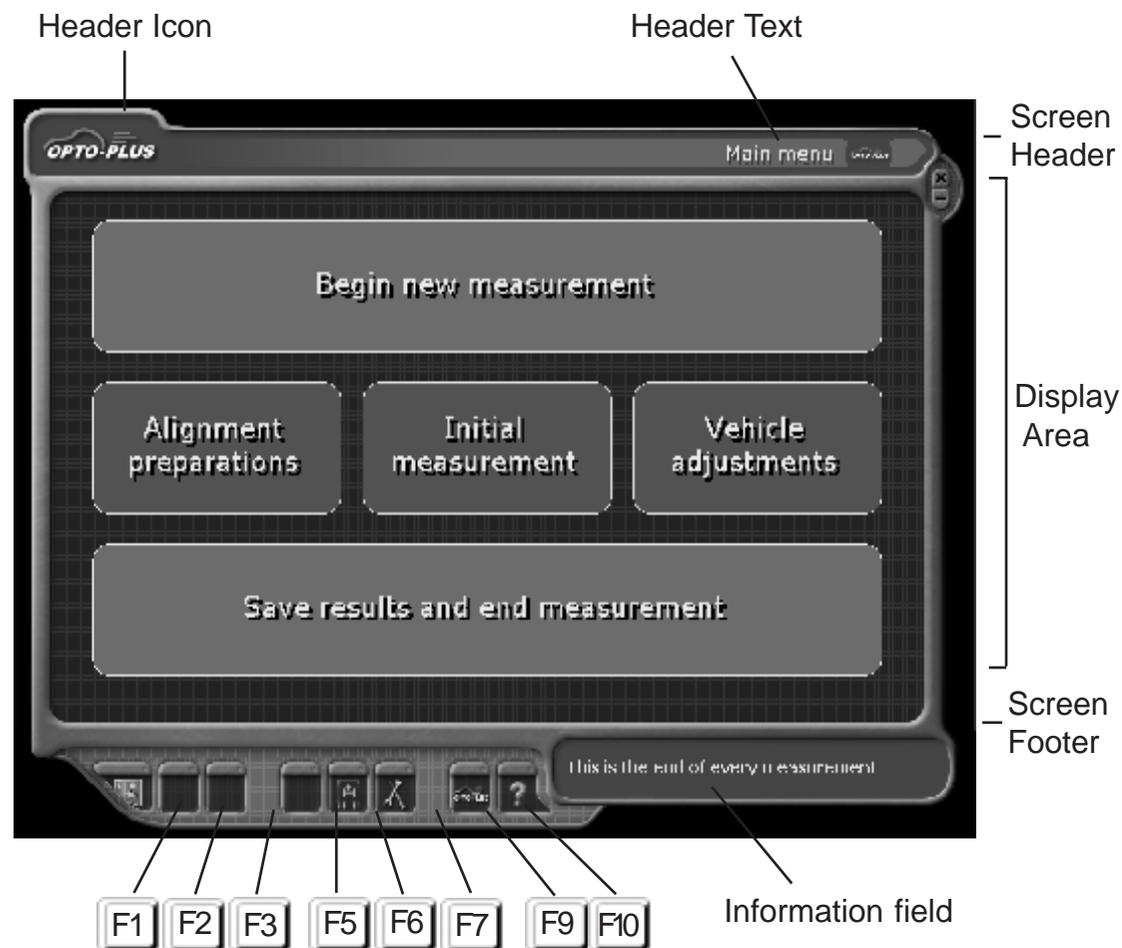
The following section describes the main components of the screen.

The screen header The screen header displays the icon related to the header text and the model name of the vehicle currently selected in the alignment database.

The display area In this area the information related to the specific page and push-buttons linked to the application of the page are displayed.

The screen footer The footer contains the push-buttons with icons related to the currently selected screen. The information field to the right displays the event that is initiated by selecting the push-button pointed to by the cursor.

Difference between 618i and i4wheels The two types of measuring units use the same technology to measure angles. However i4wheels has an integrated motor to keep the measuring head in level. Therefore it is not repeated in the manual to make sure that the measuring head should be in level. To have a correct measurement you need to keep the measuring head in level - in respect to 618i you need to manually adjust the measuring to level during measurement and adjustment.



The screen push-buttons

The push-buttons can be selected by the use of the mouse. The buttons on the screen footer can also be activated by pushing the function keys on the keyboard. F1, F2, F3 corresponds to the first three keys, F5, F6, F7 to the next three and F9, 10 to the last two. Button no. 2 and 3 can also be activated by pushing the previous and next program buttons on the front left measuring unit. In all alignment screens (except the main menu) this will lead you to the previous or next screen in the natural order of the alignment procedure.

Initiate a guided measurement

- Choose the 'Begin new measurement' button by use of the mouse.

This will initiate a guided measurement of the alignment angles.

NOTE

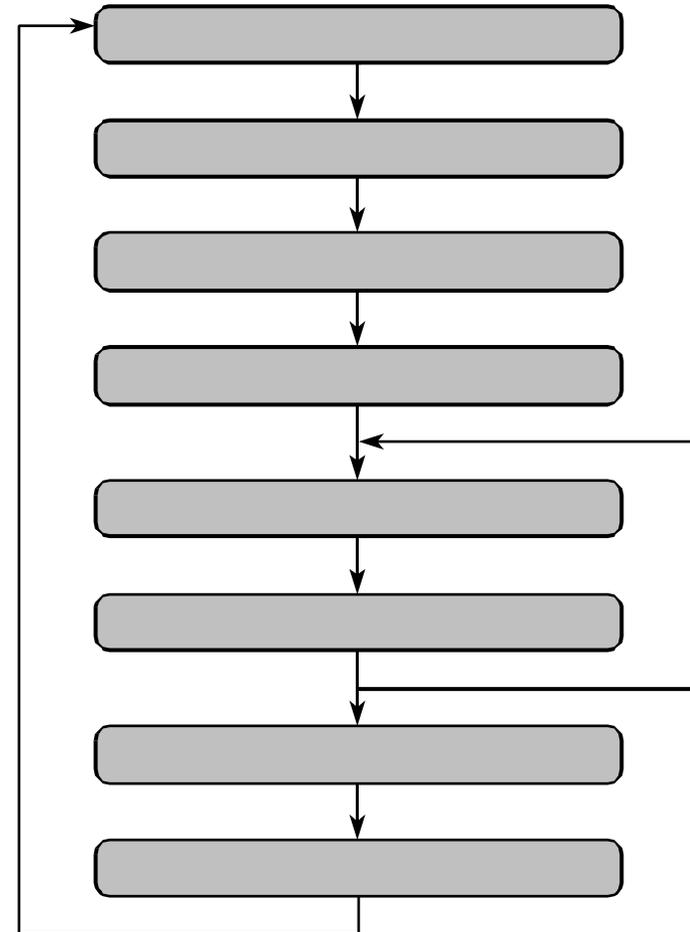
If the main menu does not appear when the aligner is turned on or a vehicle model is shown in the upper right screen corner, the last measurement was not deleted. To initiate a new measurement select 'New measurement' and follow the instructions on the screen. This will erase any measurement information stored from memory.

Help information

Normally instructions on the screen will guide the operator through the measurement. However, detailed context dependent information is available on all screens by pressing 'Help information', F10. The information displayed is related to the currently selected screen.

Quick tour

The following chapter describes a typical four wheel alignment procedure. The flow-diagram shows how a complete measurement and adjustment is performed.



- ▶ Press 'Begin new measurement' in the main menu to perform a guided tour through the measurement procedure.

The screen will change to the 'Customer data' screen.

Customer data

This screen is used for entering the customer information which will be printed as a header on all print-outs.



- ▶ Move the cursor to the desired input field.
Press and write the required information using the keyboard.

If a customer has been entered previously, the stored data can be retrieved by selecting the 'Client no.' or 'Reg. no.' from the scroll lists. This will also read the vehicle specifications for the customer selected.

Press Next' when the customer data has been entered.

OPTIONAL

If a customer has been retrieved from the list, it is possible to retrieve previously stored measurements for this customer for examination and print-out, by activating the push-button 'Load measurement' (Refer to page).

The screen will change to the 'Load vehicle' screen.

Load vehicle

This screen is used for loading the alignment specifications for a specific vehicle.



- Choose manufacturer, model and year represented in the three columns

NOTE

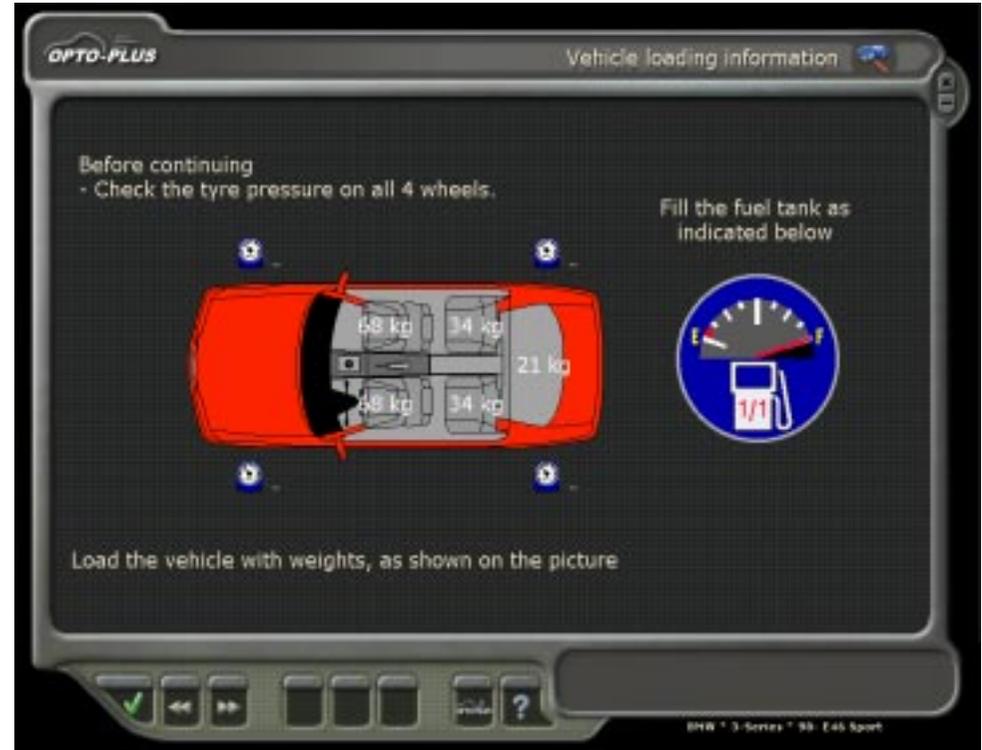
Vehicles stored by the user is marked '(user)', while data supplied by the manufacturer has no marking.

- Press 'Next' when the vehicle has been loaded.

The screen will change to the 'Vehicle information' screen.

Vehicle information

This screen shows information regarding the correct setup of the vehicle for alignment measurement in accordance with the following procedures:



- Position the vehicle on the alignment rack with the front wheels centred on the turntables and the rear wheels on the slip-plates and apply the parking brake.

CAUTION

In case the turntables and slide plates are not flush with the floor or the platforms of the lift, it is recommended to place the sliding plates and turntables after the run-out compensation has been performed and then lower the vehicle. Otherwise damage to the turntables may occur.

- Lift the vehicle to the alignment height.

NOTE

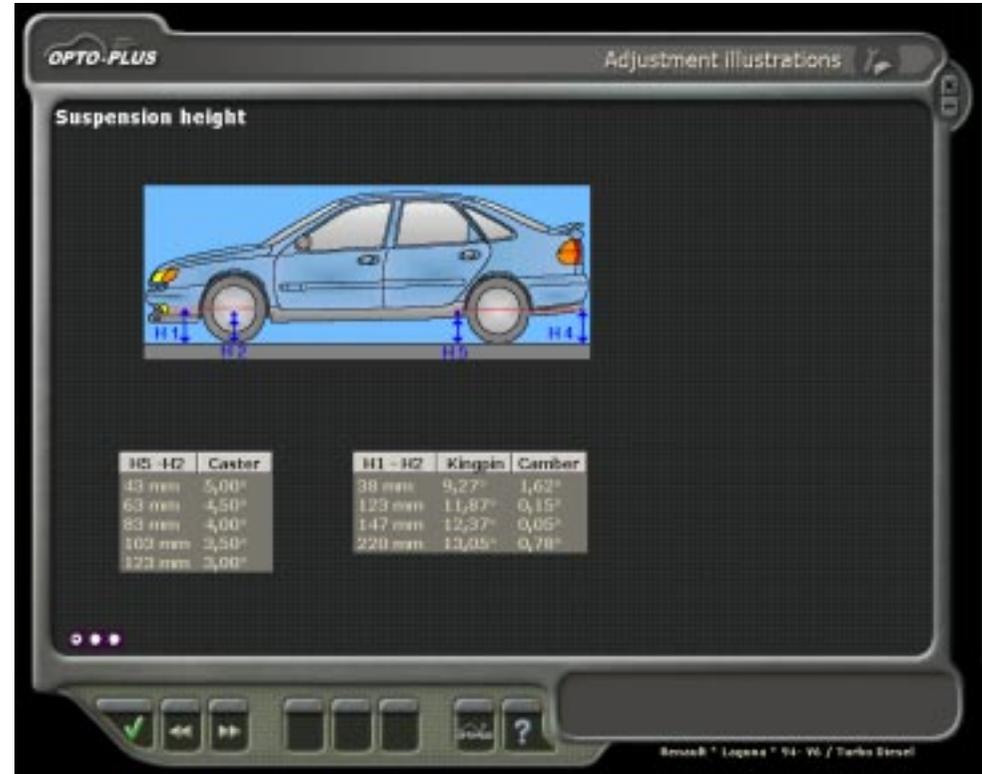
In order to ensure correct alignment, the alignment rack must be in level in transverse and longitudinal directions.

- ▶ Check for correct tire size and pressure.
- ▶ Check for weakened coil springs (vehicle may be leaning to one side).
- ▶ Turn the steering wheel from side to side and feel for excessive play. Check control arms and tie rods for possible wear or damage.
- ▶ Check ball joints and bearings for wear or damage.
- ▶ Visually inspect rims for signs of damage or excessive run-out. Badly damaged rims must be replaced.
- ▶ Press 'Next' when the vehicle has been set up correctly.

The screen will change to the Preparatory works' screen.

Preparatory works

This screen will show information about vehicle body heights and other preparatory works that are available from the manufacturer database. The data will all be related to the specific vehicle loaded from the database.



NOTE

The screen is only showed if information is available from the database. The data may include several screens describing the works to be performed before the alignment.

- ▶ **Perform the preparatory works described in the screen text (measure body heights etc.).**

If the measuring of body heights is prescribed to decide which specifications to work with, the following actions should be performed, when the heights measurements are concluded:

- ▶ **Move the cursor to the table containing the height measured.**
- ▶ **Mark the height.**
- ▶ **Repeat for all heights indicated.**

The aligner will then work with the specifications loaded related to the actual vehicle being aligned.

- ▶ **Press Next' when the preparatory works has been performed.**

The screen will change to the next 'Preparatory works' screen if available. When the last preparatory screen has been displayed the screen will change to the 'Inspection list' screen. (If the display of this screen has been selected in the alignment setup).

Run-out compensation

This screen initiates the actual measurement of the vehicle. Before performing the run-out compensation the measurement must be prepared in accordance with the following procedures:

- ▶ **Attach the clamps to the rims and check that the clamps are secure. The clamps can be fastened to the rim either from the inside to the outside or vice versa by turning the star grip. For alloy rims special adaptors are available.**
- ▶ **Level the units according to the spirit levels and tighten the locking pins.**

Check that the infrared beams are not interrupted and that the openings in the measuring units are kept clean.

- ▶ **Connect the electronic turntables (where applicable).**

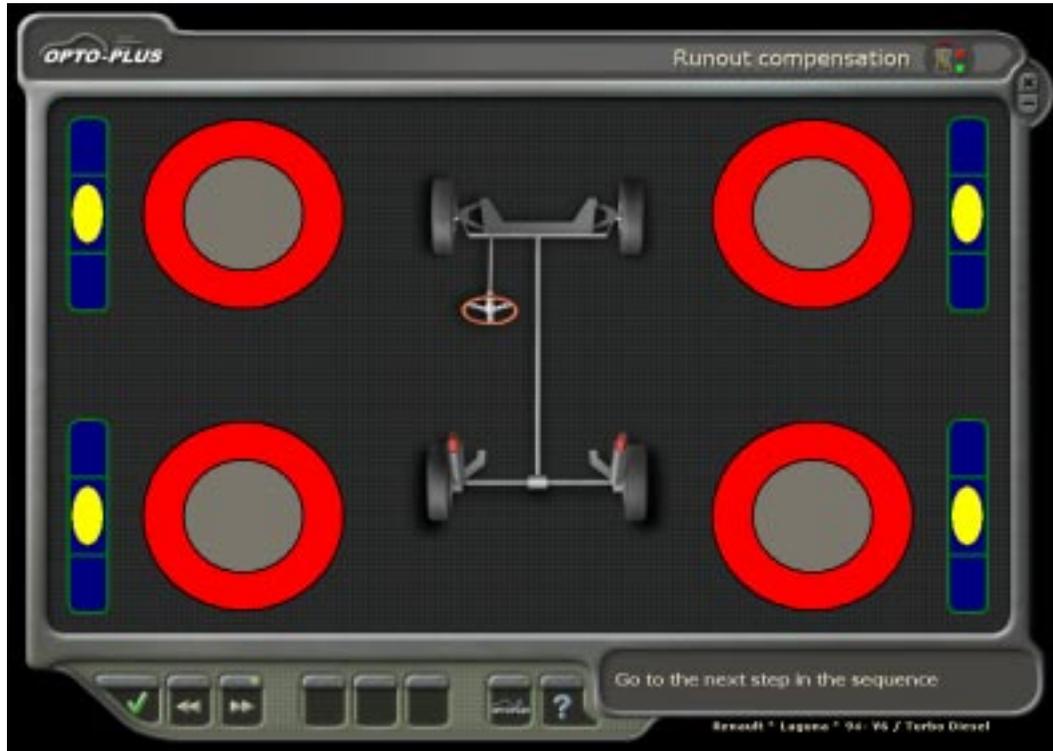
When the run-out compensation procedure has been initiated, the lamps on all four units should light continuously red. If this is not the case you should either initiate a new measurement from the main menu, or you should push the ZERO button on a measuring unit or on the screen to reset the current compensation values.

- ▶ **Lift the vehicle.**

The compensation may be started with any wheel. If all four wheels cannot be jacked during compensation, it can be preferable to start with the wheels held by the handbrake, in this way ensuring that the vehicle will not roll away when lowered. Lift the vehicle 3 cm off the ground.

When compensating one of the drive wheels beware that the other wheel does not rotate. It may be necessary to chock the wheel to prevent it from rotating. If a measuring unit is removed from any wheel this wheel must be compensated again when remounted.

The ENCO-compensation method



- ▶ Loosen the locking screw on the unit and turn the wheel until the clamp is in vertical position and the star-grip in upper position.

- ▶ Set the unit to horizontal position.

- ▶ Press the compensation button.

The lamp at the 90 degrees position starts flashing red.

- ▶ Turn the wheel 90 degrees clockwise until the clamp is in the horizontal position with the star grip to the right.

When the wheel is in the correct position the lamp starts flashing green.

- ▶ Level the unit using the electronic spirit level (green light) and hold the wheel and unit steady until all values have stabilized.

When the values have stabilized the lamp turns green continuously, and the unit beeps to indicate that the compensation value has been captured. The lamp at the 180 degrees position starts flashing red.

- ▶ Turn the wheel 90 degrees clockwise until the clamp is in the vertical position with the star grip in the lower position.

- ▶ Level the unit and hold the wheel and unit steady.

When the values have stabilized the lamp turns green continuously, and the unit beeps. The lamp at the 270 degrees position starts flashing red.

- ▶ Turn the wheel 90 degrees clockwise until the clamp is in the horizontal position with the star grip to the left.

- ▶ Level the unit and hold the wheel and unit steady.

When the values have stabilized the lamp turns green continuously, and the unit beeps. The lamp at the 0 degrees position starts flashing red.

- ▶ Level the unit and hold the wheel and unit steady.

When the values have stabilized the lamp turns green continuously, and the unit beeps. The screen shows a green circle to indicate, that the run-out compensation has been completed for this wheel.

CAUTION

If the screen shows a value inside the green circle, it indicates, that the wheel has excessive run-out. The angle shown is the run-out, while the line indicates the direction of the maximum run-out. The maximum run-out accepted without warning can be changed in the 'Program setup'. Although the aligner will calculate the correct alignment angles even though the wheel has excessive run-out, it should be checked if all claws on the clamp are mounted correctly or if the rim is damaged.

- ▶ Repeat this procedure for the remaining wheels.

NOTE

The position of the adjacent units is of no importance (they may even not be mounted).

NOTE

When the wheel has been compensated, the wheel may be rotated to any position without any influence on the measuring accuracy.

The compensation procedure can be repeated for any wheel by pressing the compensation button on the corresponding unit. The lamps on the unit turn red and the procedure can be repeated for this wheel.

To restart the compensation procedure for all wheels press the ZERO-button on a measuring unit or on the screen.

- ▶ **Lock the brakes with the brake pedal depressor (the engine may be started to activate the brake servo).**

NOTE!

If the handbrake has been pulled during the compensation, it should be released during the measurement, to ensure the highest possible accuracy.

- ▶ **Pull the locking pins on the turntables, loosen the locking screws on the sliding plates and push the plates a little inwards.**
- ▶ **Lower and bounce the vehicle.**
- ▶ **Lock the rear sliding plates.**
- ▶ **Level and lock the units.**
- ▶ **Press 'Next' when the run-out procedure has been completed.**

The screen will change to the 'Straight ahead' screen.

Straight ahead

This screen is used for initiating the measurement of caster, kingpin, toe out on turns and max. lock angle. When the ZERO button is pressed the camber and toe values are stored as the before adjustment values.



Bar Task Bar Tacometer

The bar graph shows the vehicle driving direction. When steering straight ahead always check that the measuring heads are in level.

- ▶ **Steer the front wheels until the bar graph turns green and the arrow is in the centre position. Press the ZERO button.**

NOTE

If using mechanical turntables remember to reset the scales on the turntables before pressing the ZERO-button.

When the ZERO-button has been pressed turn the steering left or right to measure caster and max turning angle. The Task Bar icons first turn light yellow and green when angle has been measured. The Speedometer indicates your steering wheel position.

Caster measurement

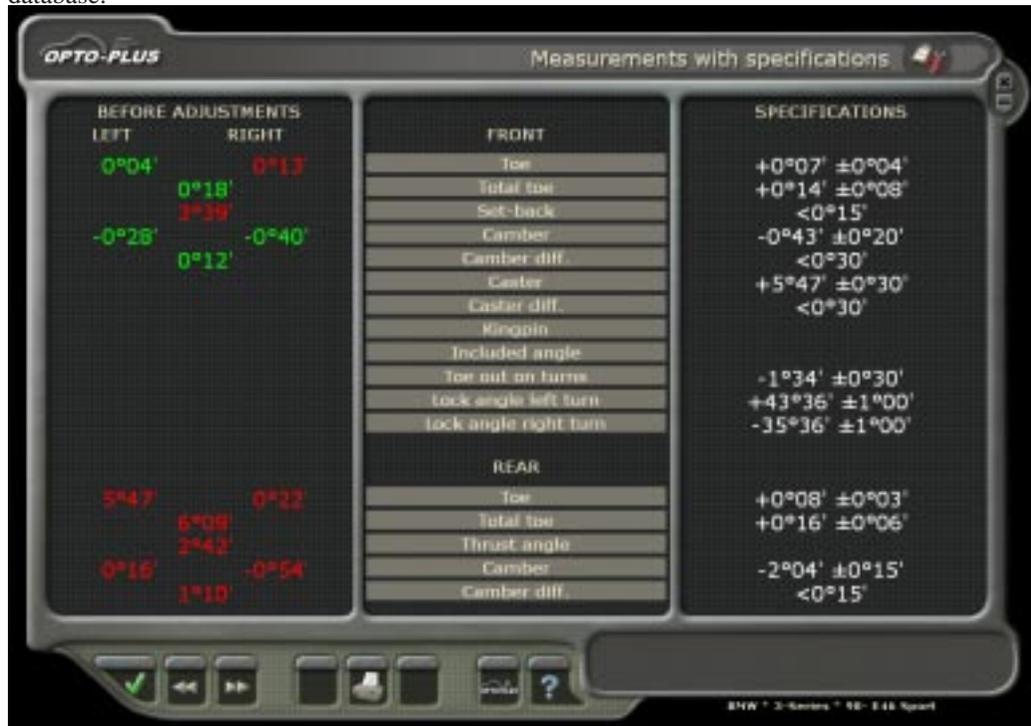
During the caster measurement several angles will be measured depending on the actual configuration of the machine. During the swing caster, kingpin, max. lock angle and toe out on turns can be measured.

To measure caster follow the directions as directed by the prompts, bar graphs and graphics on the screen.

After the caster measurement has been completed all measured angles are stored as the before adjustment values. These values cannot be changed until 'New measurement' is selected. When the wheels have been set to the straight ahead position the screen automatically changes to the 'Measurements' screen.

Measurements

The screen 'Measurements' shows the result of the wheel alignment before the vehicle is adjusted. The left column shows the stored measurements for the front and rear axle while the right column shows the vehicle manufacturer specifications loaded from the database.



Adjust rear

All stored values inside tolerance are shown in green, values outside tolerance are shown in red, while values without manufacturer specifications are shown in grey.

Values not measured are not shown. The recorded values may be printed at this time, but normally you should wait until the vehicle has been adjusted to have both the before and after adjustment values printed.

► **Press Next' when the initial measurements have been examined.**

The screen will change to the 'Adjust rear' screen.



Adjust front

The screen 'Adjust front' shows all angles related to the front axle.



To adjust caster it is necessary to initiate the correct measuring conditions as described on the screen.

- ▶ **Level and lock the measuring heads. Press the ZERO' button.**

The current caster values are shown for both wheels.

- ▶ **Adjust caster while observing the bar graphs.**

When caster has been adjusted to its correct value it should be remeasured to verify the adjusted value.

- ▶ **Press the 'Remeasure caster' button.**

This will perform a complete caster swing measurement and return to the adjustment screen.

NOTE

The remeasured caster value will appear on the print-out as the after adjustment value. The procedure of remeasuring and adjusting caster can be repeated an infinite number of times.

- ▶ **Lock the steering wheel in the straight ahead position.**
- ▶ **Adjust camber while observing the bar graphs.**

NOTE

The toe adjustment for vehicles with two adjustable tie-rods is done in this screen by adjusting the individual toe for each wheel. To adjust vehicles with only one adjustable tie rod, a screen showing straight ahead and total toe can be selected by pressing 'One adjustable tie-rod'.

- ▶ **Adjust front toe while observing the bar graphs.**
- ▶ **Press 'Measurements' when all angles have been adjusted.**

The screen will change to the 'Measurements' screen.

OPTIONAL

If the front wheels must be raised to make adjustments, refer to "Front wheel adjustment with vehicle raised" (*refer to page*).

OPTIONAL

If 'Adjust toe front' is pressed in the screen for adjusting vehicles with one adjustable tie-rod, all toe measurements related to the front wheels including set-back and straight ahead are shown on the same screen. This screen is also used for selecting adjustment of the toe constant (*refer to page*).

Measurements

This screen shows the result of the wheel alignment before and after the vehicle is adjusted. The left column shows the stored measurements for the front and rear axle before the adjustment, while the right column shows the actual measurements after the adjustment.



All stored values inside tolerance are shown in green, values outside tolerance are shown in red, while values without manufacturer specifications are shown in grey.

Values not measured are not shown.

- Press the 'Print measurements' to obtain a printed summary of the values before and after adjustment.

NOTE

Since the right column shows the live values measured, the front wheels should be in the straight ahead position. This can be accomplished by turning the steering wheel until the front individual toe is the same in both sides (with the same sign). The front wheel adjustment screen with the straight ahead illustration can also be used.

NOTE

When the values have been printed, the measurements in the right column 'After adjustment' will be locked. It is marked with 'Measurements locked' above the text in the centre column. This ensures that the values and time printed and the values and time stored in the database are the same. To obtain live values, enter one of the adjustment screens and return to this screen.

- Press 'New measurement' to terminate the current measurement and initiate a new measurement.

The screen will change to the 'New measurement' screen.

New measurement

This screen is used for printing, storing and terminating the current measurement, and for initiating a new.



OPTIONAL

If the measurements have not yet been printed, they can be printed by activating 'Print measurements' on this screen. To save the measurements in a database for later retrieval activate 'Save measurements' (*Refer to page*).

- ▶ **Press 'New measurement' to erase all current customer data, vehicle specifications, inspection notices and measurement values.**

The notice 'New measurement' appears on the screen for a few seconds and control is returned to the main menu with the cursor on the alignment preparation button.

NOTE

When a new measurement is selected, the first measurement performed will appear in the before adjustment column on the measurements screen and on the print-out. All successive measurements will appear in the after adjustment column. Selecting 'New measurement' is the only method to make values appear in the 'before adjustment' column.

If the 'Cancel' button is pressed the screen will return to the previous screen without changing any of the current data.

- ▶ **Remove the measuring heads from the vehicle.**
- ▶ **Lower the lift and drive the vehicle off the lift.**

Alignment setup

To change the user settings of the equipment, choose the 'Setup' button in the main menu of the OPTO-Win program. This section of the program has several pages to change the user settings of the program - use the F3 button to go through the pages. The first page to enter is shown on figure SU1.

To enter the page you need to enter a password. Default password is 'AUTEK'.

Setting up toe system

The first page shown on figure SU1 enables you to setup the toe system. The default value is 8 sensors. The OPTO-Win program can be used with the OPTO-PLUS 616 with only 6 sensors. The i4wheels is standard an 8 sensor system.

Print Out of measured values

If you wish to underline measured values that needs to be adjusted, then mark the bullet 'Mark on print-out'. To get a warning message mark the next line. Choose the last line if no marks are needed on the print out.

Run out procedure

The run-out procedure can be skipped if you set it to 'May be skipped'. Else the run out procedure needs to be performed and the OPTO-Win program cannot proceed if not performed. OPTO-PLUS recommends always to perform run out for the purpose of accuracy and quality of work.

Run out method

The run-out method is default set to 'Automatic four points'. Only the i4wheels 4ever level and the i4wheels 4ever level RFT can do the automatic four point run out. The standard i4wheels needs to be set to 'Two points' or 'Four points'. OPTO-PLUS recommends always to do a four point run out for accuracy and quality of work.



Figure SU1

Setting of the language

On the page two of the setup as shown on figure SU2, you can set the language by use of the scroll list.

Passwords

For security measures you can set a password control to enter the setup of the i4wheels computer wheel aligner. You can set password to delete a customer entry or a workshop specified specification. The original OPTO-PLUS database is not deletable.

Setting the converter box COM port

This list enables the setting of the correct COM port of the converter box connection. If you experience an COM port error, please try to find the correct COM port connection of the converter box.

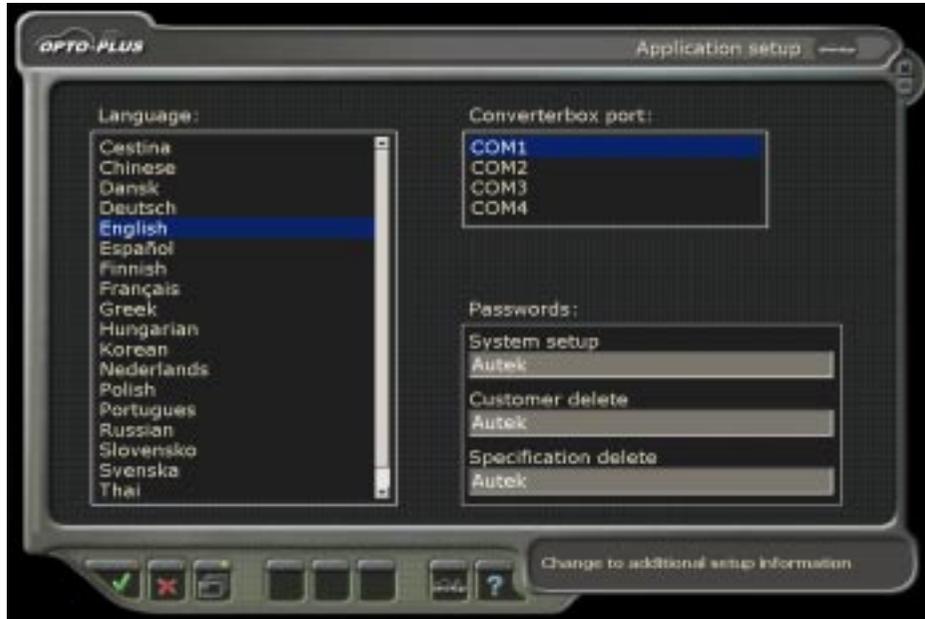


Figure SU2

Setting caster swing

The caster swing can be performed at three different angles. Either at 10, 14 or 20 degrees. The selected angle is underlined and with a bullet to the left. OPTO-PLUS recommends always to perform run out for the purpose of accuracy and quality of work.

Setting caster swing max turn

Choose the caster swing max turn from the scroll list. This sets a limit to the maximum measured turning angle.

Setting the radio channel

If several equipments has to perform in one workshop, the radio channel needs to be set to a different value for each machine. Use the radio channel scroll panel to make sure that each measuring head is set to the same value.

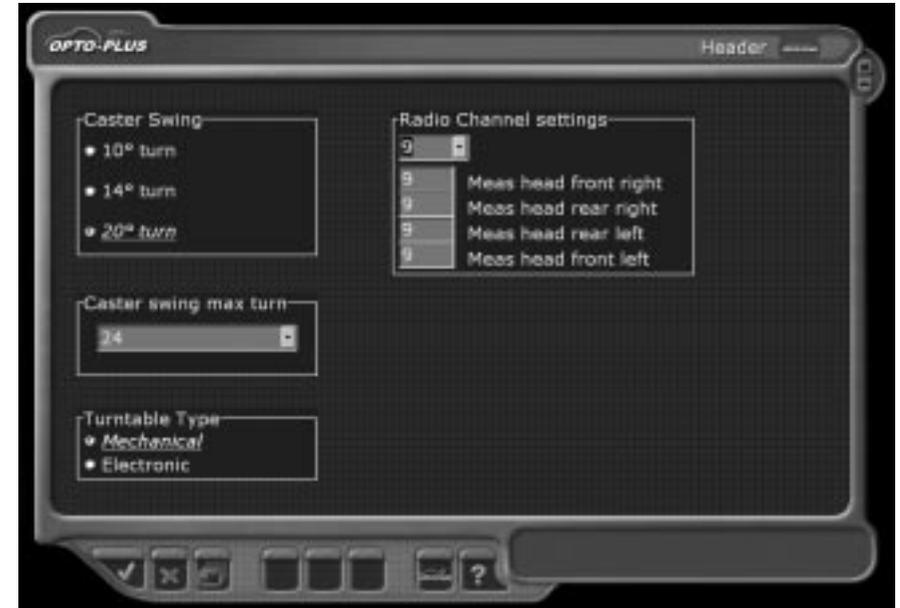


Figure SU3

Setting the radio channel (cont.)

NB!! Make sure that the cables are connected to all measuring heads before setting the radio channel.

F.Y.I. The radio signals can reach up to 40-50 meters within a building.

Setting up turntable type

The third page as shown on SU3 also offers to setup the type of turntable applied on the front wheels. Either electronic or mechanical turntables are used. Default the option is set to mechanical turntables, since the i4wheels is able to measure angles of up to 25 degrees.

The electronic turntables comes in handy when measuring maximum turning angle electronically. When set to 'Electronic turntables' the i4wheels measures the caster swing angle, toe-out on turns and maximum turning angle by use of the electronic turntables.

Radio communication

Charging the measuring units

To recharge the units they must be mounted on the wheelclamps, and be hanging on the side of the RFT cabinets. The current for charging the batteries, is transferred to the measuring unit through the hanger. Keep the contact surfaces on the measuring unit clean and free from grease.

During the charging of the batteries, the led-lamps on the measuring head will be flashing in a clockwise rotation. This also indicates that the unit is mounted correctly on the cabinet. The flashing stops when the batteries is fully recharged.

Powerdown mode

Powerdown mode is used to save power in the batteries, when the machine has not been used for an amount of time. The software will go into power down automatically after inactive period of app. 20 seconds and when the equipment is activated, the measuring units will be active again. The measuring heads will not go into power down mode while doing run out compensation, caster swing or adjustment. In all other parts of the OPTO-Win program the measuring heads will automatically to into power down mode.

During the power down mode there is no radio transmission. The measuring units are communicating on a frequency of 433 Mhz and this is the frequency to use for small range radio devices. Since this is a shared frequency, it might also be used by other equipment or remote controls, so when the wheel alignment is not used, it makes good sense to go into power down mode.

Communication problems or low battery

If a communication error to one of the measuring units occurs during the operation of the i4wheels RFT wheel aligner the program will show a picture as the one in the figure RD1.

To diagnose the problem:

Case 1:

If the small green lamp in the level indicator is flashing, the measuring unit is in the powerdown condition. The battery is ok, but the communication is not working. Attach the cables to all of the units to continue working with the machine. The screen will show the yellow pop up screen as shown on figure RD1.

Case 2:

If the battery is in a low condition you will hear an alarm from the electrical engine. The battery is no longer able to feed the electrical engine and you need to attach a cable to this unit to begin recharging and continue to work with the machine. The screen will show the yellow pop up screen as shown on figure RD1.

When to use the cables

1. Battery is low
2. If there is a communication problem
3. Cables must always be used by the service-technicians.

When doing service on the measuring units, they **MUST** all be connected by cables. Some of the functions in the service programs require that they are connected.

Important notice about battery

All types of batteries are subject to a chemical reaction. To extend the lifetime of a battery it is very important to charge the battery minimum 24 hours before using it.

NB!! Therefore connect all measuring heads with cables or hang them on the side of the cabinet with the computer turned on in order to get power supply to the measuring heads. Wait 24 hours before making the measuring heads cable free.

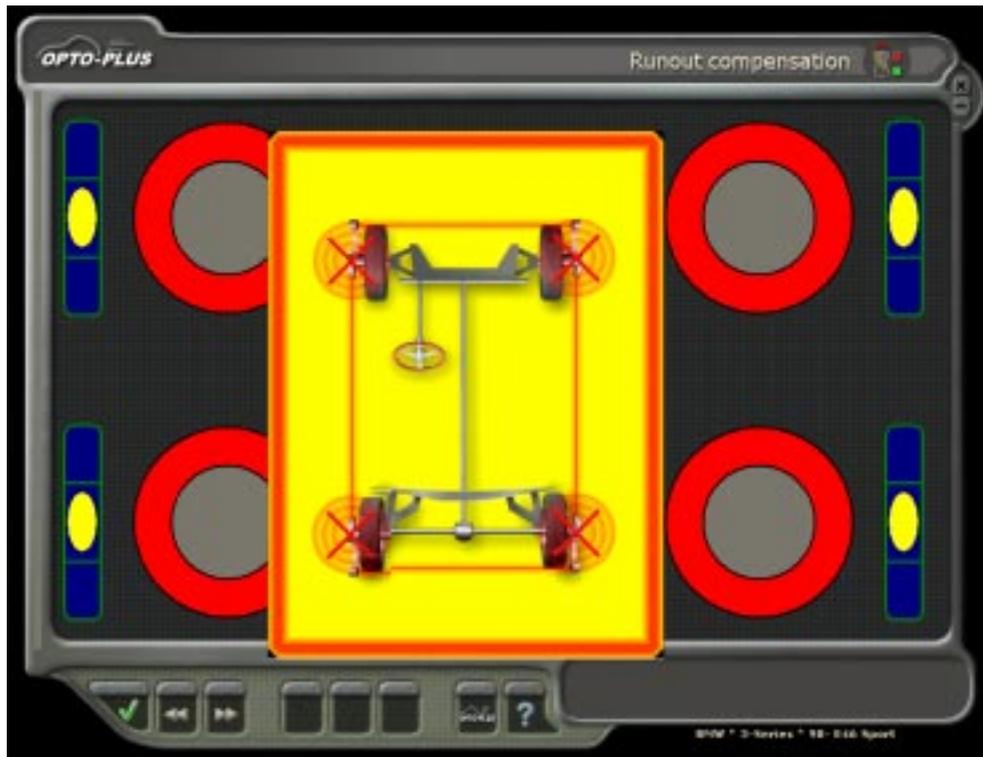


Figure RD1

General important notice about the equipment

NB!! The equipment uses sensors that are sensitive to sun-light. It is therefore not possible to use the equipment in open air with strong sun-light. If the equipment is used, the OPTO-Win software will respond that a sensor has been blocked as shown on the picture below.

Your notes:



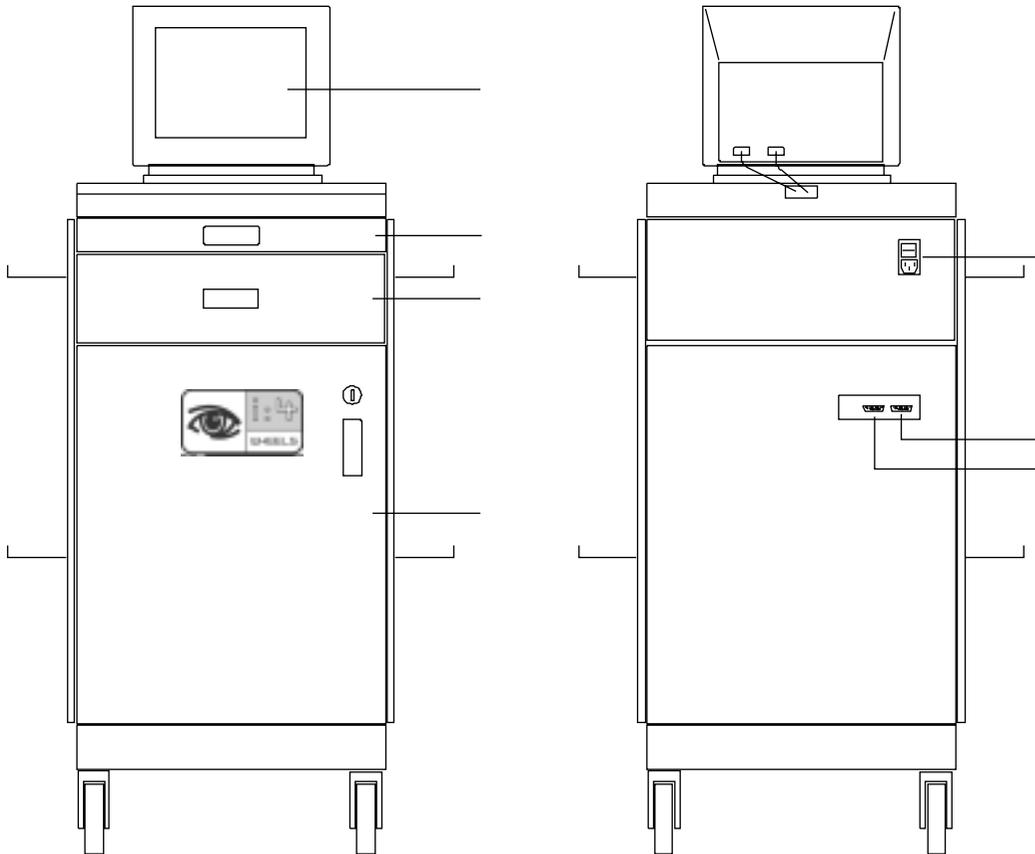
Your notes:

Your notes:

System components

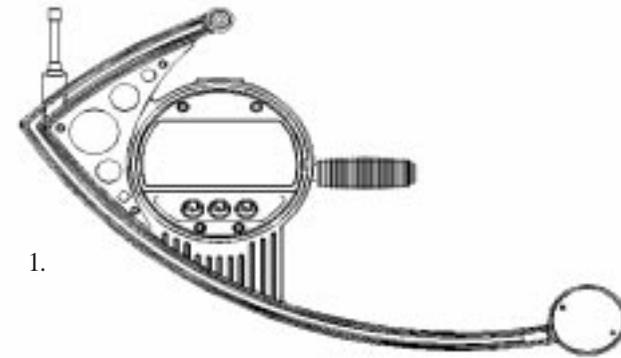
i4wheels

Mobile cabinet

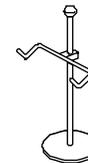


1. Colour screen with high resolution.
2. Drawer with keyboard for editing and entering data.
3. Drawer with A-4 printer.
4. Closet with PC.
5. Mains switch and power cable inlet.
- 6 + 7. Connectors for measuring units.

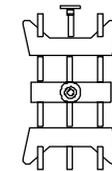
Accessories i4wheels



1.



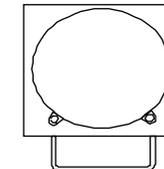
3.



2.



4.

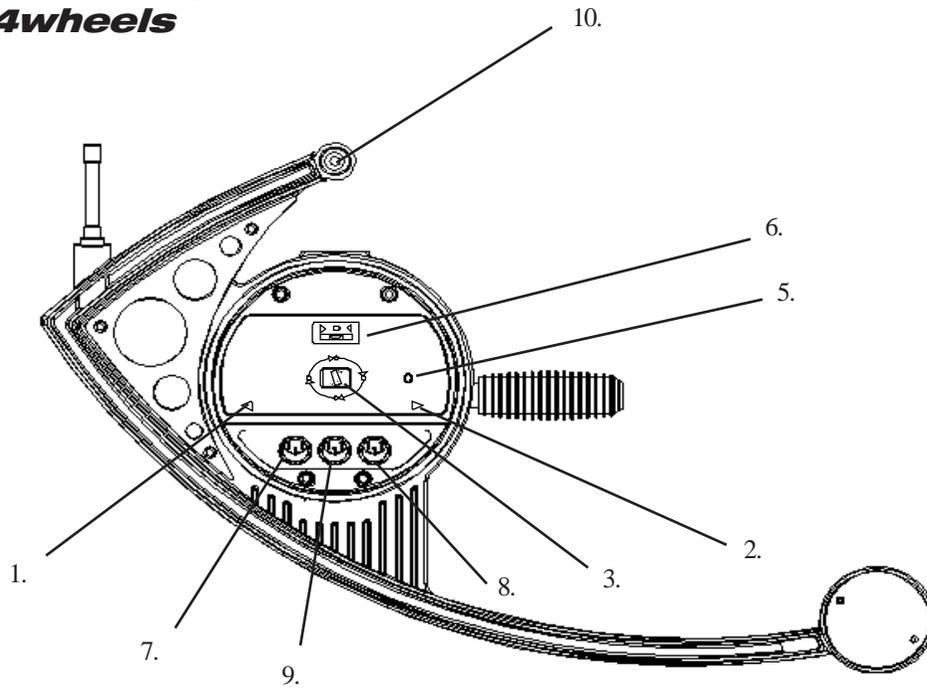


5.

The i4WHEELS Wheel Aligner is supplied with the following accessories:

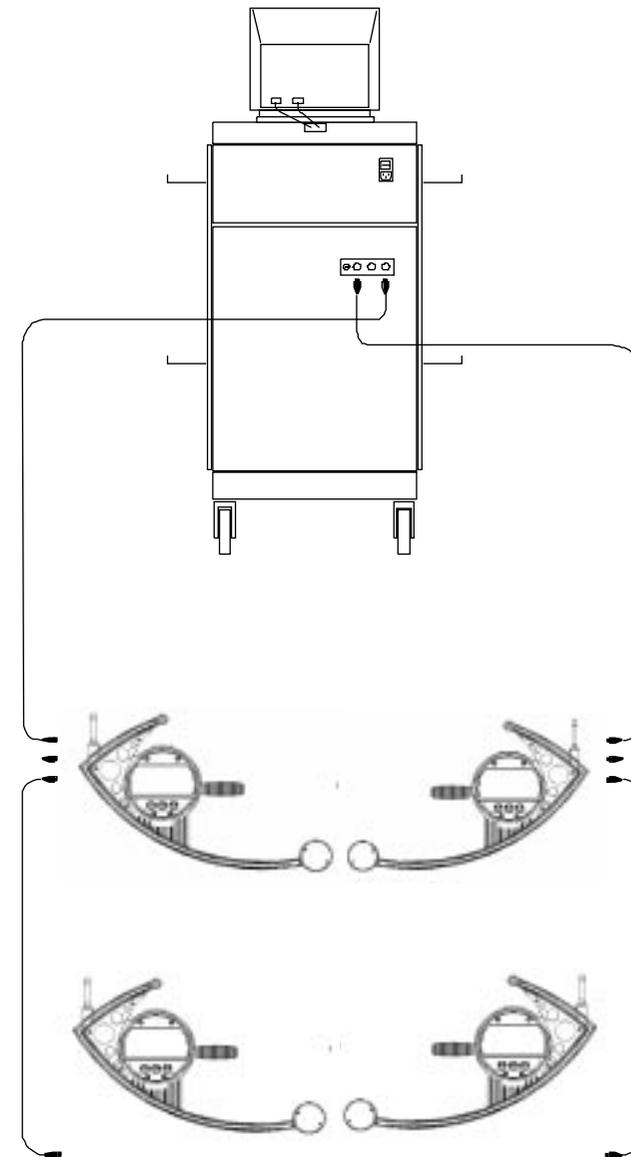
- 1 4 x measuring heads - for each wheel
- 2 4 x Self centring clamps for 12-19" wheels (4 pcs.)
- 3 1 x Steering wheel holder
- 4 1 x Brake pedal depressor
- 5 4 x Sliding plates for rear wheels (4 pcs.)

Measuring unit i4wheels



- Pos 1-2 Program selector. Increment stepwise forward or backward in the vehicle adjustment program
- Pos 3 Push Button for Run-out compensation
- Pos 5 Push Button for Zero setting. Used in measuring Caster and KPI
- Pos 6 Spirit level for horizontal position of measuring heads
- Pos 7-8 Connector for rear measuring unit or cabinet
- Pos 9. Connector for electronic turntable
- Pos 10. Indicator for left or right front measuring head

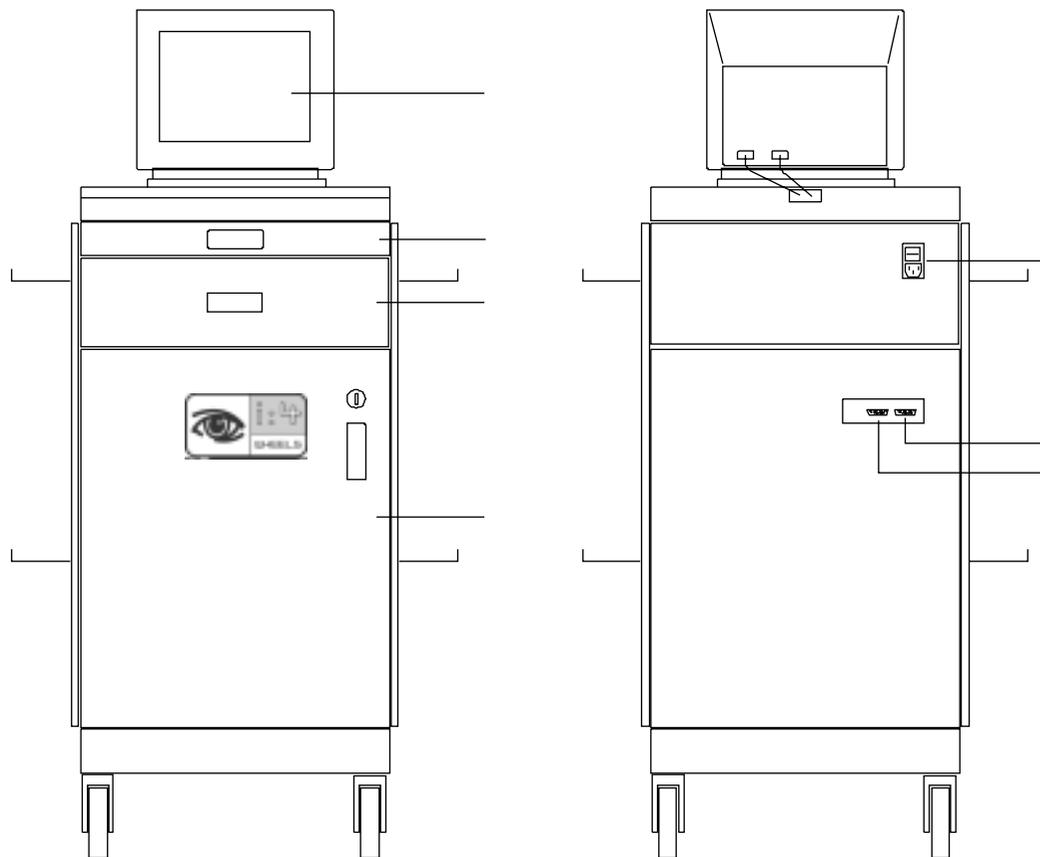
Cable connections i4wheels



System components

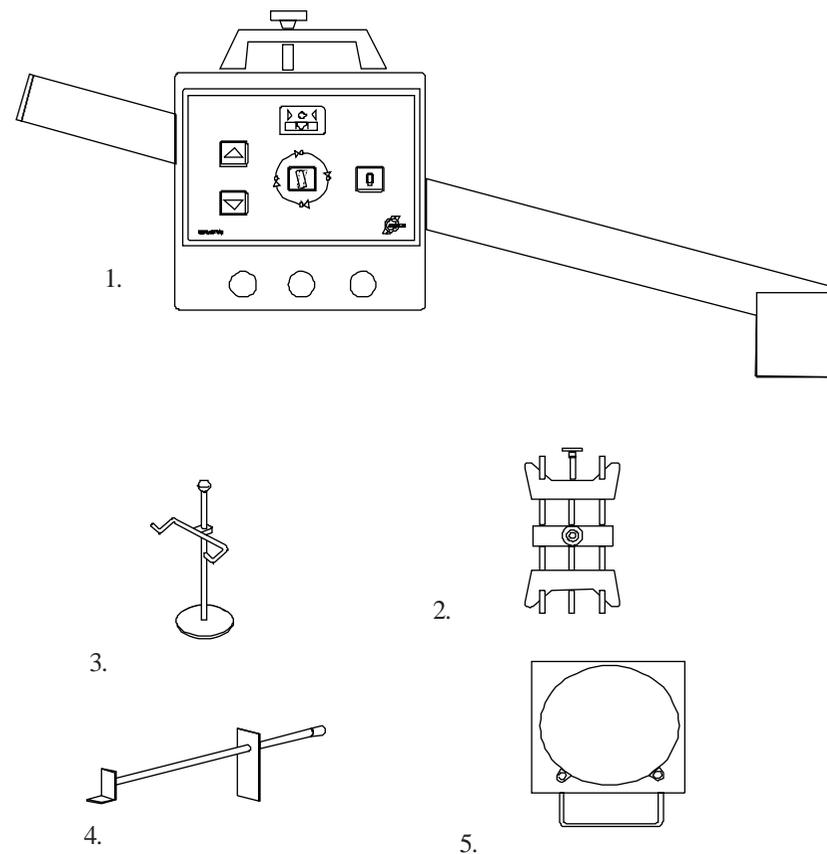
618i

Mobile cabinet



1. Colour screen with high resolution.
2. Drawer with keyboard for editing and entering data.
3. Drawer with A-4 printer.
4. Closet with PC.
5. Mains switch and power cable inlet.
- 6 + 7. Connectors for measuring units.

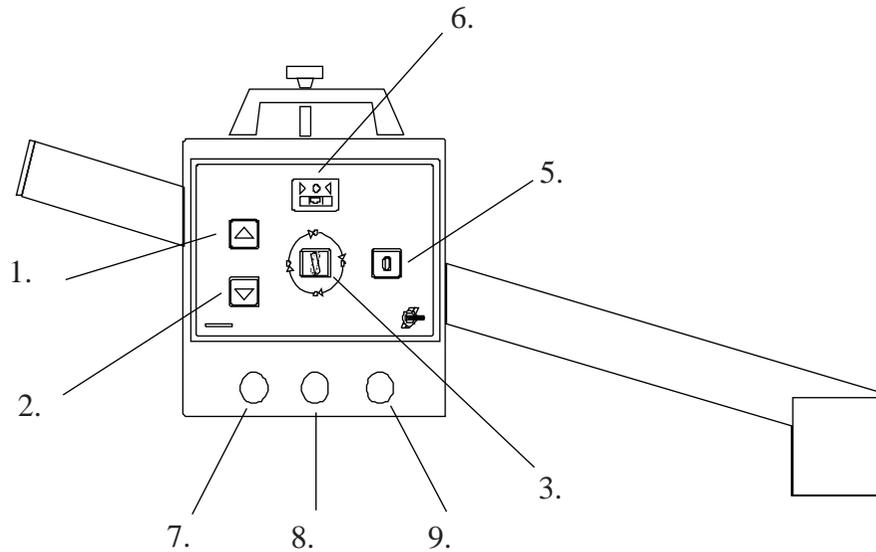
Accessories



The 618i Wheel Aligner is supplied with the following accessories:

- 1 4 x measuring heads - for each wheel
- 2 4 x Self centring clamps for 12-19" wheels (4 pcs.)
- 3 1 x Steering wheel holder
- 4 1 x Brake pedal depressor
- 5 4 x Sliding plates for rear wheels (4 pcs.)

Measuring unit 618i



- Pos 1-2 Program selector. Increment stepwise forward or backward in the vehicle adjustment program
- Pos 3 Push Button for Run-out compensation
- Pos 5 Push Button for Zero setting. Used in measuring Caster and KPI
- Pos 6 Spirit level for horizontal position of measuring heads
- Pos 7-9 Connector for rear measuring unit or cabinet
- Pos 8 Connector for electronic turntable

Cable connections 618i

