

TESS



User Manual

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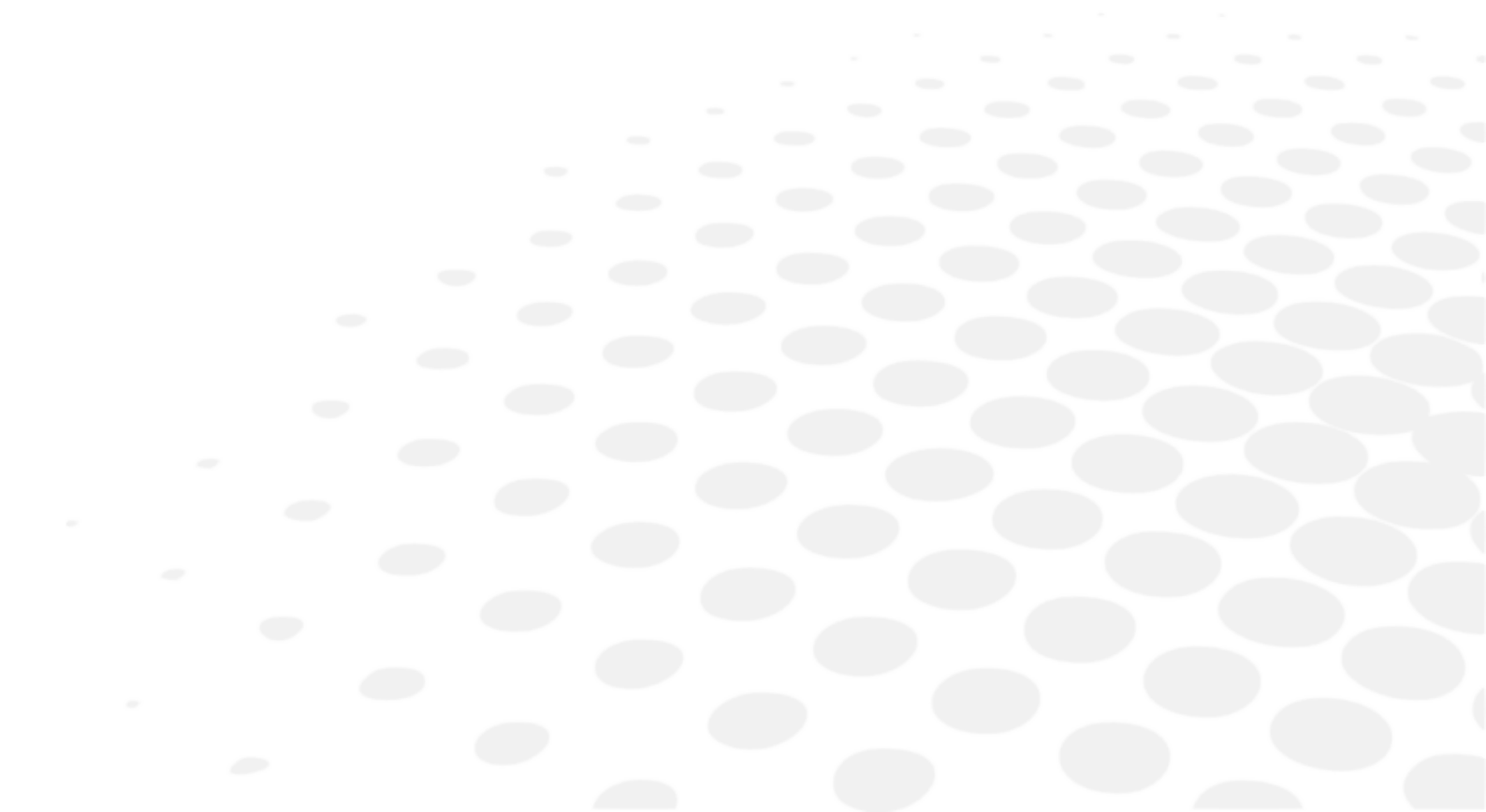
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I. INTRODUCTION



We congratulate you on acquiring a high-precision Essilor tracer.

Before using the tracer, we highly recommend to you to read this handbook in its entirety so you can get the highest satisfaction from the machine.

This equipment complies with the limits imposed by Part 15 of the FCC rule. Its use meets the following conditions: (1) this device must not cause interference and (2) must accept interference from external sources, notably that liable to cause malfunctions.

In accordance with the requirements of FCC rules, any modification made to this equipment which is not expressly approved by ESSILOR INTERNATIONAL will nullify the user's right to use this device.

1. Note

This equipment has been tested and is deemed compliant with the limits imposed for Class-B digital devices according to Part 15 of the FCC rule. Those limits are set so as to ensure reasonable protection against interference in a residential environment. This equipment generates, uses and may emit radiofrequency energy liable to interfere with radio communications if the device is not installed and used in strict compliance with manufacturer instructions.

However, nothing guarantees that interferences will not occur under particular conditions. If this equipment is the source of interferences with the receptions of radio or television, which can be determined with certainty by turning on the powered-off device, the user can eliminate the aforementioned interferences by taking one or several of the following measures:

- reorient/move the affected receiver or its reception antenna
- move the device away from the affected receiver;
- connect the device to a different circuit than the one powering the affected receiver;
- ask for assistance from the dealer or a qualified radio/television technician.



The information contained in this document is non-contractual and provided as a guide.

It is subject to change without prior notice. Errors or omissions may occur in this type of document, although the greatest care has been taken to ensure the accuracy of the information provided.

In no case Essilor will be held responsible the possible loss of data or malfunctions which could result from these errors or omissions.

2. Warning

To reduce the risks related to the use of electrical equipment - fire, electric shock, injuries, (...) - it is essential to comply with the basic safety rules.

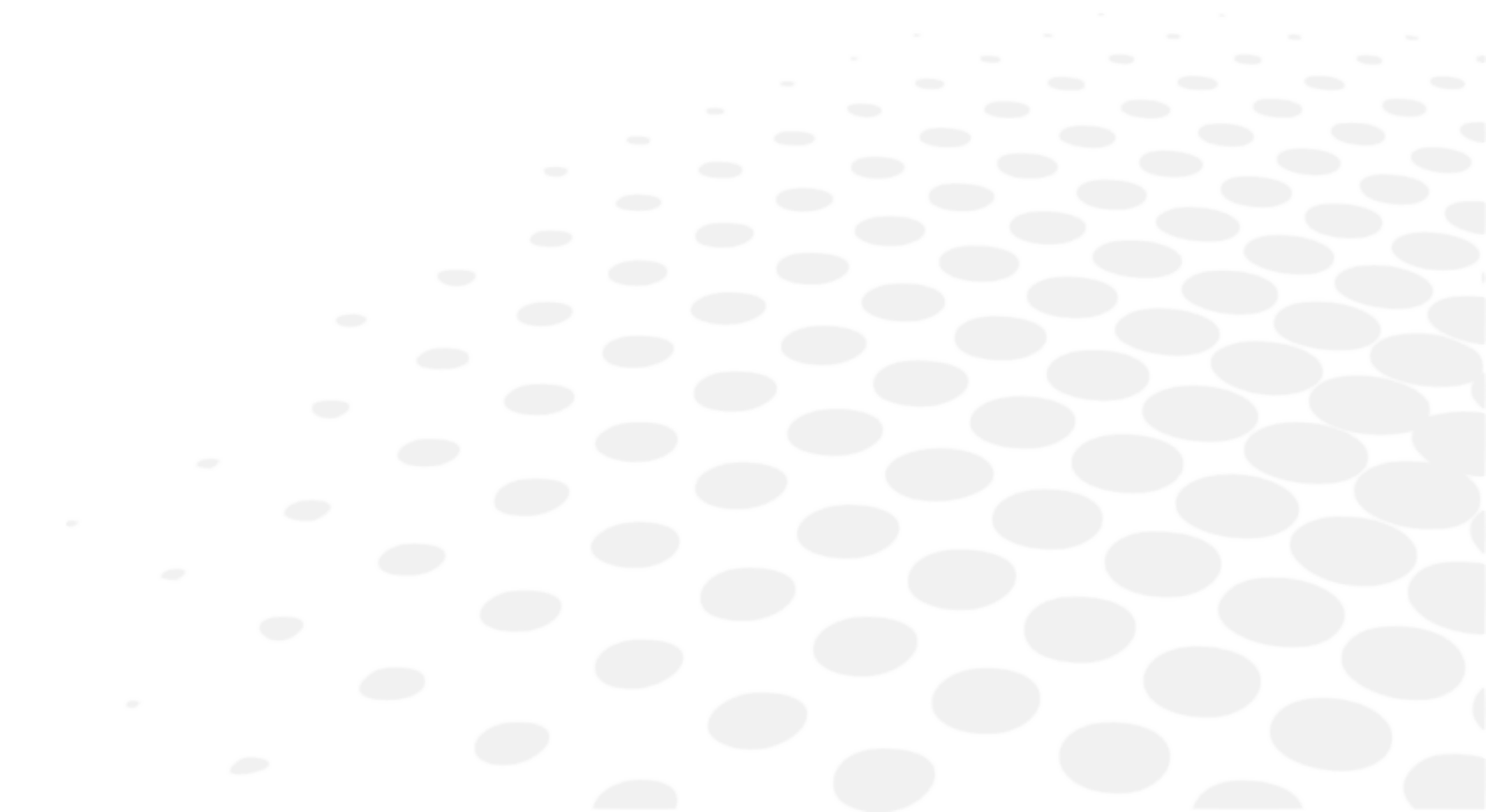
Also, we highly recommend that you read and save this handbook before activating your tracer.

Operations of the mechanical and electronic adjustments and electrical maintenance must be carried out by an After-sales service technician approved of by Essilor.

In order to use your tracer in total safety, we recommend that you follow the following instructions:

- Your table must be clean, not encumbered and sufficiently lighted to allow usage without risk.
- Take care not to use the tracer in the presence of liquids or flammable gases.
- Check the power supply cable periodically and, if it is damaged, have it replaced by an approved repair technician.
- Keep the cable far away from the heat sources, sharp objects and greasy substances.
- Never pull on the cable to extract it from the socket.
- Before connecting the tracer to the electrical network, you ensure that it is powered down.
- If the switch no longer functions you should not use your tracer any more. The defective switch must be replaced by an approved technician.
- In periods of prolonged non-use, and before carrying out any maintenance and/or replacement of certain accessories, it is imperative to disconnect the tracer from the electrical network.
- The tracer is a professional tool and its use is reserved for specialized and responsible operators. It must not be used by anyone other than those operators.
- Before using the tracer, make sure it functions and ensure that the product can function correctly.
- Use and installation of any accessory other than those recommended in this handbook can present a risk for the operators who use the product.
- Do not use the tracer for operations other than those described in this document.
- The tracer must be maintained carefully in accordance with the instructions detailed in this document.
- The tracer is a piece of electrical equipment in conformity with the applicable safety standards. In the event of malfunction, repair operations must be performed by qualified personnel approved by Essilor. Otherwise, the user's safety may be at risk.

II. PRECAUTIONS REQUIRED



1. Work surface

To get the highest level of precision from the tracer, we recommend that you lay out it on a strong surface that is **stable** and flat, isolated from any shocks or oscillations.

The tracer can be placed up to 5 meters from your computer and/or your edger. Optional longer cords are available.

2. Environment

The temperature and the relative humidity of the location where you use your tracer must be within the following limits:

Operation in "remote lens edging"	+15 °C (+59 °F) to +30 °C (+86 °F) 30% to 75%
Operation in "local edging"	+10 °C (+50 °F) to +40 °C (+104 °F) 30% to 75%
Storage	-5 °C (+23 °F) to +50 °C (+122 °F) 10% to 95%
Altitude	< 2000 m

Avoid abrupt changes of temperature and moisture and install the tracer:

- in an area not exposed to direct sunlight,
- away from any heat sources,
- away from any strong magnetic fields,
- away from any corrosive chemical products or vapors and liquids.

Make sure to arrange it so it can expel heat from the top of the tracer. Do not put any objects on the tracer.



This machine is not suitable for nor intended to operate in an environment classified as being under risk of explosion.

3. Electrical installation

a. Electrical characteristics

Tracer power

12 Volts	---
----------	-----

Power supply voltage (external power)

100-240 VAC	---
Frequencies	50 - 60 Hz

Grounding

The tracer must be plugged into a grounded electrical network.

This grounding must be in conformity and checked by an electrician.

Parasites and micro-interruptions

The tracer was designed to resist and function in spite of the presence of parasites and the possibility of micro-interruptions on the electrical communication.

However, if these defects are major and abnormal, the normal functioning of the product cannot be guaranteed.

4. Cleaning

To prevent any accidents, unplug the device before cleaning it.

Regularly clean the tracer (except for the feeler) using a soft rag dampened with water or a neutral detergent (dish soap).

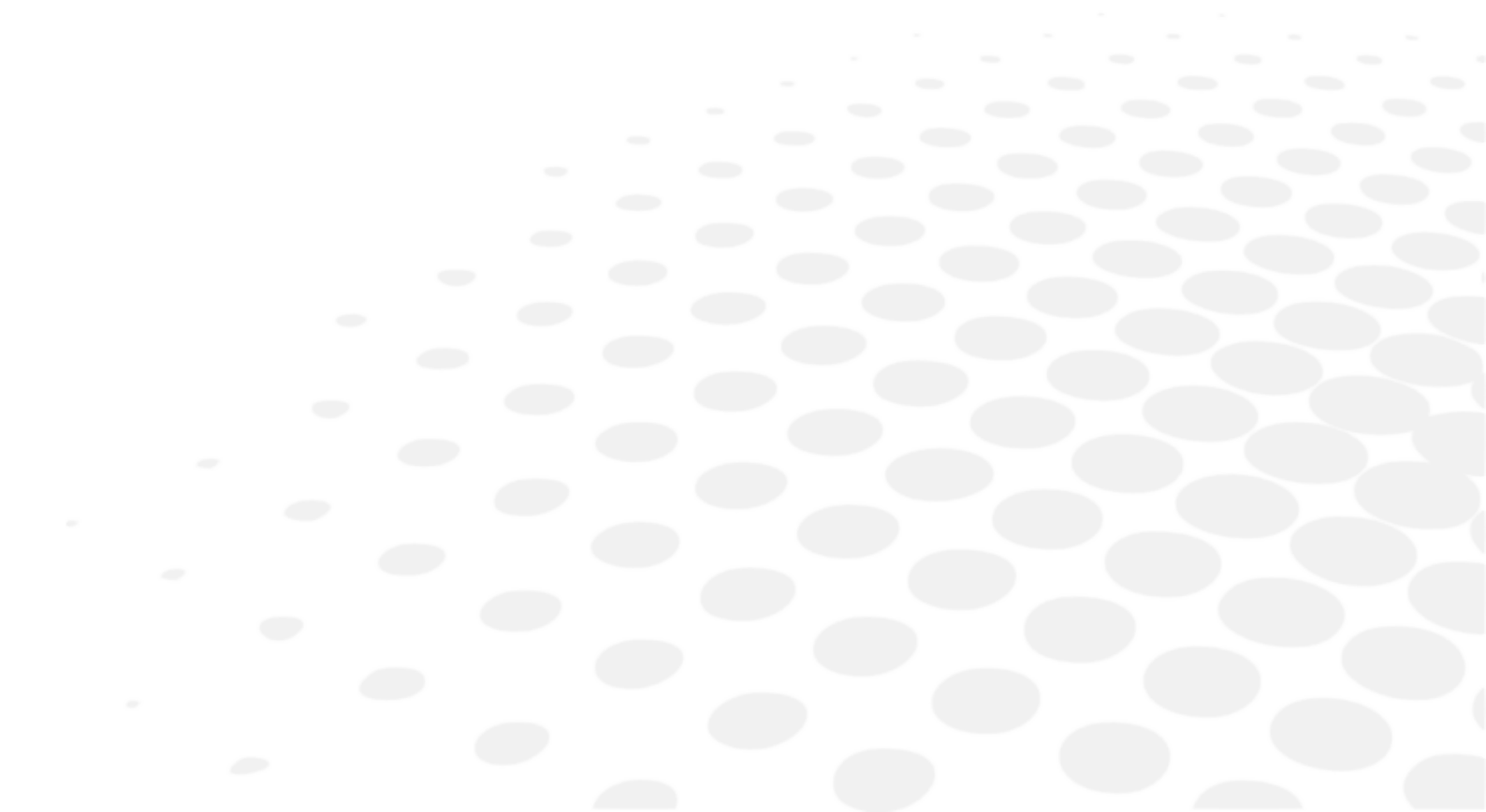


To prevent dust deposits from disturbing the high precision of the tracer, we advise that you close the protective cover after use.



Never clean the tracer using thinners, different solvents, alcohol or benzene, acetone or other organic or mineral solvents.

III. INSTALLATION



1. Introduction

Technical data

Turn the tracer on using the on/off switch.

- Complies with ISO16284 Standard (VCA compatible).
- Automatic autotest when turned on.
- Calibration, in connection with the micro-computer (PC) or from the tracer.
- Cycle counter available on the software installed on the computer.
- Automatic insertion of the feeler
- Tracing in 3 dimensions for frames, 2 dimensions for patterns, demo lenses or already cut lenses.
- The "remote lens edging" precision will be assured only on closed frames.
- High-Precision Tracing with profile reading of the frame groove.
- Support provided for the tracing of a pattern or a lens (demo or already cut).
- Automatic measurement of the bridge of the frame, in binocular tracing.
- Frame thickness measurement.
- Differential tightening of the clamps.
- RS232 port and RJ-45.
- Update of the memories via Essilor external USB key .
- Built-in memory: 200 Jobs.
- Digital display 2 X 16 characters.
- Integrated functions of auto-maintenance, from the micro-computer (PC), or from the Delta T edger.
- Power supply: 12V
- External power: 100-240 VAC, 1 A, 50-60 Hz, Output 12 V.
- Limits of frame dimensions:
 - B-dimension 17mm minimum (pattern: 18.5mm), 58mm maximum.
 - A-dimension 28mm minimum, 70mm maximum.
 - Z Height limit: 30mm in binocular, 40mm in monocular.
 - Frame thickness : 1.45mm minimum, 12mm maximum.
- Dimensions: (L) 280mm X (D) 285mm X (H) 180mm.
- Weight: 7.5kg



Due to constant improvements, these specifications may be modified without prior notice.

2. Unpacking of the product

a. Reception of the product

- Check the general state of the cardboard box. It should not present any marks of shock or trauma. If so, contest the transporter's usage restrictions.
- Position the cardboard box: the two arrows on the box must be directed upwards.
- Open the box at the top and take out the accessories first.
- Take out the product with its two foam supports.
- Remove the foam supports.
- Save all the packaging for possible re-use.

b. Unbinding of the device

Before any use, it is **REQUIRED** that you remove the transport stabilizing system.

To do this:

- 1 Remove the two screws holding the stabilizing plate.

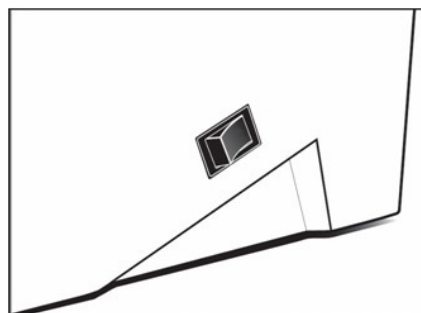


- 2 Remove the stabilizing shim (save these two screws as well as the shim for possible re-use).

c. Turning on and off the product

Turning on the product

Press on the pushbutton for approximately 1 second, then release:



> The display indicates:



> At the end of powering up, the tracer is working.


Machine shutdown.

Press on the pushbutton for approximately 1 second, then release:

> The display indicates:



> Press on  to stop the power-down process.

> Press on  to confirm the power-down process.



By pressing the pushbutton for too long you will force the device to turn off. This action will cause a warning message to appear the next time the machine is started.

d. Packing of the device

To pack the tracer:

1 Turn off the device.

> The device is put automatically into parking position.



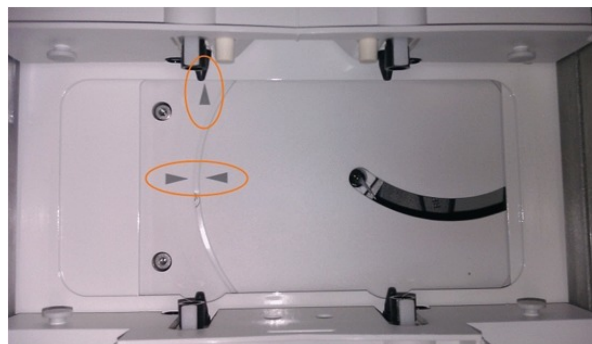
It is also possible to use:

- the barcodes below:



..PARKTR

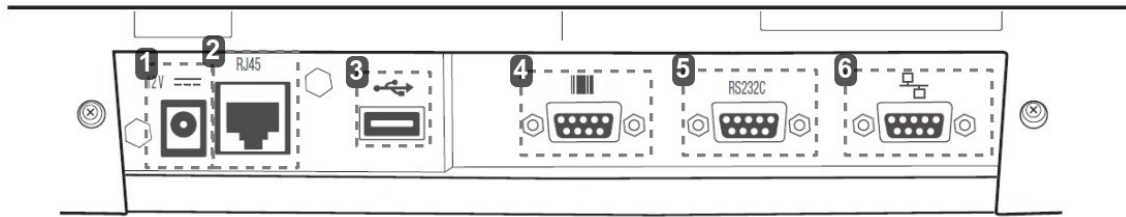
- it is also possible to put it manually in parking position using marks:
 - two horizontal arrows for the position rotation: they must be aligned,
 - a vertical arrow for the output position: this arrow must be aligned with the left stud of the back jaw.



2 Position the plate and insert the two screws.



3. Connections



1. Power socket
2. Ethernet port
3. USB port
4. Barcode tracer port
5. Serial port
6. Edger connection port



Depending on your configuration, the tracer can be connected to the RS323 port through:

- a computer,
- a Essilor edger:
 - Delta T
 - Delta 2
 - Jess
 - JessIE
 - JessD

a. Connection to a computer

There are two methods to connect the tracer to a computer:

1. Connect RS232C cable to the serial port of the tracer (cf image 5, shown above) and on a serial port RS232C of the computer.
2. Connect the RJ-45 cable to the Ethernet port of the tracer (cf image 2, shown above) and on your Ethernet network (switch, router, faceplate...).



Before any Ethernet connection, it is imperative to know the structure of the network to which the tracer will be connected.

b. Connection to an Essilor edger (Delta T, Jess, JessIE, JessD)



- The connection of the tracer to the edger will be carried out with the two devices powered off.
- The voltage indicated on your devices (tracer, power supply) must correspond to the provided power.
- Avoid connectors or adapters which are likely to not ensure good contact.
- Check that the cables do not pass near to disruptive electric elements: electric motors, fluorescent tubes, radios, etc.

- 1 Check that the device is turned off.
- 2 Connect the specific black cable delivered with Delta T: refer to the guidance labels found on the side, and connect the of edger connection port of the tracer (cf image 6, shown above) with the RS232 port of the edger.



The cable used is a cross cable.

Make sure to comply with the direction of the connection indicated on the labels of the cable in correspondence with the symbols used on the edger and the tracer.

- 3 Connect the line connector cord of the external power supply to the tracer (cf image 6, shown above) and to the outlet, after you have made sure that it is grounded.



If necessary check the outlet grounding with your electrician.

- 4 Start the tracer.



When using it with:

- Delta T: refer to the user manual of the edger to configure the installation suitably.
- A login PC and edger, you can combine the two installations described above.

c. Login with a Delta 2 edger

- 1 Connect the RJ-45 cable of the tracer to the edger.

Then to the tracer:

- 2 Press simultaneously on  and "1".

- 3 Press on "6. Communicate" then press on .

In the menu "1. Protocol":

- 4 Click on  then on .

Press  to confirm.

Press on  (Ø) to exit the menu.

- 5 Click on  then on .

Press  to confirm.


Press on  (Ø) to exit the menu.

- 6 Click on  then on .

Press  to confirm.


Press on  (Ø) to exit the menu.

- 7 Then, configure the IP addresses as follows:

Press simultaneously on  and "1".

- Press on "6. Communicate" then press on .

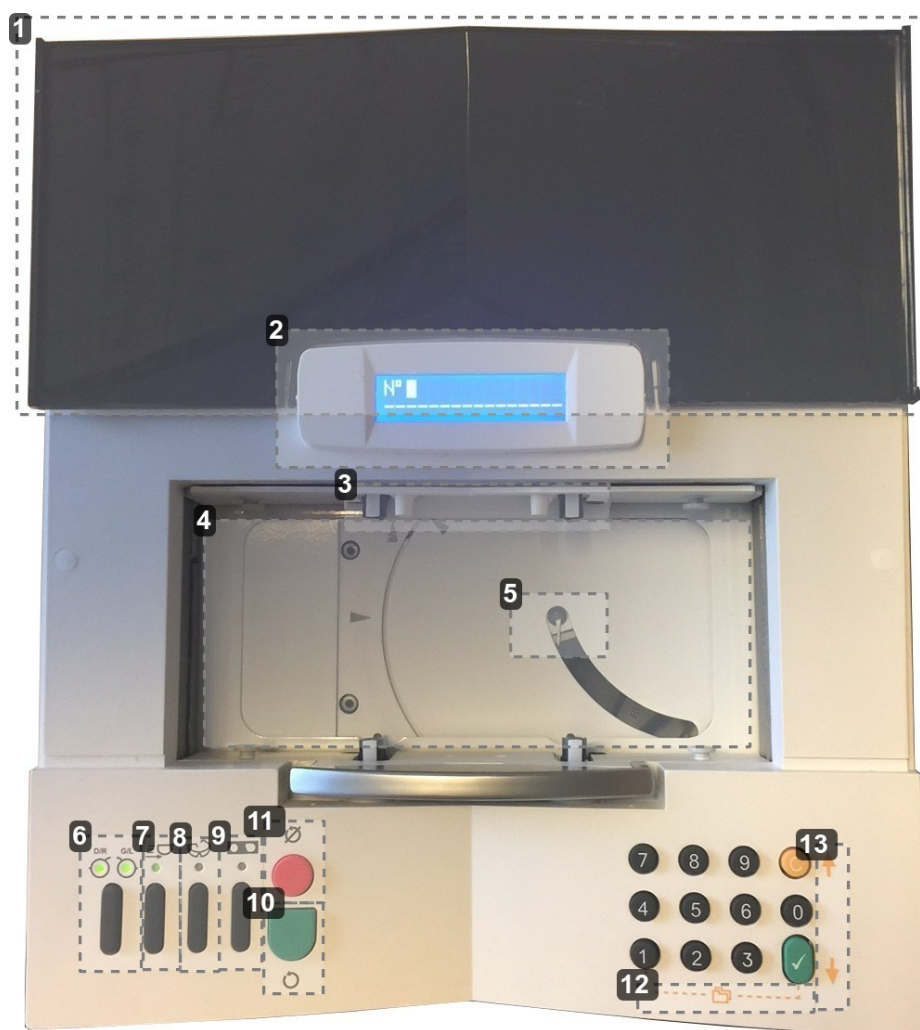
- Press on "2. Parameters" then press on .

- Lastly, press on "3. IP" then press on .

Enter the elements below:


- Static mode
- IP: 192.168.128.12
- Mask: 255.255.255.0

4. Tracer description




1. Protective cover
2. Two line display
3. Tightening clamps
4. Tracing centering
5. Feeler
6. Selection RE, LE, RLE
7. "Precal lenses" order cycle selection
8. "Very high-base frame" cycle selection
9. Calibration test launch
10. Tracing cycle initialization
11. Stop of tracing cycle
12. Access to the internal menu
13. Navigation arrows

5. Presentation of the internal menu


The internal menu of the tracer is accessible by pressing simultaneously on  and "1".

It is composed of 7 sub-menus.




To access one of these sub-menus, enter the figure corresponding, then press on :

1 Calibrate: launching of a complete calibration. For more information, consult the section Auto-Maintenance > calibration. (p.54)

2 Auto-test: launching of an autotest. For more information, consult the section Auto-Maintenance > Autotest. (p.55)

3 Contrast: adjustment of the display contrast; enter the desired value (from 1 to 9), then press on .

4 Import export: data exchange with an external USB key. For more information, consult the section Import/export. (p.57)

5 Delete: deletion of information from the tracer; enter the desired value (from 1 to 9), then press on . Press on  again to confirm the deletion or on  to cancel the deletion.

6 Communicate: setting of the communications of the tracer with your environment. For more information, consult the Installation > Connections. (p.18)

7 Grooving acqui: access the three modes of groove acquisition. For more information, consult the section Utilization of the tracer > Frame tracing > Groove acquisition. (p.47)

6. Connection configuration

To configure the connection:

- 1 Press simultaneously on  and "1".

> The display indicates:



- 2 Press on "6".

> The display indicates:



- 3 Press on  to enter the menu.

> The display indicates:




a. Configuration of protocols

The menu "1. Protocol" is composed of 3 sub-menus:

- 1 Pc OmaEth** : configuration of PC connection
- 2 No edger** : configuration of the edger connection
- 3 Centrer Off** : configuration of the blocker connection




To configure PC connection

- 1 Press on "1", then press on .



> The display indicates by default:




> If not, it displays the last memorized choice.

- 2 Press on "1", then press on  to make your choice.
- 3 Then choose the desired protocol by navigating the menu using the keys  and .

- 1 No Pc** : no PC connection
- 2 Pc OmaRs232** : OMA protocol, with RS232 connection
- 3 Pc OmaRs232+** : OMA protocol for Check Pro, with RS232 connection
- 4 Pc OmaEth** : OMA protocol, with Ethernet connection
- 5 Pc PccomRs232** : PCCom protocol for Opsys V1
- 6 Pc Meganet** : specific Japan protocol

- 4 Enter the selected line number selected then, press on  to confirm.
- 5 Press on  (⌫) to exit the menu.




To configure the edger connection

- 1 Press on "1", then press on .



> The display indicates by default:




> If not, it displays the last memorized choice.

- 2 Press on "2", then press on  to make your choice.
- 3 Then choose the desired protocol by navigating the menu using the keys  and .

- 1 No edger** : no edger connection
- 2 Edger OmaRs232** : edger connection with the provided cord
- 3 Edger Topcon1** : specific Topcon edger protocol

- 4 Enter the selected line number selected then, press on  to confirm.
- 5 Press on  (⌫) to exit the menu.

To configure the blocker connection


- 1 Press on “1”, then press on .



> The display indicates by default:



1 Pc OmaEth
2 No edger


> If not, it displays the last memorized choice.



- 2 Press on “3”, then press on  to make your choice.

- 3 Then choose the desired protocol by navigating the menu using the keys  and .


: by default mode

: connection with Iness

- 4 Enter the selected line number selected then, press on  to confirm.

- 5 Press on  () to exit the menu.

b. Configuration of parameters (optional step)

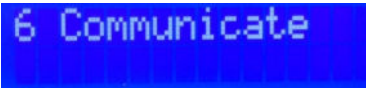
- 1 Press simultaneously on  and "1".

> The display indicates:



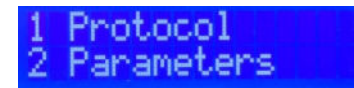
- 2 Press on "6".


> The display indicates:



- 3 Press on  to enter the menu.

> The display indicates:




- 4 Press on "2", the, Press on  to access the configuration of default settings:

Serial link			
	Speed	Flow control	INSTRUCTIONS FOR USE
PC Port	19200	Inspection	Opsys configuration
Edger port	19200	Inspection	Configuration Delta T




Any modification of this configuration could harm the proper performance of the instruments. We advise that you modify the configuration of this menu only if your configuration is not compatible with the configuration suggested by fault and with help from your technician.

- 5 Press on "2", the, press on  to configure the data of menu "2: Settings."

> Three choices are then possible:

- PC Port
- Edger port
- IP


Configure PC port

- 1 Press on "1", then press on .

> The display indicates by default:






> If not, it displays the last memorized choice.

- 2 If the choice on line 1 does not correspond to your configuration, press on "1", then press on  to choose the transmission speed in bauds:

1. 9600
2. 19200
3. 38400
4. 57600
5. 115200

- 3 Choose the desired speed by navigating the menu using the keys  and .

- 4 Enter the chosen line number selected, then press on  to confirm.


- 5 Press on  () to exit the menu.

- 6 If the choice on line 2 does not correspond to your configuration, press on "2", then press on  to choose the flow test:

 : no equipment flow test (usual configuration)

 : activated equipment flow test


Configure the edger port

- 1 Press on "2", then press on .

> The display indicates by default:





> If not, it displays the last memorized choice.

- 2 If the choice on line 1 does not correspond to your configuration, press on "1", then press on  to choose the transmission speed in bauds:

1. 9600
2. 19200 (usual speed)
3. 38400
4. 57600
5. 115200

- 3 Choose the desired speed by navigating the menu using the keys  and .


- 4 Enter the chosen line number selected, then press on  to confirm.



- 5 Press on  () to exit the menu.

- 6 If the choice on line 2 does not correspond to your configuration, press on "2", then press on  to choose the flow test:

1 no flow : activated equipment flow test


2 flow : no equipment flow test (usual configuration)

7 Enter the chosen line number selected, then press on  to confirm.

8 Press on  () to exit the menu.

Configure the IP


To configure the IP:

Press on “3”, then press on .

> It is then possible to configure:

1. The IP mode
2. The IP address:
3. The subnet mask

IP mode

1 If the choice indicated does not correspond to your configuration, press on “1”, then press on .

1 Dhcp mode : dynamic IP addressing via DHCP-server


2 Apipa mode : menu not used

3 Static mode : static IP addressing


2 Enter the chosen line number selected, then press on .

3 Press on  () to exit the menu.

IP address

1 If the address indicated does not correspond to your configuration, press on “2”, then press on .

2 Press on  to confirm the address or on  to cancel the change.


3 Enter the new address, then press on  to confirm.




To enter the 192.168.0.12 IP address manually: type the 12 figures: 1 9 2 1 6 8 0 0 0 0 1 2 (without spaces).
The tracer will automatically add the “.”.



4 Press on  () to exit the menu.

Subnet mask

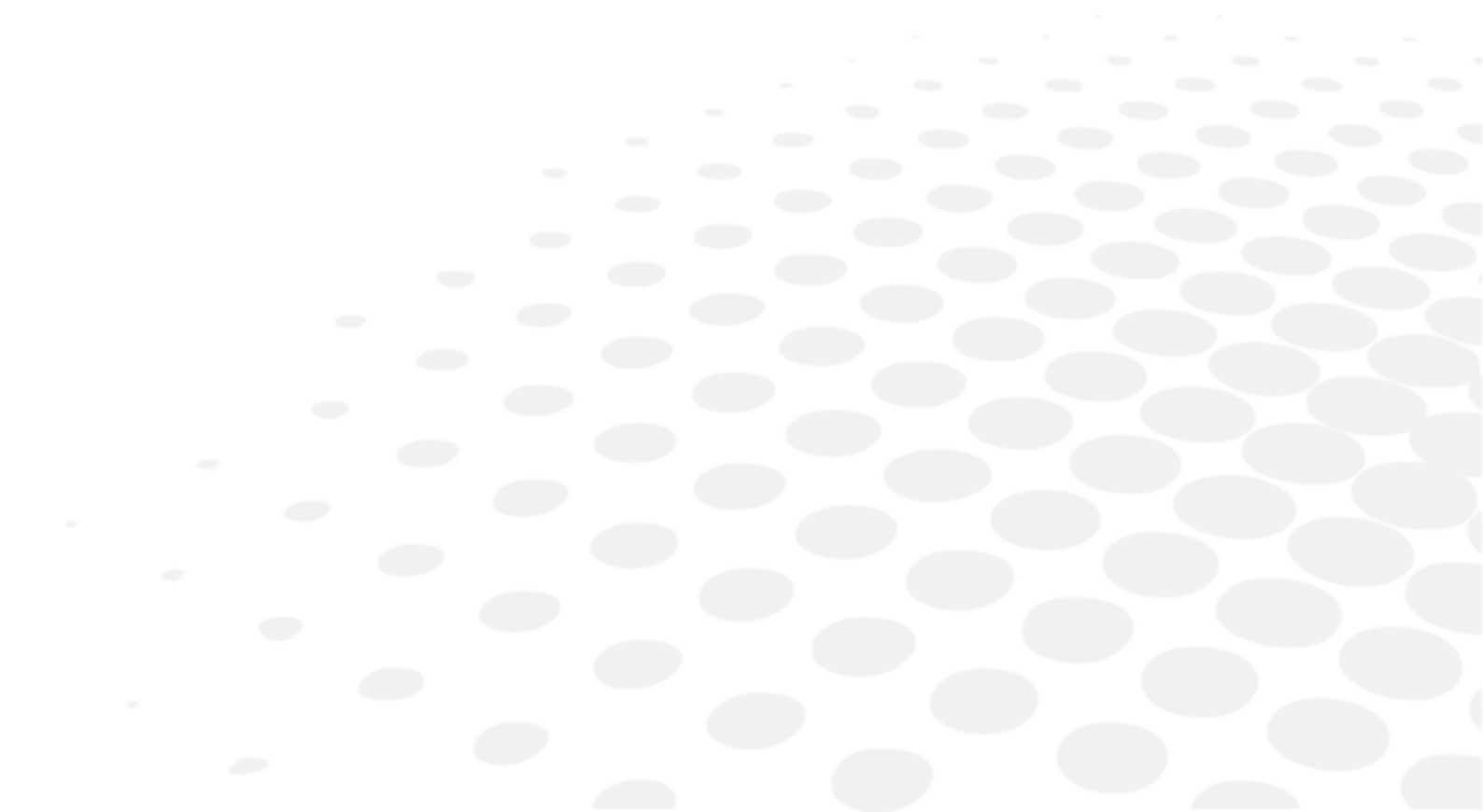
1 If the address indicated does not correspond to your configuration, press on “3”, then press on .

2 Press on  to confirm the address or on  to cancel the change.

3 Enter the new mask then, press on  to confirm.

4 Press on  () to exit the menu.

IV. CHECK PRO



The Check Pro software allows you to:

- Know the statistics of tracings.
- Understand the error messages generated by the tracer.
- Perform an autotest from the computer.
- Perform a calibration inspection from a computer.
- Perform calibrations from a computer.
- Personalize the display of the tracer (function not currently available).

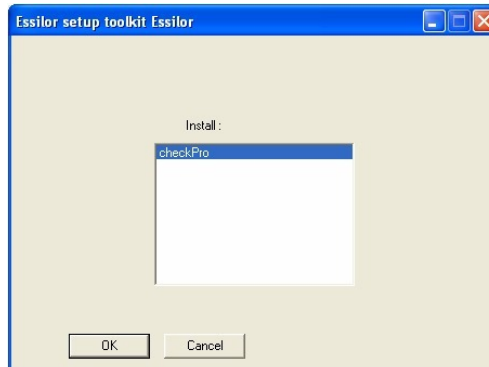
Check Pro is compatible with following the operating systems:

- Windows 98
- Windows 2000
- Windows XP
- Windows Vista
- Windows 7 (32 and 64 bits)
- Windows 8 and 8.1
- Windows 10

1. Installation

- 1 Insert the CD-Rom delivered with the tracer.

> The following window is displayed:



- 2 Click on "**checkPro**" then on "**OK**".

> The installation starts.

> The following window is displayed:



- 3 Click on "**Next**" and follow the various steps of installation.

> At the end of the process, the following window is displayed:



- 4 Click on "**Finish**".

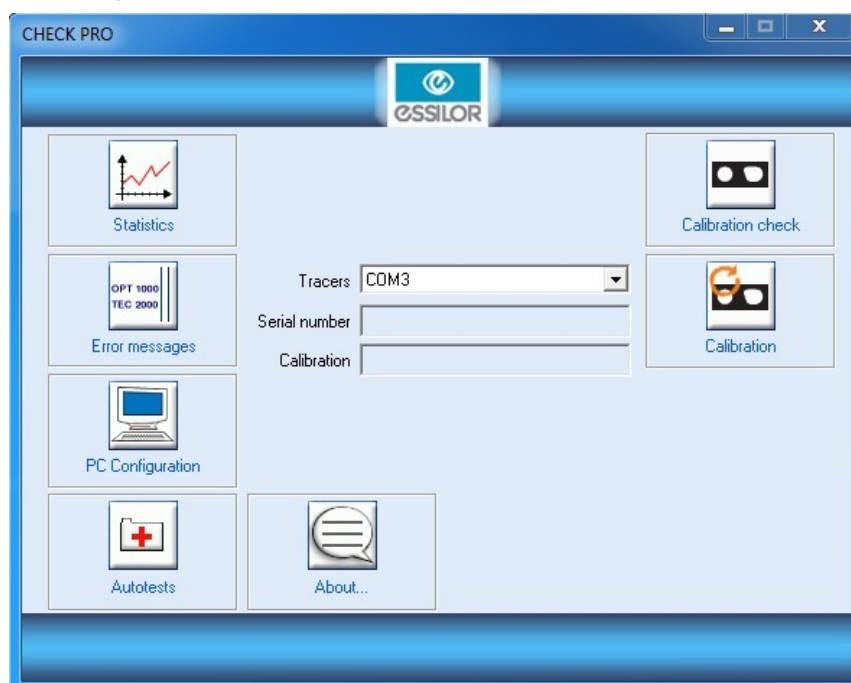
> The application is automatically launched.

2. Instructions for use

1 Click on the desktop icon  and select the desired language.


2 Configure the desired properties and click on **“OK”**.

> The following window is displayed:

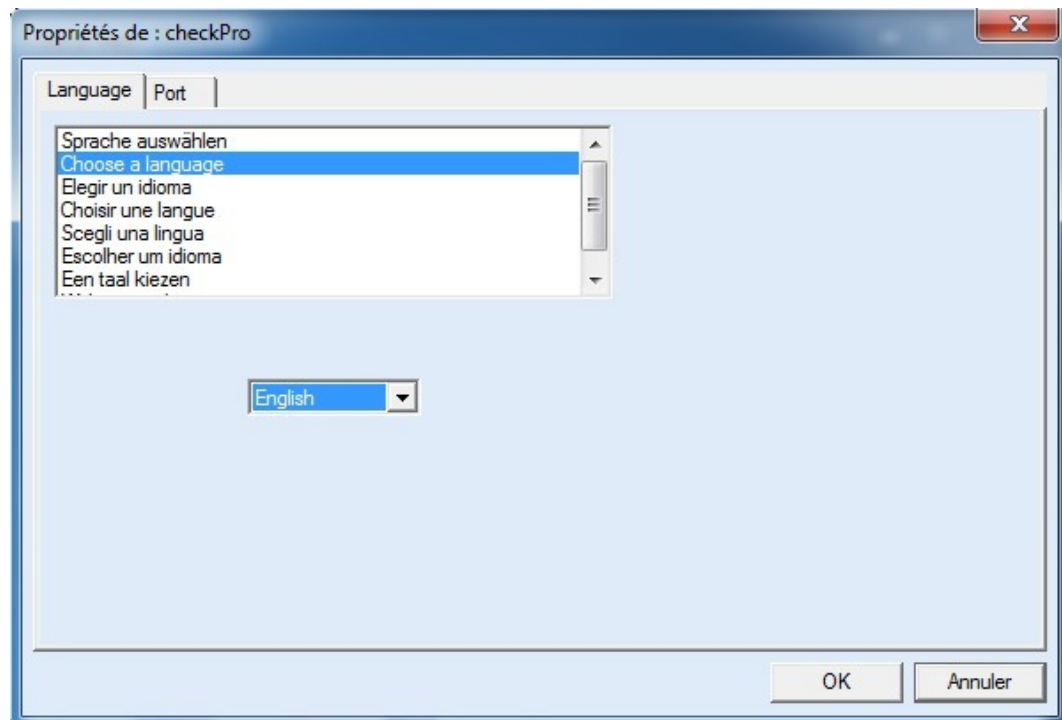


From this screen, all the functions are accessible through the various icons.

a. PC Configuration

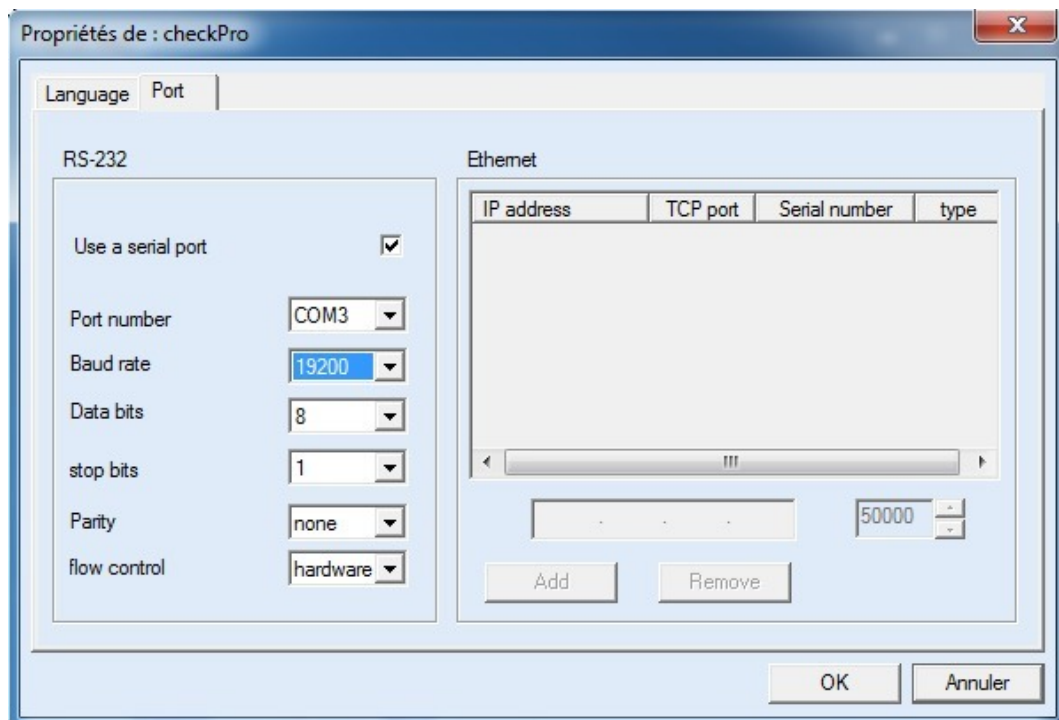
1 Click on .

> The following window is displayed:



2 Choose the desired language of operation.

3 To configure the login between the tracer and the computer click on "Port".



On the left side of the window you can activate the communication via serial port (remember to configure the tracer in the same way by using Oma + PC protocol).

On the right side of the window the list of the machines detected in IP are available.

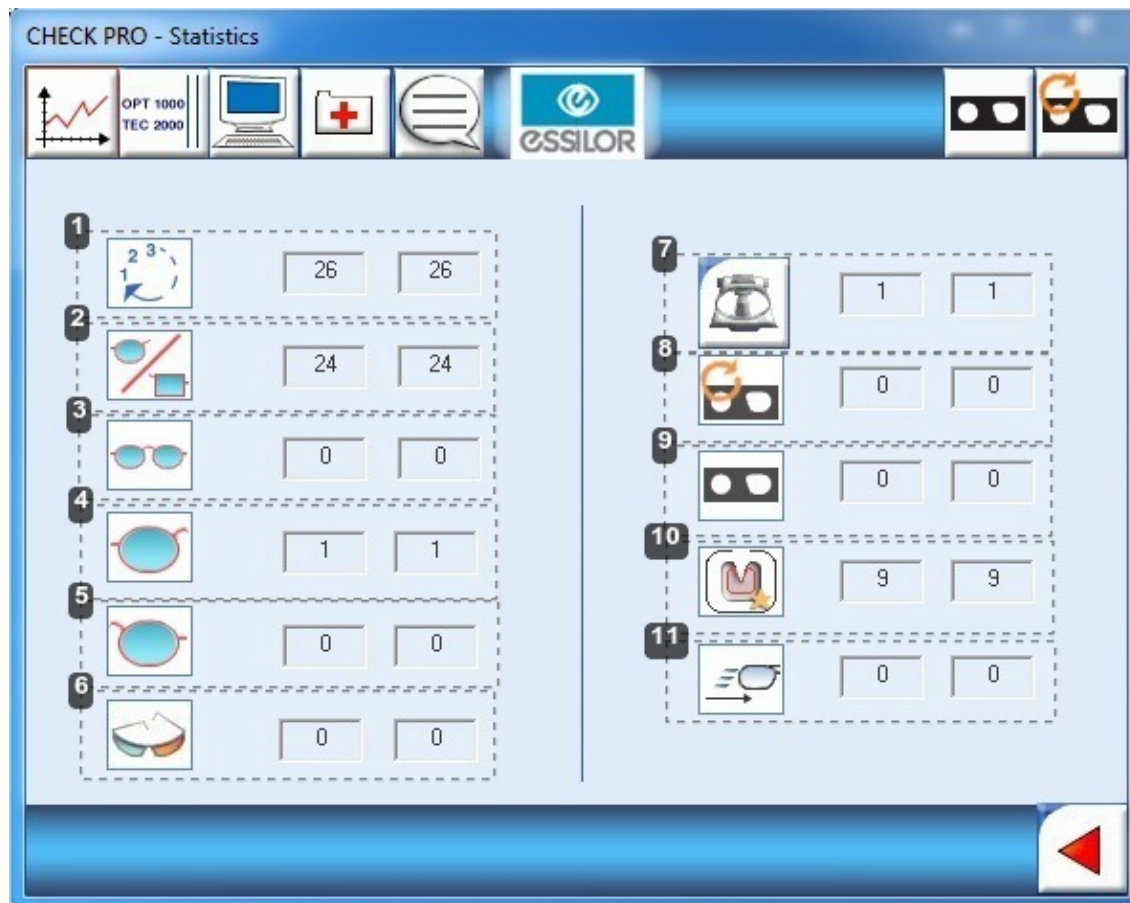
4 Then, click on "OK".

> The previous screen is displayed.

b. Statistics

1 Click on .

> The following window is displayed:



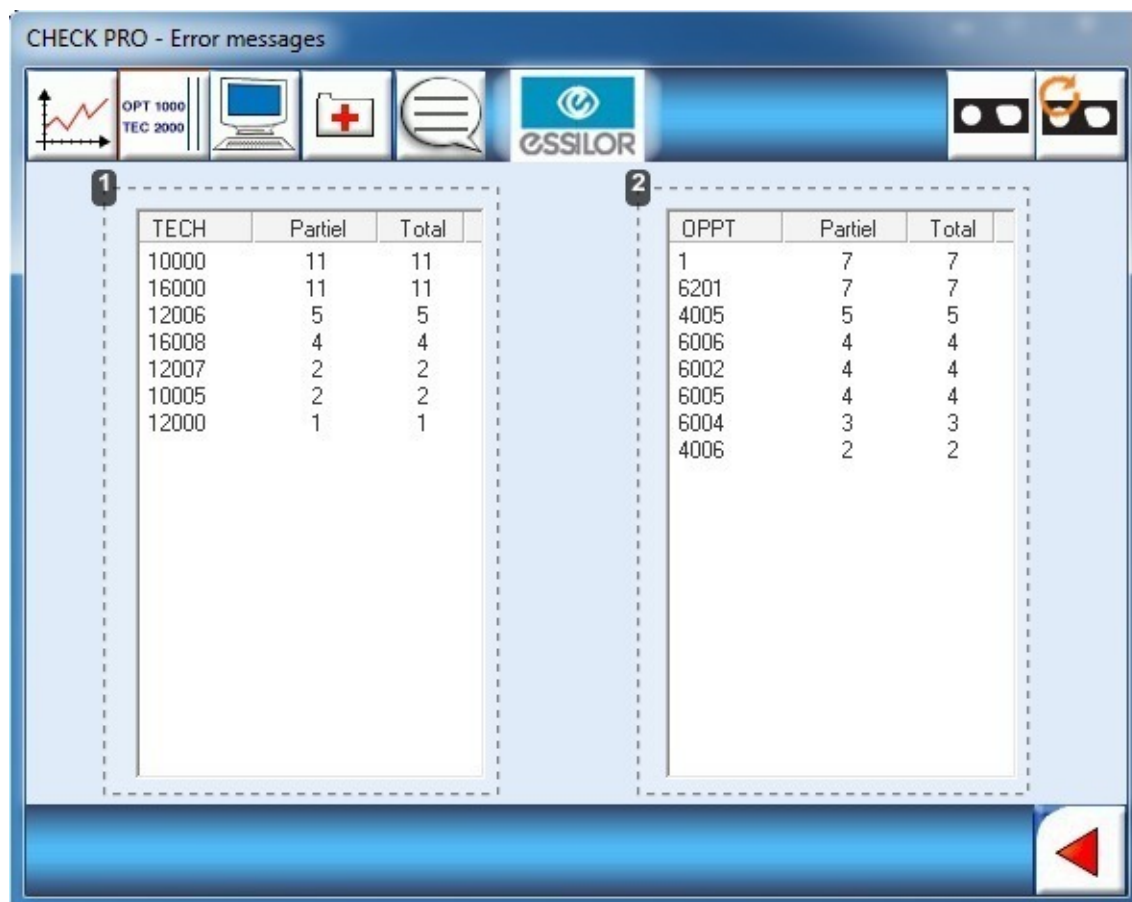
1. Total number of cycles
2. Number of symmetrical binocular cycles
3. Number of asymmetrical binocular cycles
4. Number of RE monocular cycles
5. Number of LE monocular cycles
6. Number of very high-base cycles
7. Number of pattern cycles
8. Number of calibrations
9. Number of calibration inspections
10. Number of high-precision (metal) tracings
11. Number of precal cycles

2 Click on  to return to the previous screen.

c. Error message

1 Click on .

> The following window is displayed:



TECH	Partiel	Total
10000	11	11
16000	11	11
12006	5	5
16008	4	4
12007	2	2
10005	2	2
12000	1	1


OPPT	Partiel	Total
1	7	7
6201	7	7
4005	5	5
6006	4	4
6002	4	4
6005	4	4
6004	3	3
4006	2	2

1. List of recorded "technician" errors

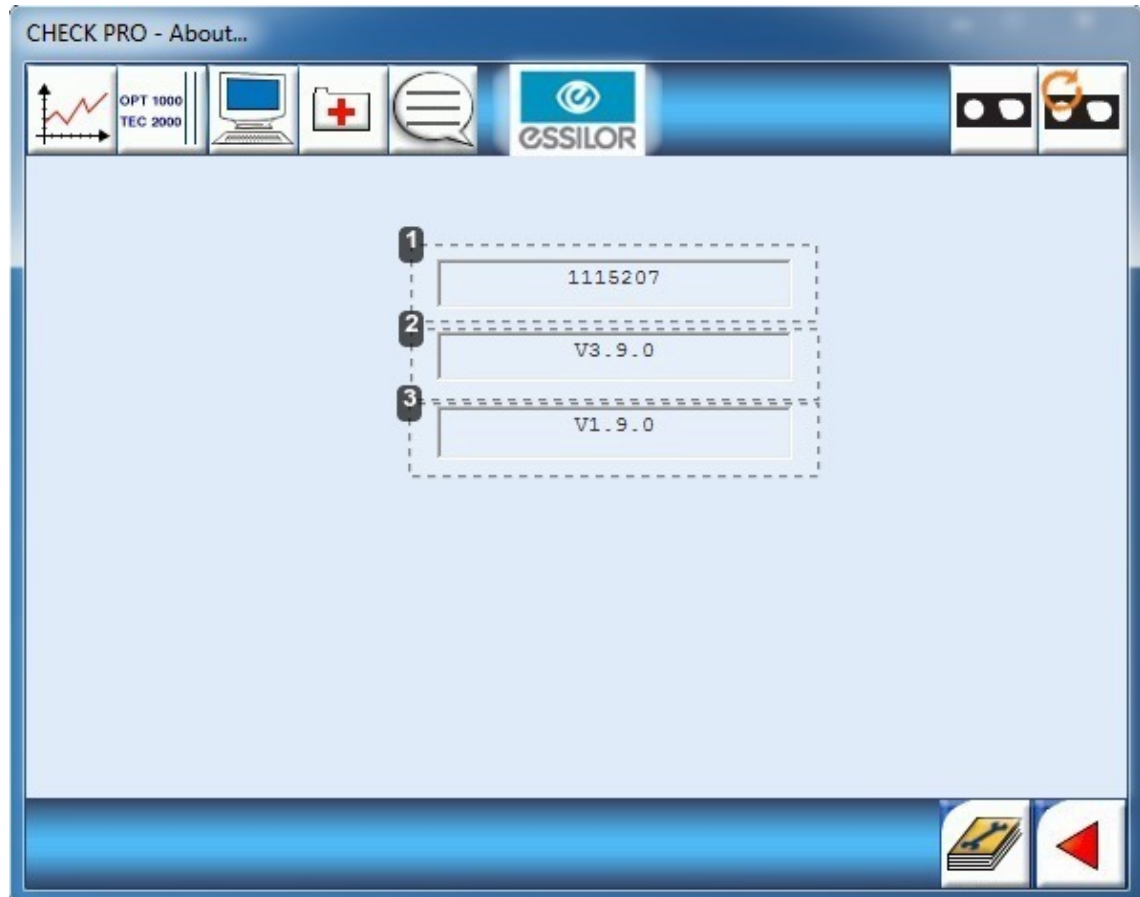
2. List of recorded "optician" errors.

2 Click on  to return to the previous screen.

d. About the tracer...

- 1 Connect the tracer to the computer according to the selected login mode.
- 2 Display on the main screen the list of tracer choices then, choose the port which the tracer is connected to, COM3 for example.
- 3 Click on .

> The following window is displayed:



1. Tess serial number
2. Tess memory version
3. Check Pro memory version



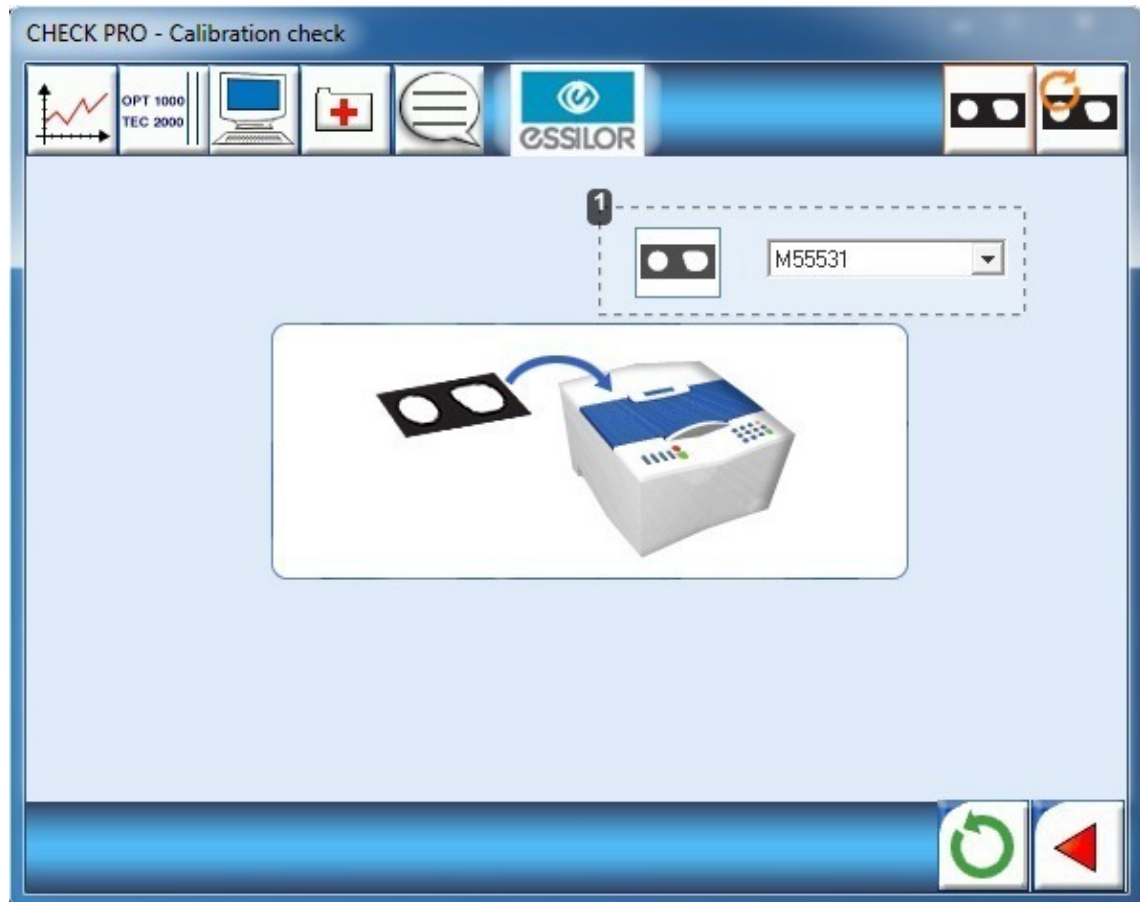
Information is displayed after a few seconds.

- 4 Click on  to return to the previous screen.

e. Calibration test

- 1 Click on .

> The following window is displayed:




1. Number of the frame gauge caliber

- 2 Choose the number of the frame gauge caliber.
- 3 Position stably the frame gauge within the tracing boundary on the 4 lower studs.




The "V" must be open aiming up.

- 4 Click on  to validate.

>  is displayed on the Check Pro window.

- 5 Check the sizing number on the display of the tracer.

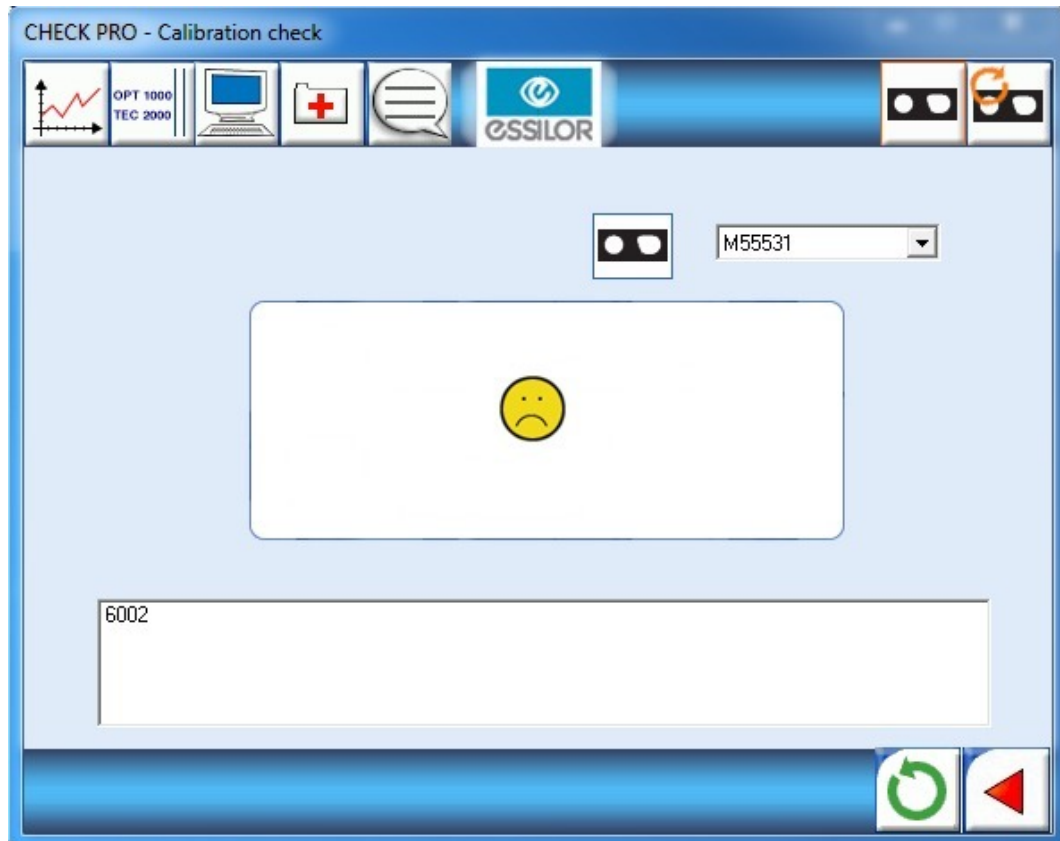
- 6 Press on  of the tracer to launch tracing.

> The inspection starts.

> At the end of the inspection, there are two possible cases:

1.  Test NOK.



> The code error is displayed in the Check Pro window.



> In this case, carry out another inspection. If the result is again KO, perform a calibration.




For more information, consult the section error codes & barcodes > error codes. (p.65)

Click on  to return to the previous screen, then press  to confirm the tracer code.

2.  Test OK.

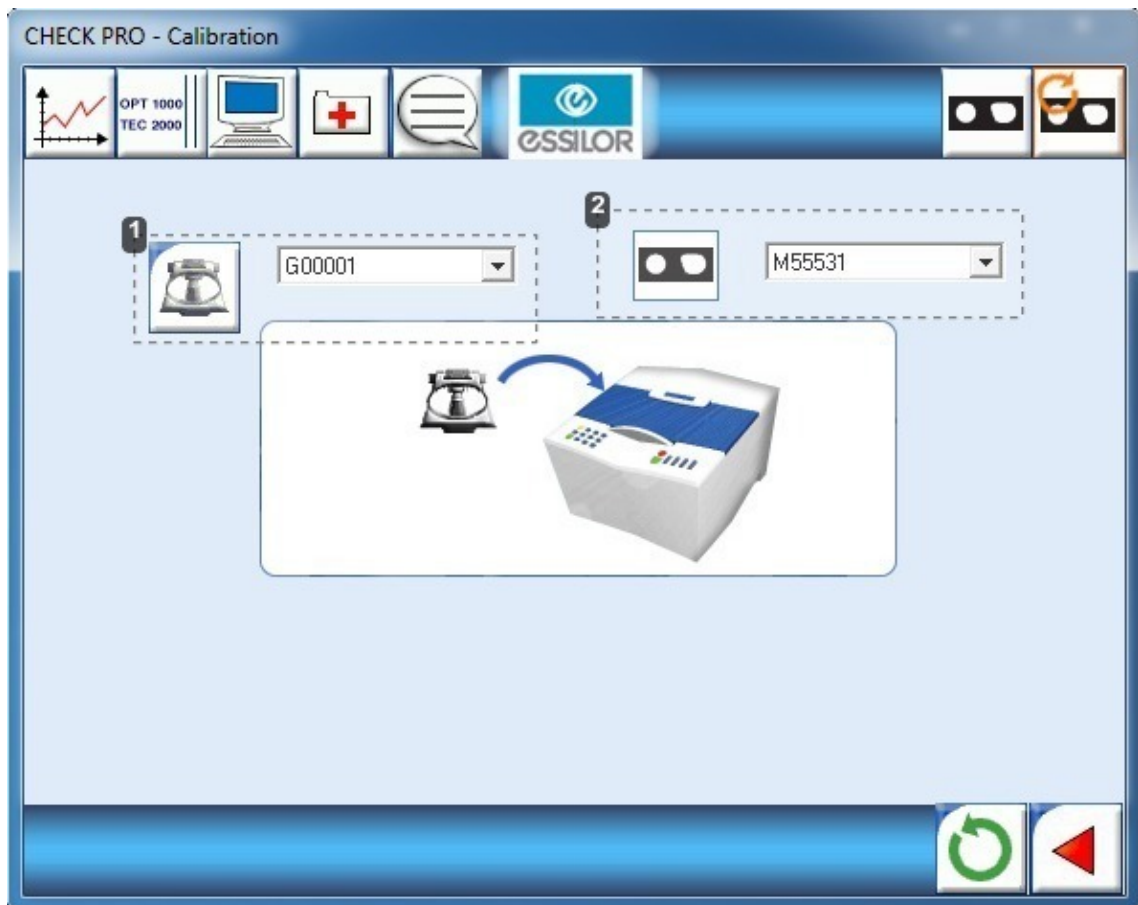
> You can use of the tracer again, your tracer's display is waiting for the job.

> Click on  to return to the previous screen.

f. Calibration

1 Click on .

> The following window is displayed:



1. Number of the pattern gauge caliber

2. Number of the frame gauge caliber


2 Choose the frame and pattern gauge caliber numbers corresponding with the gauge caliber used.

3 Position stably the frame gauge within the tracing boundary on the 4 lower studs.




The "V" must be open aiming up.

4 Click on  to validate.

>  is displayed on the Check Pro window.

5 Check the sizing number on the display of the tracer.

6 Press on  (⌂) of the tracer to launch tracing.

> Tracing starts.

> At the end of tracing, the pattern gauge caliber number is displayed on the tracer.

7 Remove the frame gauge and insert the pattern gauge.

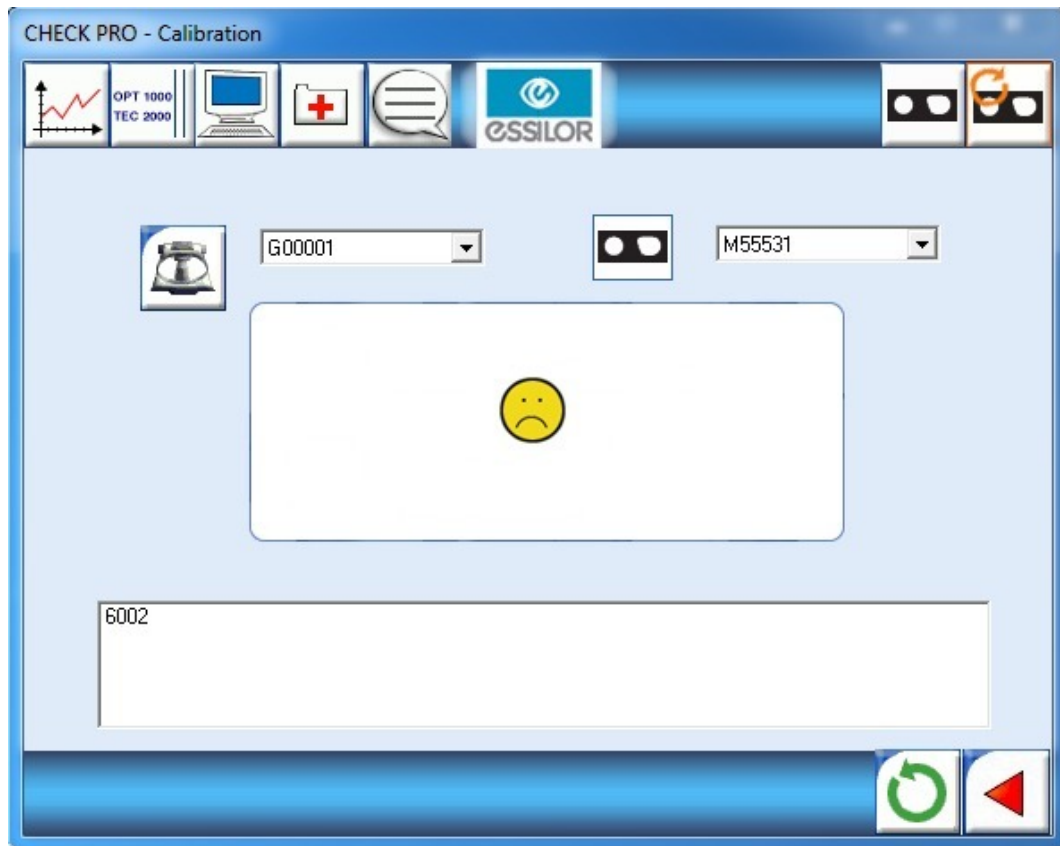
8 Press on  (⌂) of the tracer.

> The second part of the calibration starts.



> At the end of calibration, calculation begins and lasts approximately 10 min. Two cases possible:

1. ☹️ Calibration NOK.

> The code error is displayed in the Check Pro window.




For more information, consult the section [error codes & barcodes > error codes](#). (p.65)

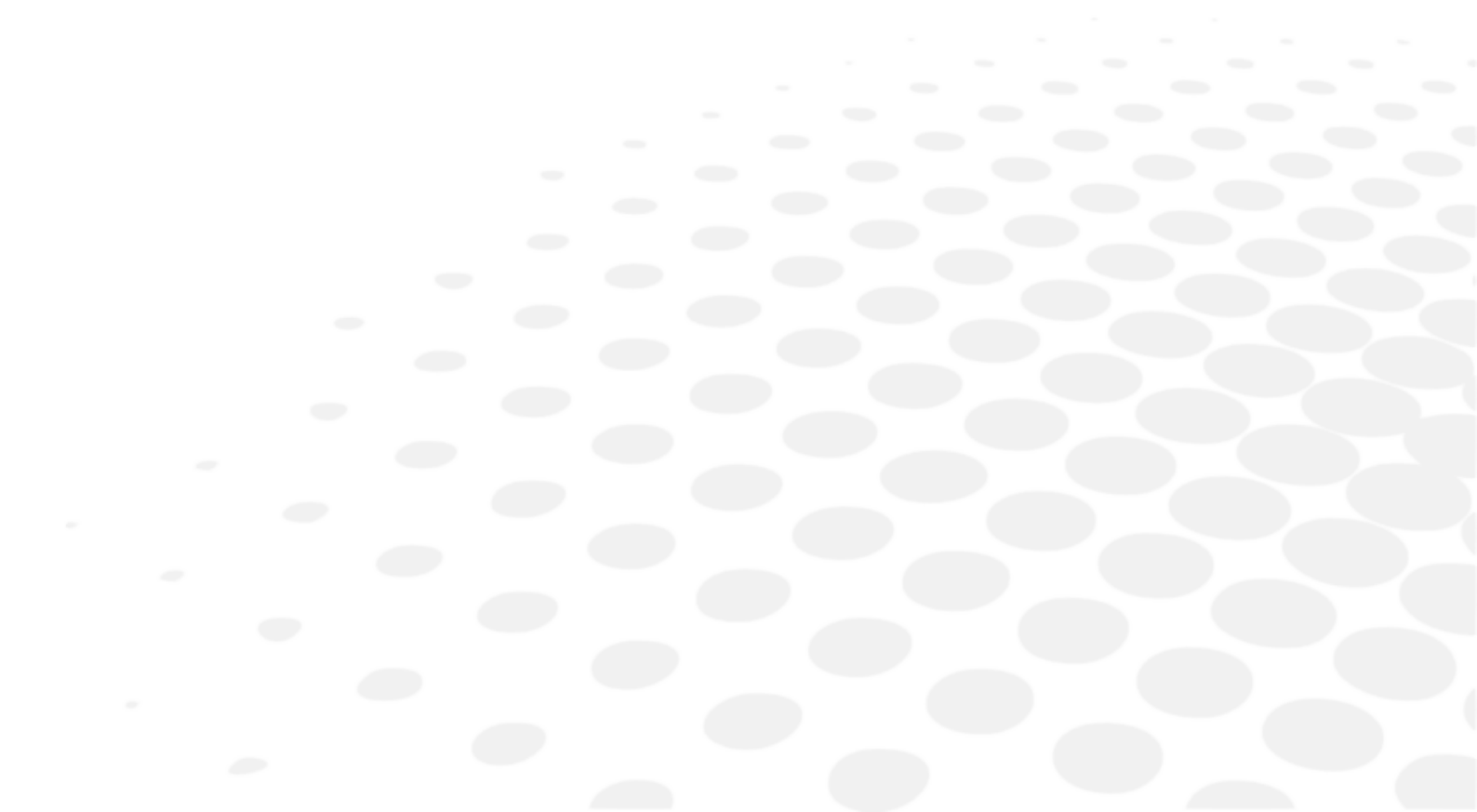
Click on  to return to the previous screen, then press  to confirm the tracer code.

2. 😊 Calibration OK.

> You can use of the tracer again, your tracer's display is waiting for the job.

> Click on  to return to the previous screen.

V. USE OF THE TRACER



1. Initialization

- 1 Power up the tracer.

> The display indicates:





- > A beep indicates that the initialization phase is successful.
RE and LE LEDs light up on the tracer.
- > The tracer systematically requests if you want to add a job number.




2. Tracing

If you wish to assign a job number

- 1 Enter the desired job number, between 1 and 200 (beyond your job will not be memorized).
- 2 Press  to confirm.
 - > The job number is displayed.
- 3 Press on  (⌂) of the tracer to launch tracing.

If you wish to work on the current job

- 1 Press on  (⌂) of the tracer to launch tracing.




Working on the current job allows for a simplified identification of the job between the tracer and the edger.



In this case, the jobs are not memorized.

If you work with barcodes

- 1 Scan the barcodes.
 - > The number is displayed on the screen.
- 2 Press on  (⌂) of the tracer to launch tracing.


3. Frame tracing

a. Standard tracing

- 1 Remove the lenses from the frame.
- 2 Insert the frame onto the tracing table while making sure that each circle rests between the tightening clamps.



Repair the frame if necessary.
Make sure the hinge is closed correctly.
Take care not to crush the frame if it is flexible.

- 3 Select your choice of tracing side by pressing repeatedly on .

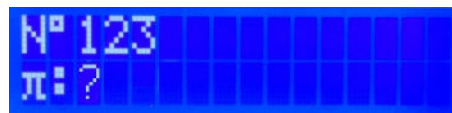



While carrying out:

- 1 support: asymmetric binocular tracing, the two diodes are lit (selected item by default),
- 2 supports: monocular tracing of the right eye, diode D/R is lit,
- 3 supports: monocular tracing of the left eye, diode G/L is lit,
- 4 supports: symmetrical binocular tracing, the two diodes flicker.



In the case of a monocular tracing, you will be asked to enter the value of the bridge at the end of the tracing using the numeric keypad.





- 4 Enter the desired value, then press on .



As long as the entered value is not confirmed, you can correct it by pressing on .





No other action is possible without this entry.
The available frame dimensions can then be displayed.

- 5 Press on  () of the tracer to launch tracing.



During the use of the tracer with a Delta T edger or a Jess, JessIE, JessD edger please wait for the end of acquisition **FRONT** to call up the shape on the edger.

- 6 If you wish to stop the cycle during tracing, press on  ()





While carrying out:



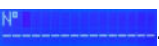
- 1 support: the cycle of tracing is stopped (gathered data is lost),
- 2 supports: rebooting of the cycle and sounding of the audible signal. After a few seconds the tracer is again ready to read.



b. Groove detection

By default, feeler insertion is configured in the centre of the frame thickness: .



- 1 Enter the desired job number, between 1 and 200 (beyond your job will not be memorized).
- 2 Press  to confirm.
> The job number is displayed.
- 3 After the validation of the job number or current job, press on  to choose the adapted feeler insertion.

While carrying out:

- 1 support, choose low insertion: arrow aiming downwards .
- 2 supports, choose high insertion: arrow aiming upwards .
- 3 supports, you return to the main screen .

- 4 Once the insertion is configured, press on  () of the tracer to launch tracing.

c. Groove acquisition settings

- 1 Press simultaneously on  and “1”.
- 2 Press on “7”, then press on  to access the “Grooving acquisition” menu.

> The display indicates:



- 3 Choose among the 3 modes of groove acquisition:

1 Auto: if the thickness of the frame is less than 3.5 mm, the frame is detected as metal. Groove acquisition is then automatically triggered.

2 None: Groove detection is never performed.

3 Forced: Groove detection is performed in every case.

d. Special cycles

Precal tracing,

Press .

When this function is selected, tracing is performed in RE monocular by default, with a very fast cycle of tracing, intended for the ordering of pre-gauged lenses (optional option).

You can choose the left eye by pressing on the selection button on the tracing side (binocular tracing is impossible).

Tracing is carried out on a standard cycle.

“Very high-base” frame tracing

Press .

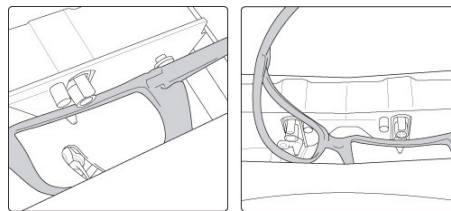
The tracer can read high bases on a standard cycle. This specific cycle allows for the reading of very high-base frames for which binocular tracing can be done only monocular purposes.



Activate this function when you want to read a very high-base frame.

- 1 Choose the tracing side, right or left.
- 2 Position the eye as flat as possible to place the frame in the tracing table.



The black clamps which hold the eye to be read must be located in the middle of the circle.



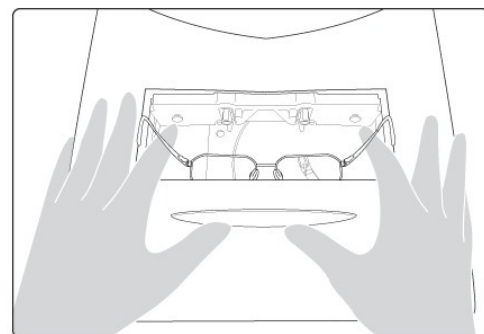
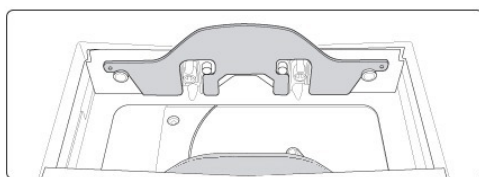
- 3 Gently close the jaw to hold the frame.
- 4 Press on  (⏻) of the tracer to launch tracing.
- 5 Enter the value of the bridge, then press on .
- 6 Position the frame in order to read the opposite eye.
- 7 Launch a new tracing.

“Very small B-dimension” tracing



This kind of tracing is appropriate for frames having a B-dimension $\leq 19\text{mm}$.

- 1 Position the accessory as indicated below:



- 2 Perform your tracing.

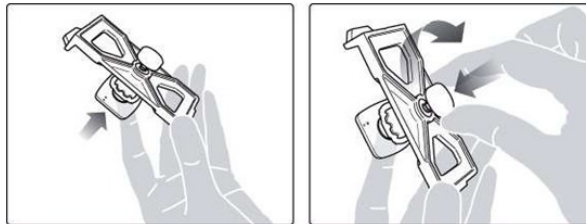


For more information, consult the Utilization of the tracer > performing a tracing. (p.43)

e. Patter Tracing , demo lens or recut lens, pattern holder

To fix a demo lens or recut lens to the pattern holder:

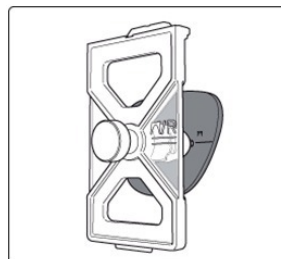
- 1 Block the lens in the boxing center, making sure it is properly centered.
- 2 Insert the blocked lens and hold it in position with your index finger
- 3 Press on the knurled button, screwing, until the blocked lens is immobilized.



The feeling pressure on the lens being weak, it is pointless to excessively screw down the knurled button. Screwing in the knurled knob inside the posiblock does not have a functional impact on the posiblock.

To fix the pattern on the pattern holder:

- 1 Unscrew the holding screw on the pattern holder tip.
- 2 Fix the pattern on the tip of the pattern holder:
 - nose to the right for a right lens, and to the left for a left lens
 - tip positioner of the pattern holder towards the bottom of the pattern.
- 3 Insert the block pattern and hold it in position with your index finger (like fixing a lens).
- 4 Align the marking \overline{TVR} (right nose) or \overline{TVL} (left nose) of the pattern holder with that of the pattern:



- 5 Press on the knurled knob, screwing it, until the pattern is immobilized (as for fixing a lens).

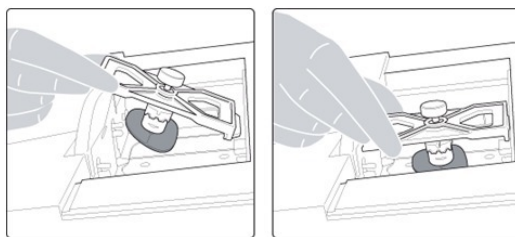


The feeling pressure on the lens being weak, it is pointless to excessively screw down the knurled button. The screwing of the knurled knob inside the posiblock of the nozzle has no functional impact on the latter.


> You can place the pattern holder in the tracing table.


Position the pattern holder in the tracing table:

- 1 Position the pattern holder in place in the tracing table.
- 2 Fit the front tab of the pattern holder between the cylindrical white pins on the tracing table (in front of you).

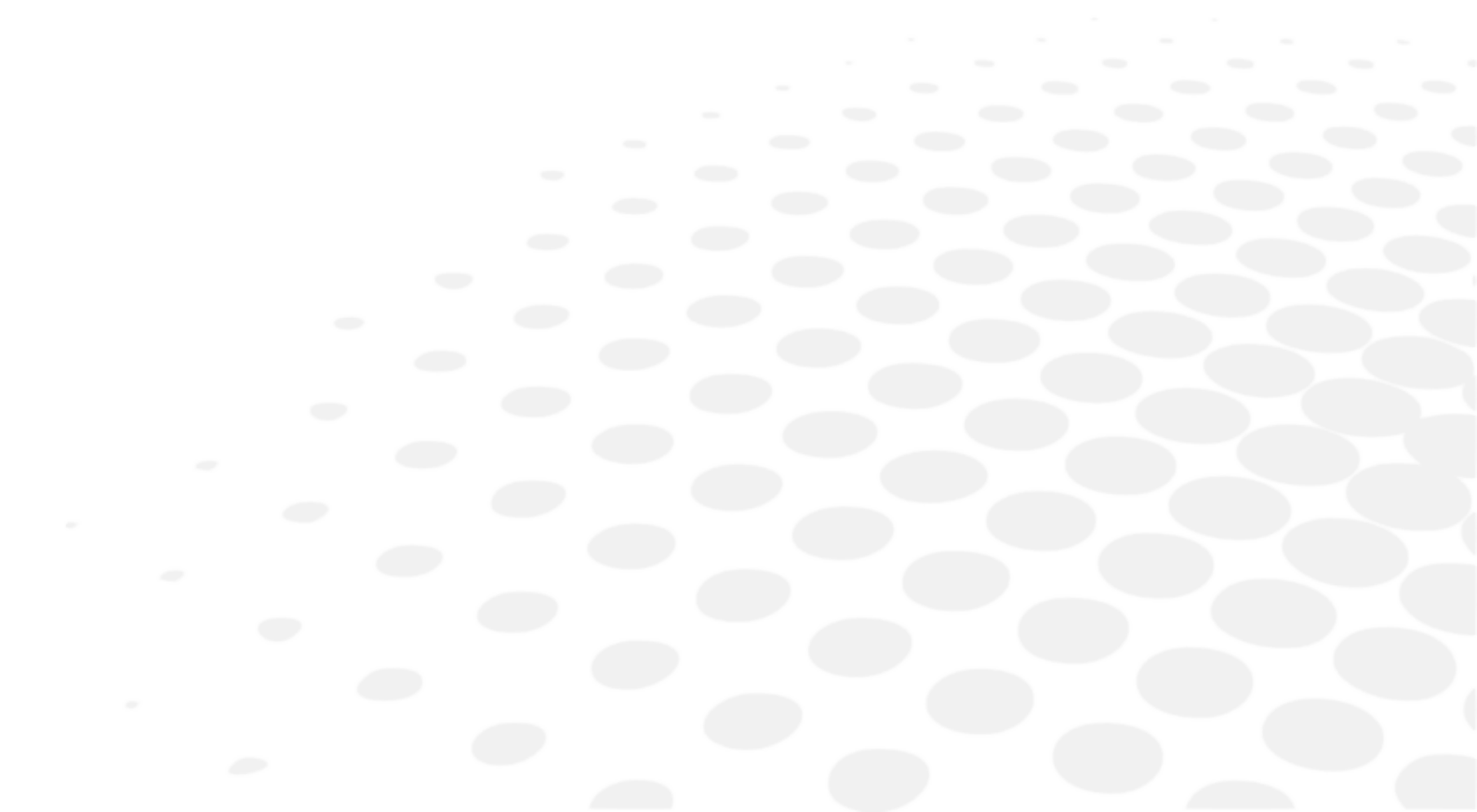


Adjust the jaws of the tracing table so as to block the pattern holder.

3 Press on  (↺) of the tracer to launch tracing.

- > The tracer automatically detects that it is a tracing pattern, it asks you to select the tracing eye.
- > At the end of tracing, enter the value of the nose using the numeric keypad, then press on .



VI. AUTO-MAINTENANCE



The functions described in this menu will allow you to correct issues yourself, or to direct the technician in solving any problems you might encounter while using the tracer.

1. Calibration test


To ensure “high precision” performance is maintained, please carry out a calibration inspection regularly.

- 1 Press on  to select the “calibration test” function.
- 2 Select the gauge caliber number on the tracer then, press on .
- 3 Position stably the frame gauge within the tracing boundary on the 4 lower studs.



The “V” must be open aiming up.



- 4 Press on  of the tracer to launch tracing.
 - > At the end of tracing, the clamps open, an audible signal indicates the end of calculations. Two possible cases:
 1. Test OK.
 - > The display indicates:


Check OK
U

Press on  and continue to use the tracer.

2. Test KO.

> The display indicates:

Check KO
U

Press on  and perform a complete calibration.

2. Calibration



This step requires a certain amount of time and blocks the use of the tracer. It is however essential for the maintenance of the tracer's performance.

1 Press simultaneously on  and "1".

2 Select **1 Calibrate** by pressing on "1" then on .



The first step consists in calibrating the "pattern" precision using the metal pattern gauge.

> The display indicates:



With:

- G: pattern
- 00001: Pattern number provided by default with the tracer.

3 Select the pattern number delivered with the tracer then, press on  to launch the calibration or  to exit the menu.

4 Position the pattern provided with the tracer on the pattern holder (nose towards the left).




Make sure that it is stable.

5 Then, position the pattern holder within the tracing boundary.



For more information, consult the section Tracer Utilization > frame tracing > pattern tracing, demo or recut lens, pattern holder. (p.49)

6 Press on  of the tracer to launch tracing.

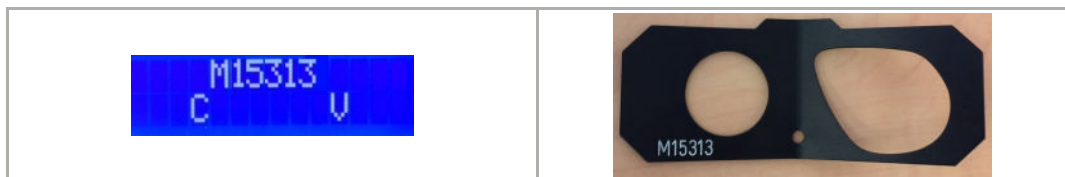
> At the end of tracing, the display indicates:



7 Select the gauge caliber number on the tracer then, press on .




Make sure that the pattern holder number and the gauge caliber number are identical.



8 Position stably the frame gauge within the tracing boundary on the 4 lower studs.

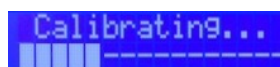


The "V" must be open aiming up.

9 Press on  of the tracer to launch tracing.



During the calculation phase, the display indicates:




This operation can take about ten minutes.

> At the end of tracing, the clamps open, an audible signal indicates the end of calculations. Two possible cases:

1. Calibration OK.

> The display indicates "OK":



Press on  and continue to use the tracer.

2. Calibration KO.

> The display indicates a code error: in this case, start again calibration.



If the problem persists, contact a technician.



For more information, consult the section [error codes & barcodes > error codes](#). (p.65)

3. Autotest:

This function allows you to test the various movements of the tracer.

1 Press simultaneously on  and "1".

2 Select **2 Auto-test** by pressing on "2" then on .

3 The tests starts:

- T1: Jaws
- T2: Feeler reproducer
- T3: Rotation
- T4: Feeler transfer
- T5: Carriage transfer

> The display indicates:



> At the end of the tests, an audible signal indicates the end of the process. Two possible cases:

1. Tests OK.

> The display indicates:



Press on  and continue to use the tracer.

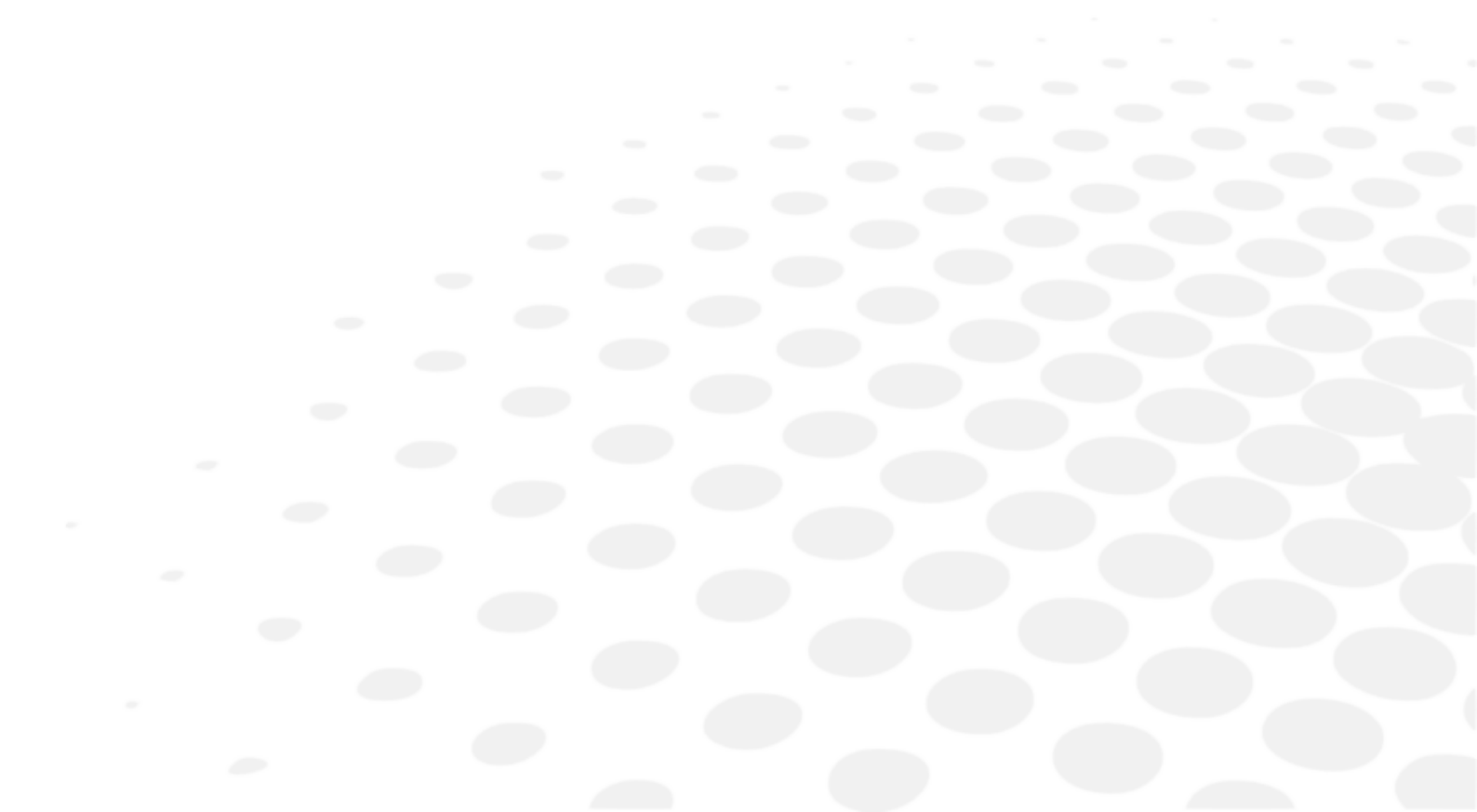
2. If one or more tests KO.

> The display indicates the result of each test:



Press on  and contact your technician.

VII. IMPORT/EXPORT





Thanks to its USB connector, the tracer can quickly exchange information remotely with your technician.
To achieve this, an USB key compatible with the tracer is available at your dealer.


1. Export

This function allows you to transmit internal information to the tracer and/or to your technician in order to optimize the analysis of a possible malfunction.

From the tracer


- 1 Power up the tracer.
 - 2 After the initialization phase, insert the Essilor USB key in the external USB port of the tracer.
 - 3 Press simultaneously on  and "1".
 - 4 Select **4 Import export** by pressing on "4" then on .
- > The display indicates:

```
1 Tess > USB
2 USB > Tess
```

- 5 Press on "1", then press on  to transfer the information from the tracer to the USB key.

Three possible choices:

- 1 Info trace** : transfer of the data related to tracer piloting.
- 2 Info calib** : transfer of the data related to calibrations.
- 3 All** : transfer of all the data.

- > Depending on the files requested by your technician, choose the desired line number, then press on .
- > The display indicates:

```
Loading...
```

- > When the export is finished, the tracer is in queued job position, the information having been copied on the USB key.

From the computer

- 1 Insert the Essilor USB key into the computer.
- > The key appears in the list of devices on your computer.
- 2 Double-click on the device.
 - 3 Copy-paste the desired files into a specific space and transmit them to your technician.



It might be necessary to compress the data.

For that you can easily use the tools for compression provided on your computer, WinZip for example.

2. Import

This function allows for the upgrade of the product, or the addition of necessary information to the performances of the tracer.

a. Addition of a gauge

This function allows you to record on the tracer the information relative to a gauge frame used for calibration and the calibration inspection.

From the computer

- 1 Insert the Check CD-ROM (CD no. 2) delivered with the gauge which you wish to put into the tracer.



The number indicated on the gauge must be identical to the number indicated on CD.

- 2 Insert the Essilor USB key in the computer's USB port.

> The key appears in the list of devices on your computer.

- 3 Double-click on the device.



- 4 Copy the files of the type "M66173OD.TXT" and "M66173OG.TXT" found on the root of the CD-ROM and copy them to the root of the USB key.



The name of the files corresponds to the numbers of the gauges.


> Once the files are copied, remove the USB key.

From the tracer

- 1 Power up the tracer.
- 2 After the initialization phase, insert the Essilor USB key in the external USB port of the tracer.
- 3 Press simultaneously on  and "1".
- 4 Select **4 Import export** by pressing on "4", then press on .

> The display indicates:

```
1 Tess > USB
2 USB > Tess
```

- 5 Press on "2", then press on  to transfer the information from the USB key to the tracer.

> The display indicates:

```
1 Add gauge
2 Update
```

- 6 Select **1 Add gauge** by pressing on "1", then press on .

> The importing is automatically launched.

> The display indicates:

```
New gauges...
```

> When the importing is finished, the tracer is put in queued job position.
The new gauge is available.



For more information, consult the section [error codes & barcodes > error codes](#). (p.65)



- 7 Remove the USB key.

b. Software update


From the computer

- 1 Insert the Essilor USB key into the computer's USB port.
 - > The key appears in the list of devices on your computer.
- 2 Double-click on the device.
- 3 Copy the file into format ".tar.gz", which was already sent to you on the root of the USB key.
 - > Once the file is copied, remove the USB key.


From the tracer

- 1 Power up the tracer.
- 2 After the initialization phase, insert the Essilor USB key in the external USB port of the tracer.
- 3 Press simultaneously on  and "1".
- 4 Select **4 Import export** by pressing on "4", then press on .
 - > The display indicates:



```
1 Tess > USB
2 USB > Tess
```

- 5 Press on "2", then press on  to transfer the information from the USB key to the tracer.
 - > The display indicates:

```
1 Add gauge
2 Update
```

- 6 Select **2 Update** by pressing on "2", then press on .
 - > The display indicates:


```
3.8.00 > 3.9.00
C      U
```

- 7 Press on  to confirm or on  to cancel.
 - > The display indicates:

```
Updating...
```

- > At the end of the update, the display indicates:

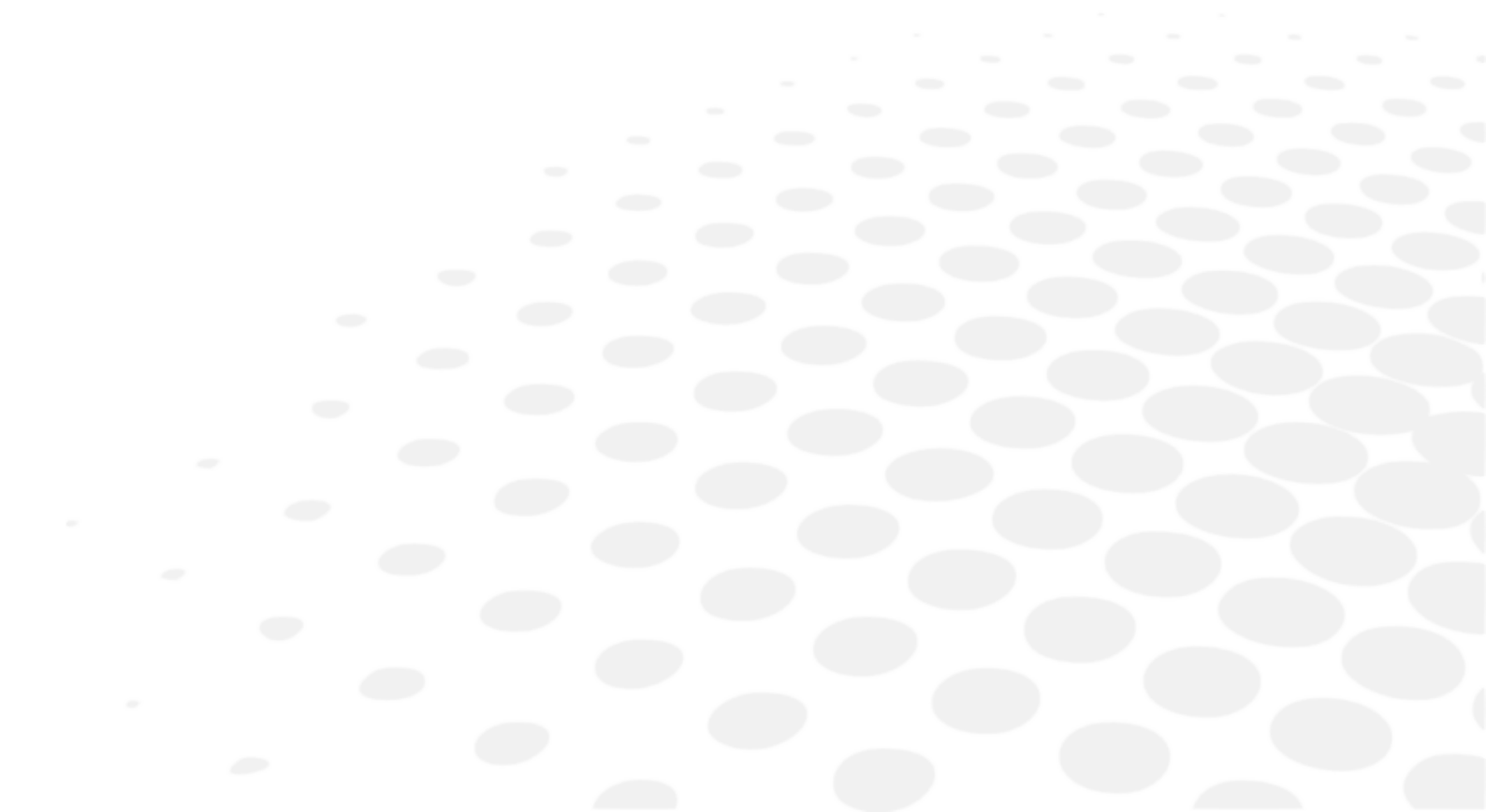
```
USB OFF
U
```

- 8 Remove the USB key, then press on .
 - > The tracer turns off then restarts at the end of approximately 5 seconds.
 - > The tracer is put in queued job position.



For more information, consult the section [error codes & barcodes > error codes. \(p.65\)](#)

VIII. ERROR CODES & BARCODES



1. Error codes

You will find below the actions to be carried out if an error code appears.

If one of these codes appears repeatedly or persists after employing the solution proposed below, note the code and contact your technician.

Code	Meaning
Opt1	Contact your technician with the data from the machine
Opt1000	Software update failure > Restart the device. It will restart automatically on the previous model
Opt4000	Software error (in the tracing processing task) > Restart the device If the error reoccurs several times, contact your technician
Opt4001	Software error (in the tracing cycle task) > Restart the device If the error reoccurs several times, contact your technician
Opt4002	Software error (in the PccomV2 communication task) > Restart the device If the error reoccurs several times, contact your technician
Opt4003	Software error (in the keyboard task) > Restart the device If the error reoccurs several times, contact your technician
Opt4004	Software error (in the HMI supervisor task) > Restart the device If the error reoccurs several times, contact your technician
Opt4005	Software error (in the LCD screen management task) > Restart the device If the error reoccurs several times, contact your technician
Opt4006	Software error at the start-up > Restart the device If the error reoccurs several times, contact your technician
Opt4007	Software error (in the task supervisor) > Restart the device If the error reoccurs several times, contact your technician
Opt6000	CDL function not implemented. Perform another action
Opt6001	SUP function not implemented. Perform another action
Opt6002	Insert a pattern or a frame
Opt6003	Check the insertion of the feeler
Opt6004	Groove exhaust Try a second tracing (in monocular if the frame is heavily cambered) If the error reoccurs several times, contact your technician
Opt6005	Calibration function not available in table bank-test startup mode
Opt6006	Incorrect "function" barcodes
Opt6007	Barcode numbers too long
Opt6008	Barcode numbers too long
Opt6010	Insert gauge files
Opt6011	Insert the missing gauge
Opt6012	Incorrect tracing table calibration file
Opt6014	Calibrate the tracer
Opt6017	Bad format of the gauge files
Opt6018	Delete jobs
Opt6019	Error related to the contents of OMA job > Restart the device
Opt6021	The statistics file on the errors is erroneous
Opt6022	Barcodes unauthorized with this start-up mode
Opt6023	Restart. The instrument will restart automatically on the old version
Opt6024	External USB key is absent
Opt6025	External USB key was removed
Opt6026	The new software version is incorrect
Opt6027	The gauge pattern is badly positioned

Opt6028	Communication time-out. Check the connection with the computer
Opt6029	The job does not exist
Opt6030	The edging chain does not allow the machining of lenses with a weak B-dimension
Opt6031	The edging chain does not allow the machining of large base lenses
Opt6032	Incorrect gauge frame or major mechanical gap or problem during the digitization
Opt6033	An object blocks the movements of the tracing table
Opt6034	The job does not exist
Opt6035	The gauge in the tracing table is not the correct one. Insert the gauge pattern
Opt6036	The gauge is absent or the gauge in the tracing table is not the correct one. Insert the gauge frame
Opt6037	Impossible to start > an external USB key is present. Remove this key then restart the product

2. Barcodes

To upgrade the language of the tracer:

- 1 Plug in a barcode reader into the tracer external plug.
- 2 Turn your tracer on.
- 3 From the tracing screen, scan the barcodes of the desired language:

French language option	
English language option	
Spanish language option	
German language option	
Portuguese language option	
Italian language option	

> The language of the tracer changes.



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