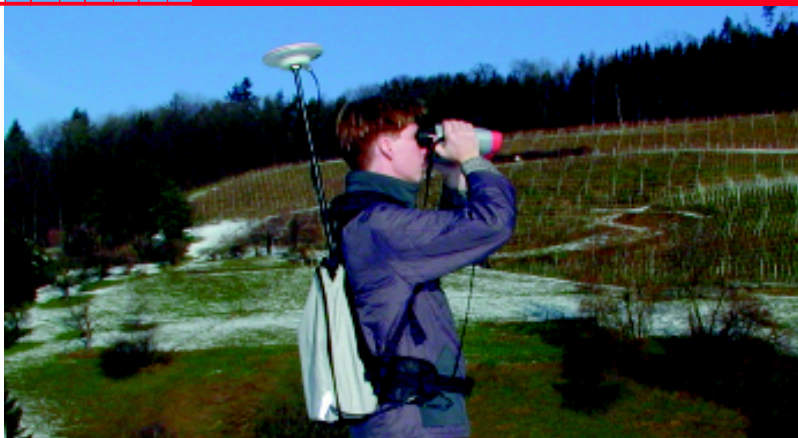


20 30 40 50

Laser Locator



Operating Instructions Laser Locator / Laser Locator Plus

***English
Version 1.0***

Leica
Geosystems

Laser Locator

Congratulations on purchasing your Laser Locator.

Laser Locator = 4 instruments in 1:

- **Binoculars**

Superb optics in a robust, watertight, rubber-armoured casing.

- **Digital Compass**

Displays magnetic azimuth or grid azimuth in degrees, gon or mils.

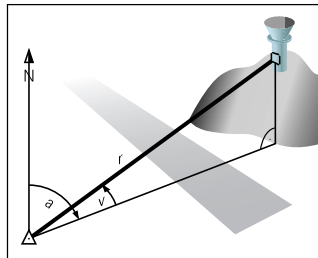
- **Laser Rangefinder**

Measures from 5 m to over 4 km (depending on model, visibility and nature of target objects).

- **Inclinometer**

Displays vertical angles between -45° and $+45^\circ$.

The object is marked by a red square that appears at the centre of the field of vision when you press one of the two measurement keys.



- r Range** (slope distance)
- a Azimuth** (bearing, horizontal direction, angle between north and object)
- v Vertical angle** (inclination, elevation)



For safe use of the Laser Locator, please note the detailed safety directions included in the Operating Instructions.

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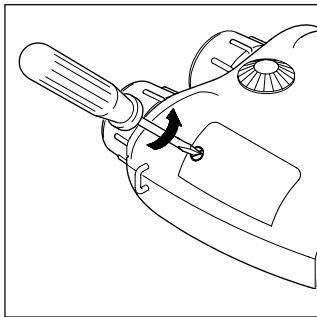
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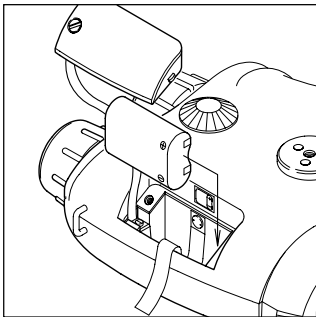
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Getting started



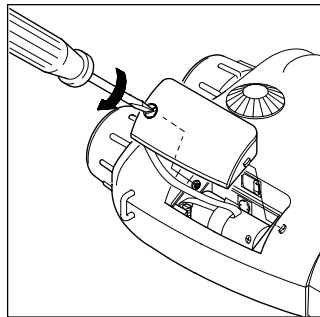
Open the battery compartment using a suitable tool, or a coin. Insert a 6V lithium battery, SANYO type 2CR5 or equivalent. Ensure that the drawing ribbon lies above the securing tape of the battery cover. Keep the battery cover seals and the instrument case clean.

Changing the battery



Refit the battery cover and re-tighten the screw.

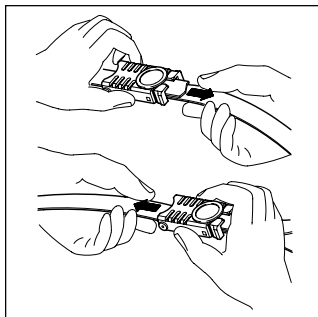
The Laser Locator monitors the battery's condition. If the display shows "LobAtt", this indicates that the battery is used up. You can still get readings, but the battery needs to be replaced soon.



The "LobAtt" display may also appear under cold conditions, since low temperature reduces the battery performance.

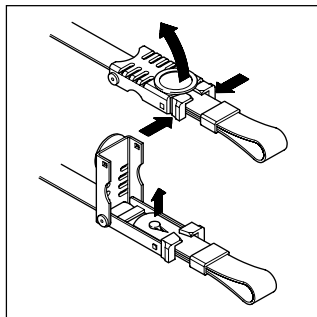
i Remove the Laser Locator battery before a prolonged period of non-use.

Adjusting the neck strap



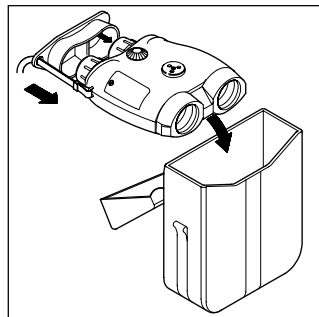
Adjust the length of the neck strap by pulling the strap slowly but firmly around the back of the catch.

Removing the neck strap



Open both catches: Squeeze the two clips together and lift the cover. Remove the strap ends and pull them through the lugs on the Laser Locator.

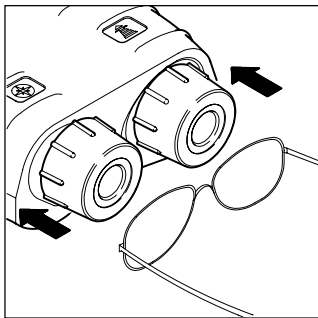
Storing the Laser Locator



i To protect from dirt: Always fit the eyepiece cover and keep your Laser Locator in its pouch when not in use.

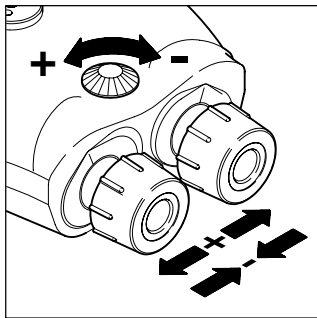
Eyepiece viewing distance Eye-base adjustment

Dioptric adjustment

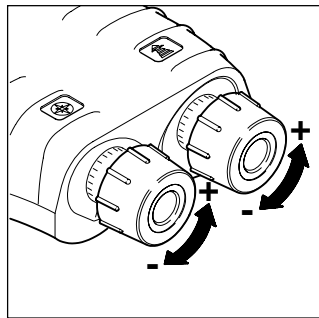


When using the Laser Locator with glasses, push the eyecups fully inwards.

When using the Laser Locator without glasses, pull the eyecups out to the stop.



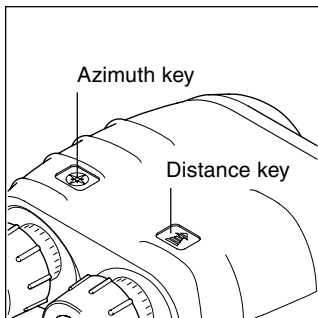
Turn the adjusting knob until the left and right fields of view fuse to form a circular image.



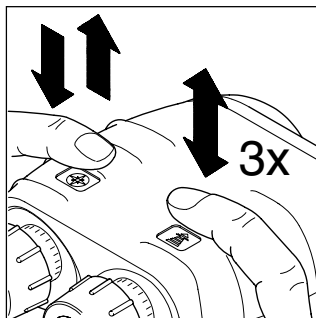
Sight on an object farther than 100 m away and rotate the eyepieces to obtain a sharp image. Standard setting: 0 dioptres.

i If the Laser Locator is being used by a number of different people, remember your personal dioptric setting.

Using the Laser Locator



The Laser Locator is operated entirely by means of the keys on the top of the casing.



Key operation is indicated by the following symbols:

Downward arrow: press and hold down the key.

Upward arrow: release the key

Double arrow: press and release the key (click)

Double arrow plus a number:
Press and release the key in rapid succession (e.g. triple click)

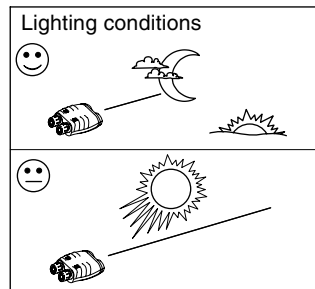
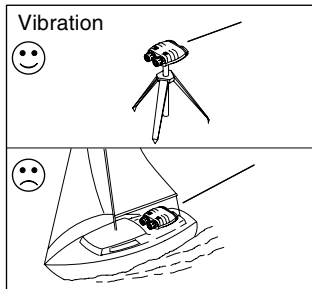
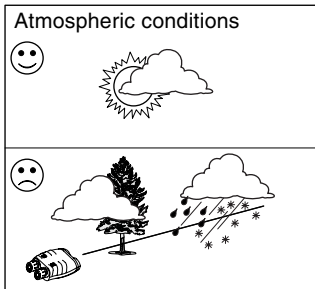
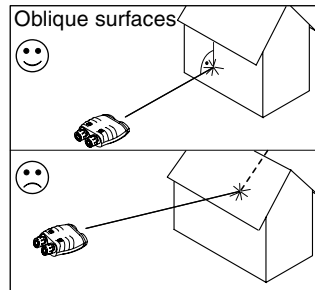
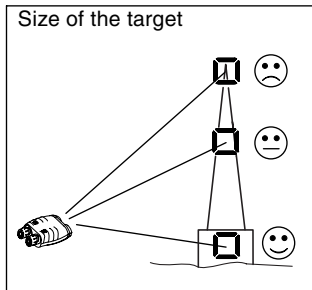
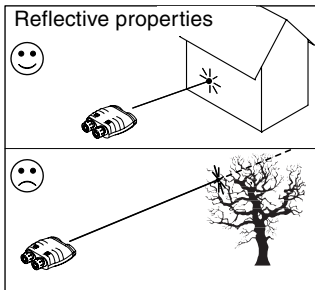
Sight the object to be measured using the pointing circle.

Hold the Laser Locator steady during measurement.

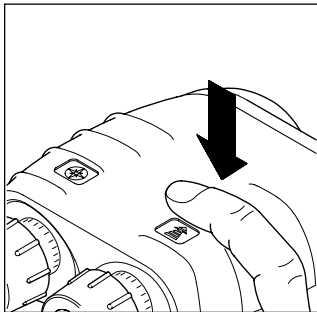
The Laser Locator displays the measurement result, then switches itself off automatically after a few seconds.

i You can prolong the display period by holding down the measuring key while the result is displayed.

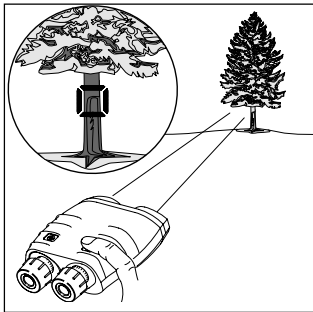
i The last blinking digit indicates decimeters.



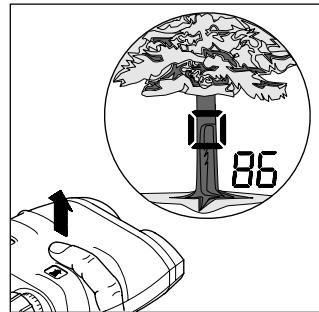
Distance measurement (slope distance)



Press and hold the distance key; the pointing circle appears in the field of view.



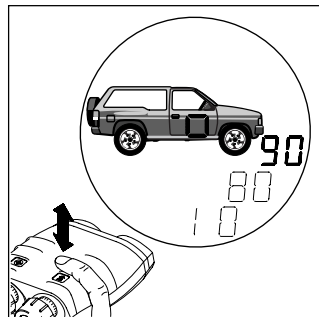
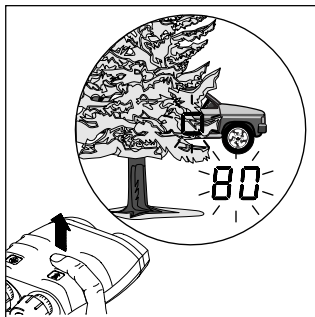
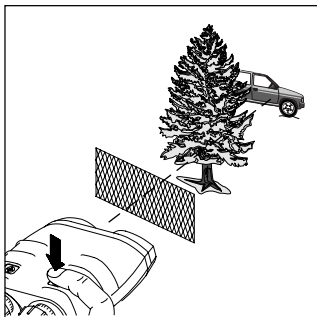
Sight the pointing circle on the object.



Hold the Laser Locator steady as you release the distance key. Read off the distance. If "----" appears in the display, the object lies outside the measuring range, or measuring conditions are poor (see page 10).

i Setting measurement units: see page 26

Multiple object measurement



Up to 3 separate distances can be obtained with a single measurement, for example when:

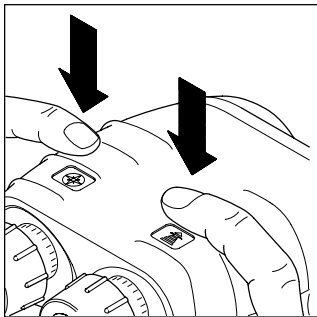
- the laser beam passes through objects in front of the main target (bushes, shrubs, etc.)
- there are reflective objects behind the main target (mountains, etc.)

i To use this feature, "3diS on" (3 distances) must be activated via the configuration menu; see page 25.

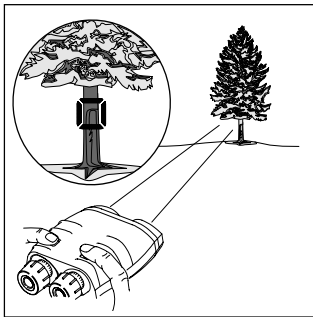
Sight on the most visible portion of the object. Operate the Laser Locator as described under "distance measurement".

The distance display blinks for a few seconds after a multiple distance measurement. Click the distance key repeatedly to obtain all the measured distances in succession.

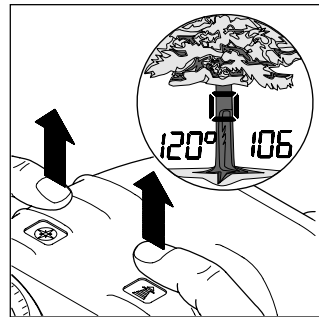
Combined measurement with data transfer (distance, azimuth, inclination)



Measurement data is transmitted via the (optional) interface cable immediately after the measurement is taken (see page 22).
It is not possible to store measurement data in the Laser Locator itself.



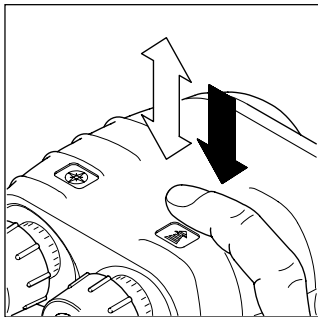
Hold down both keys simultaneously; the pointing circle appears, together with the current azimuth.
Sight the object with the pointing circle.
Release both keys while holding the Laser Locator steady.



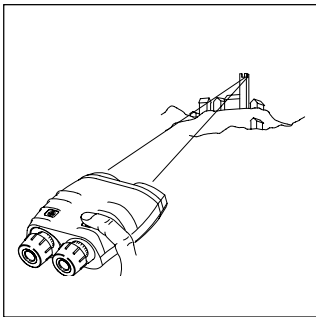
The azimuth appears at the left and the distance at the right of the field of view.
The inclination angle is not displayed, but it is sent via the data interface.

i Setting measurement units: see page 26.

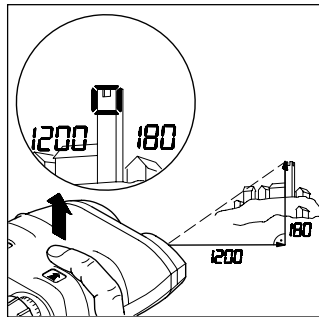
Horizontal dist. and height difference between your position and a remote object



Click the distance key once, then press and hold it down. The pointing circle appears.



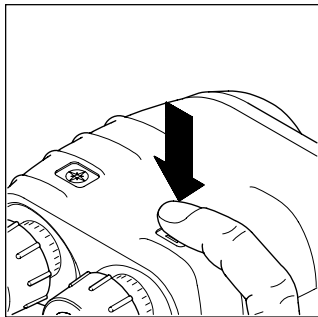
Sight the object with the pointing circle.



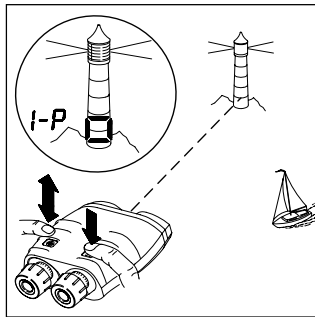
Release the distance key while holding the Laser Locator steady. The horizontal distance appears at the left and the height difference at the right of the field of view.

i Setting measurement units: see page 26.

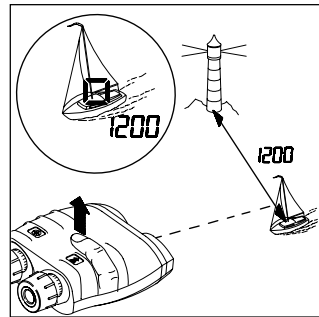
Distance between two objects



Press and hold the distance key.
The pointing circle appears.



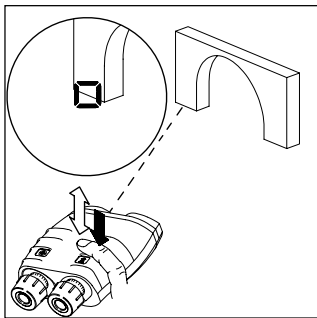
Sight the first object with the
pointing circle.
Click the azimuth key while
holding the Laser Locator
steady.
The first object measurement is
confirmed (1-P = first point).



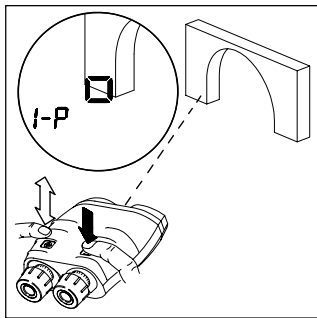
Sight the second object with the
pointing circle.
Release the distance key while
holding the Laser Locator
steady.
The distance between the two
objects is displayed.

i Setting measurement units:
see page 26.

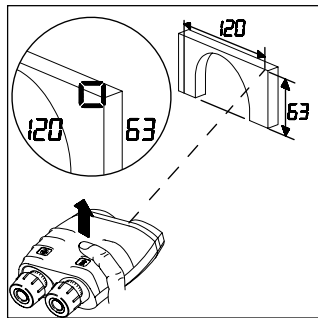
Horizontal and vertical distance between two objects



Click the distance key once, then immediately press and hold it down.
The pointing circle appears.



Sight the first object with the pointing circle.
Click the azimuth key while holding the Laser Locator steady.
The first object measurement is confirmed (1-P = first point).



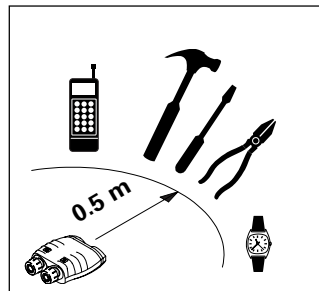
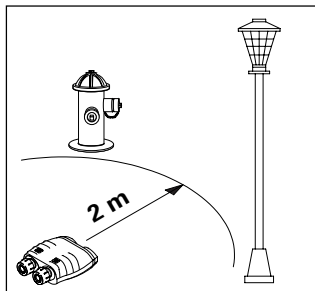
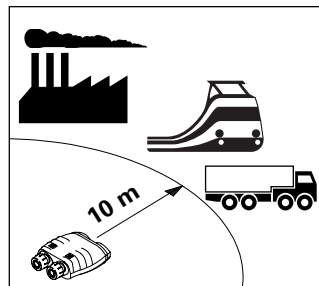
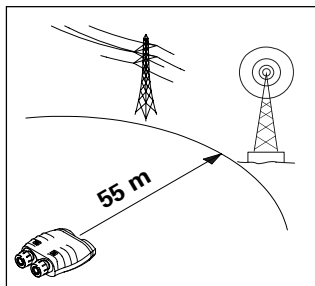
Sight the second object with the pointing circle.
Release the distance key while holding the Laser Locator steady.
The horizontal distance appears at the left and the vertical distance at the right of the field of view.

i Setting measurement units: see page 26.

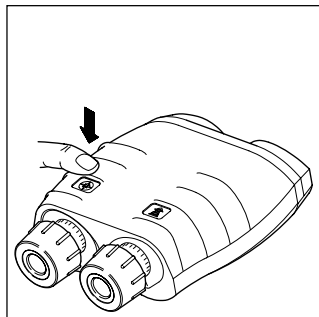
The Laser Locator has a digital compass that works similarly to a magnetic compass. Metal objects and magnetic fields can cause errors in directional readings. Nonmagnetic metals and alloys do not affect the compass readings.

i Countermeasures:
Calibrate the compass (see pages 30–32) after every battery change.

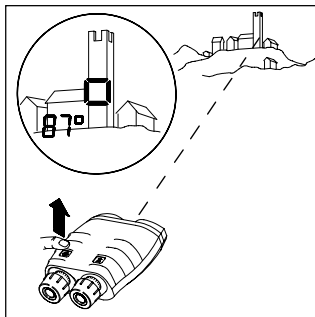
Observe the minimum safe distances shown opposite when making azimuth measurements or calibrating the compass:



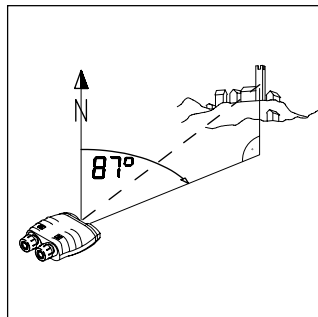
Azimuth measurement



Press and hold the azimuth key. The pointing circle appears, together with the current azimuth. The display updates twice per second.

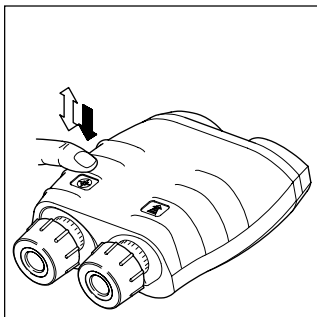


Sight the object with the pointing circle, then release the azimuth key while holding the Laser Locator steady. The most recently measured azimuth is displayed.

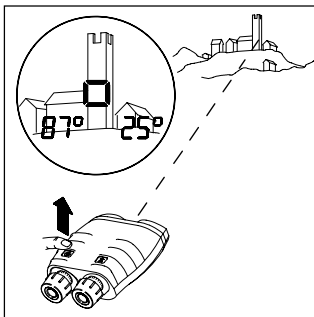


i Setting measurement units: see page 26.

Combined azimuth and inclination angle measurement



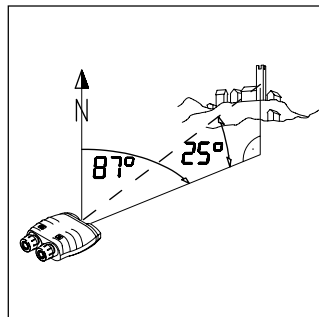
Click the azimuth key once, then immediately press and hold it down.



The following items appear in the field of view:

- the pointing circle
- the current azimuth at the left
- the current angle of inclination at the right.

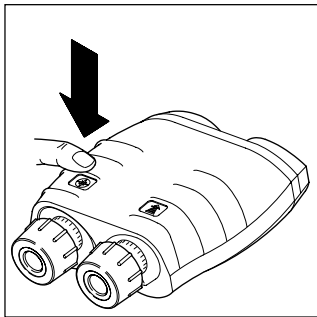
Sight the object with the pointing circle, then release the azimuth key while holding the Laser Locator steady.



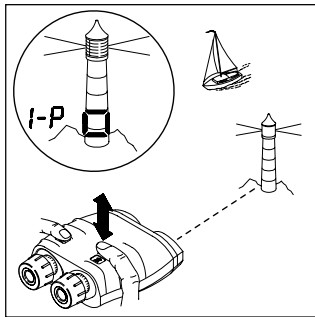
The azimuth and angle of inclination to the object are displayed.

i Setting measurement units: see page 26.

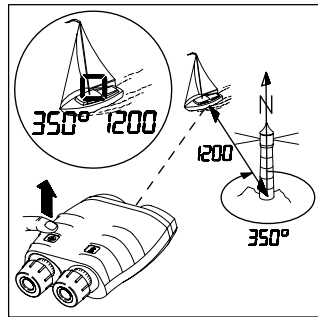
Azimuth and distance between two objects



Press and hold the azimuth key. The pointing circle appears, together with the current azimuth.



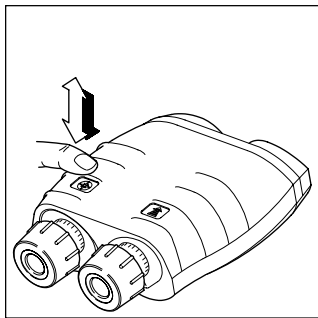
Sight the first object with the pointing circle. Click the distance key (> 0.5 s) while holding the Laser Locator steady. The first object measurement is confirmed (1-P = first point).



Sight the second object with the pointing circle. Release the azimuth key while holding the Laser Locator steady. The azimuth appears at the left and the distance at the right of the field of view.

i Setting measurement units: see page 26.

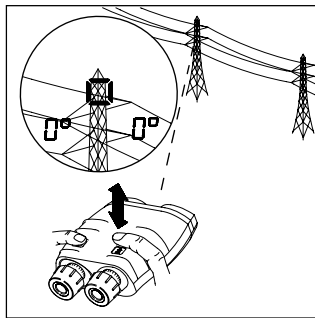
Relative horizontal and vertical angle



Click the azimuth key once, then immediately press and hold it down.

The following items appear in the field of view:

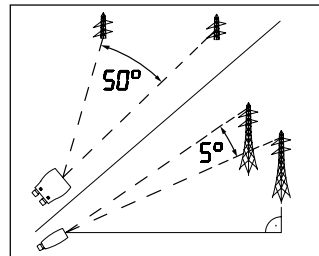
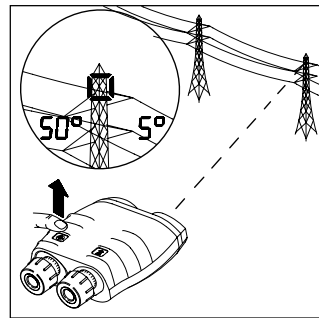
- the pointing circle
- the current azimuth at the left
- the current angle of inclination at the right



Sight the first object with the pointing circle.

Click the distance key while holding the Laser Locator steady.

Both angles are set to zero. Sight the second object and release the azimuth key. The relative angles appear in the field of view.



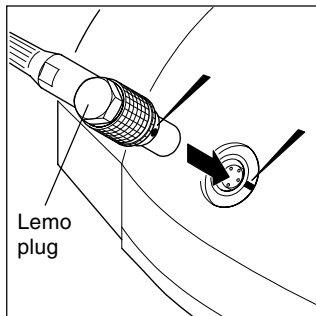
On the underside of the Laser Locators is a socket for sending data to:

- personal computers or laptops
- modems
- fire control systems

i Our customer service will be pleased to inform you about special accessories for transmitting and analysing data.

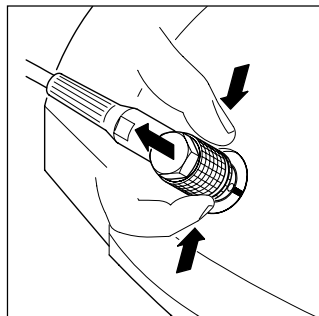
Caution

Incorrect handling can damage the socket and optional interface cable.



To plug:

Align the respective red markings on the Lemo plug and socket. Slide the plug carefully into the socket until the locking mechanism engages.

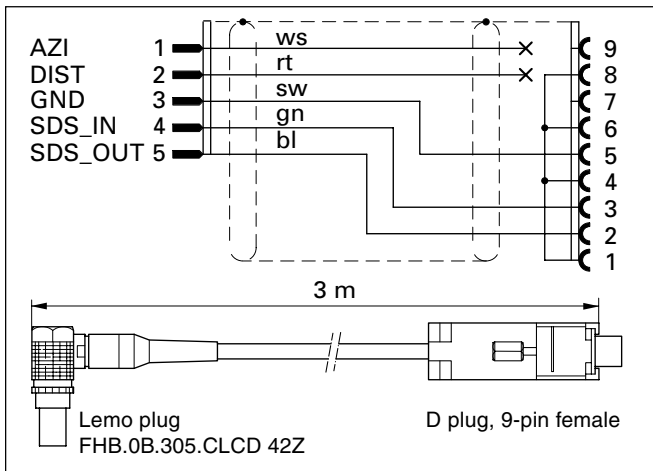


To unplug:

Grasp the plug grip

- between two fingers,
- draw it carefully back to the stop to disengage the locking mechanism,
- pull back a little harder until the plug slips out of the socket.

Cable configuration



Interface parameters

Interface	RS 232
Data transmission	unidirectional
Baud rate	1200 bps
Parity	none
Data bits	8
Stop bits	1
Handshake	none

The optional interface cable is intended for connection to a PC serial interface with a 9-pin D plug.

Data transfer format

Every measurement (distance, azimuth, inclination) is transmitted as 10 ASCII characters:

Z	XXXXXX	XY	<CR>
Start character	Measurement value	Checksum	End character

A complete set of measurements therefore consists of 30 ASCII characters.

Before and after this continuous string, a steady logic 1 is transmitted while the Laser Locator is powered on.

Start character for measurement value:

d distance
a azimuth
e angle of inclination (elevation)

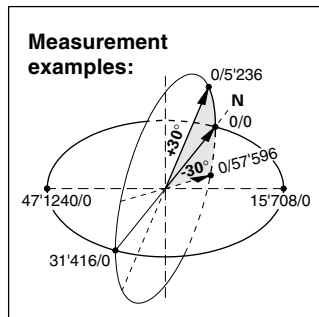
Start character for error report:

C compass error
R distance error
M instrument (main board) error

Measurement value: 6 integer digits or six-digit hexadecimal error code.

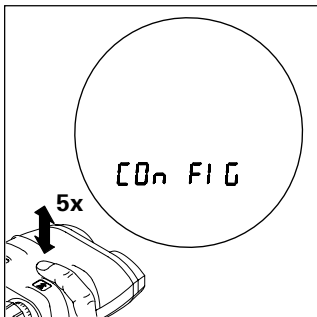
The data transmitted comprises:

- distance in decimetres, with 0.5 m resolution
- azimuth and inclination in milliradians (full circle = 6'283.2 mrad) and 0.2 mrad resolution.



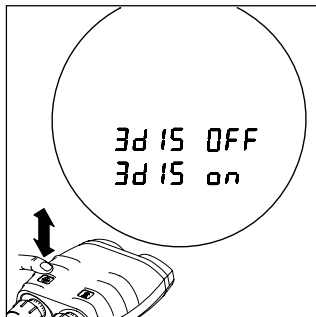
Checksum: 2 hexadecimal digits. These correspond to the 8 LSBs (least significant bits) of the ASCII measurement value and the start character.

End character: 1 position for line feed (CR).



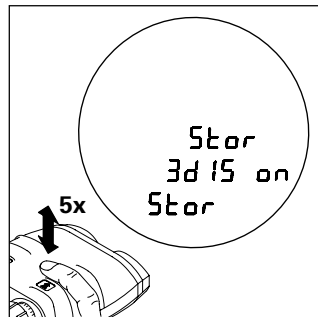
Click the distance key five times in rapid succession. The configuration settings appear in the field of view.

In the following configuration menu the multiple object measurement "3dIS" (3 Distances) can be switched on or off.



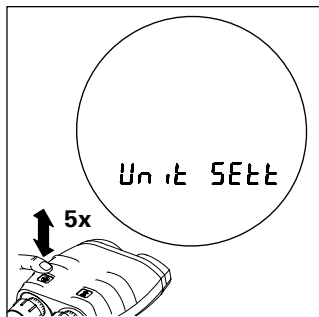
i The function "3dIS on" allows up to 3 distances to be displayed from a single measurement (see page 12).

Click the azimuth key until the desired function status for "3dIS" appears (function **on** or **OFF**).



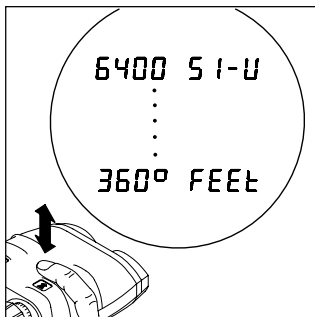
Click the distance key five times in rapid succession to save your settings.

If the distance key is not correctly clicked five times, the previous settings remain unchanged and "Old Conf" is displayed.



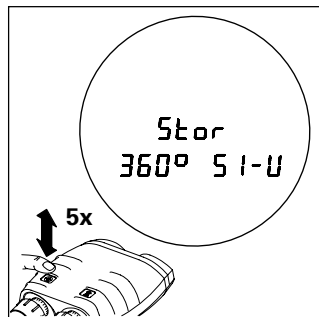
Various angle and distance measurement units may be set via the configuration menu.

Click the azimuth key five times in rapid succession. "Unit SEt" appears briefly, followed by the measurement units currently in use by the Laser Locator.



Click the distance key until the desired units appear in the field of view:

- at the left: angular unit in mils, gon or degrees
- at the right: distance unit in metres (SI-Unit), yards, or feet.



Click the azimuth key five times in rapid succession to save your preferred units.

If the azimuth key is not correctly clicked five times, the previous settings remain unchanged and "Old Unit" is displayed.

Declination compensation Declination display

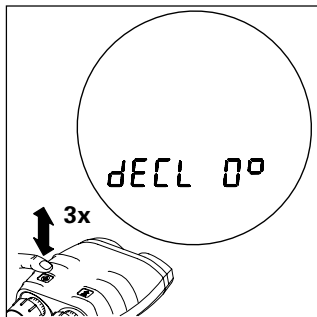
Declination represents the deviation between magnetic north and grid north.

Declination

- varies from location to location
- varies from time to time
- is specified on most land and sea maps

To refer the azimuth angle to grid north: enter the local declination value into the Laser Locator.

To refer the azimuth angle to magnetic north: enter a zero declination value into the Laser Locator.



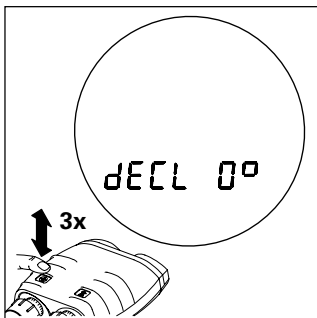
Click the azimuth key three times in rapid succession.

The current declination value is displayed for 10 seconds. The Laser Locator displays "Old dECL" before switching itself off (the declination value is unchanged).

Declination is displayed in the currently selected angular units (see page 26).

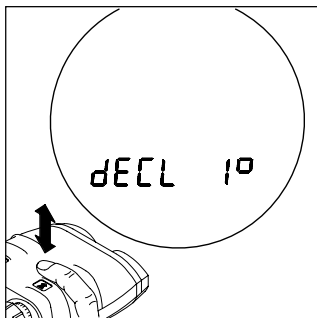
- i** The stored declination value
 - is reset to 0 when the measurement units are changed (see page 26);
 - is retained when the battery is exhausted or replaced;
 - is factory-set to 0.

Declination setting / correction



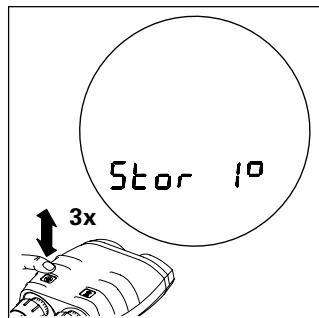
Click the azimuth key three times in rapid succession.

The stored declination value is displayed.



Distance key

- short click: the declination value increments by one unit;
- long click (hold down the key for longer than half a second): the declination value decrements by one unit.



Click the azimuth key three times in rapid succession to store the new declination value.

If the azimuth key is not correctly clicked three times, the previous settings remain unchanged and "Old dECL" is displayed.

Compass calibration

How?

There is a choice of two calibration procedures:

- 4 point calibration (4 Pt Co) achieves adequate precision for most applications.
- 12 point calibration (12 Pt Co) is performed at the factory under optimal conditions.


General instructions

When?

After every battery change.


After the Laser Locator has been exposed to strong magnetic fields.

When metallic parts have been attached to the Laser Locator.

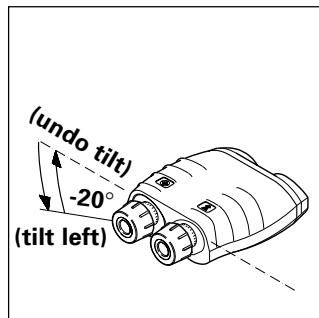
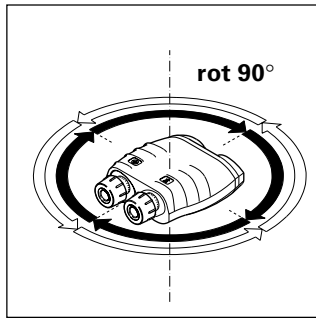
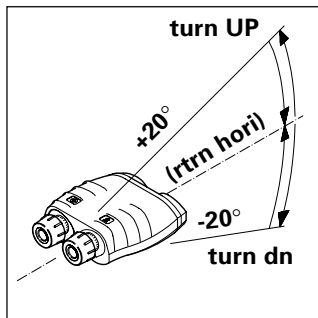
 Check the stored declination after every compass calibration, and correct if necessary.

Where?

In an open area (e.g. a field) at an adequate distance from buildings and metallic objects (see page 17). Ensure that there are no buried pipes, cables, etc. in the vicinity.

 Never calibrate the compass inside a building, or in the vicinity of disruptive magnetic fields!

Operator guidance



The Laser Locator needs to be swivelled in various directions during calibration. Instructions for the required direction of movement appear successively in the display:

turn UP tilt upwards
rtrn hori return to horizontal
turn dn tilt downwards
rot 90° rotate by 90°

tilt left tilt the left side of the Laser Locator downwards
undo tilt return to horizontal

i Instructions in brackets apply to 12 point calibration only.

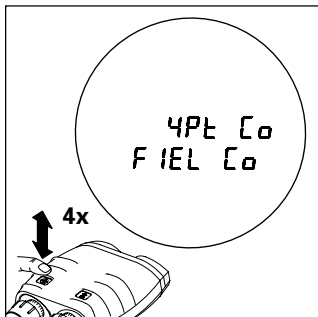
Always turn in the same direction for all "rot 90°" instructions.

Important:

Perform each movement **slowly and steadily**, until the next instruction appears.

When you see the "StOP" instruction, **immediately hold the Laser Locator still** and on no account move it while "StOP" is displayed.

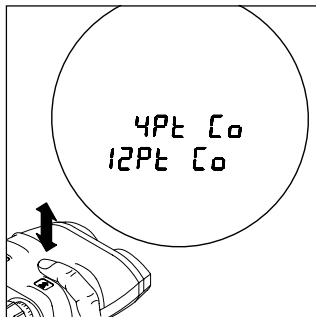
Calibration procedure



Point the Laser Locator roughly northwards.

Click the azimuth key four times in rapid succession.

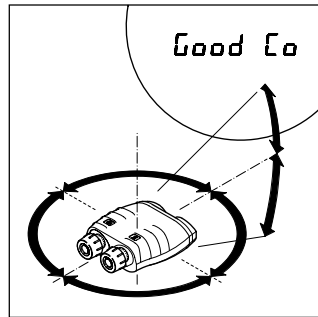
"FIEL Co" appears briefly, followed by "4 Pt Co" for the regular 4 point calibration.



i Only click the distance key if you want to perform the special 12 point calibration. "12 Pt Co" is displayed.

The selected calibration procedure begins in a few moments.

Move the Laser Locator according to the displayed instructions.



After the last instruction, analysis begins and the pointing circle blinks for 4 sec. (4 Pt Co) or 30–60 sec. (12 Pt Co).

You then see

- "Good Co": indicates successful calibration.
- "bAd Co" followed by "rES Co": indicates that the calibration data are unusable.

Calibration procedure (continued)

i After 12 point calibration, the Laser Locator can be put down as soon as the pointing circle starts blinking. You can check the results later by clicking the azimuth key.

Magnetic interference can still lead to inaccurate measurements, even if calibration was successful. For this reason, you should verify compass accuracy after a successful calibration: perform several azimuth measurements on known landmarks and compare the results.

After calibration, the Laser Locator acts on the measurement results as follows:

Display	Action
"Good Co"	Store the newly determined constants.
"bAd Co"	Store the newly determined constants.
"bAd Co" + "rES Co"	Reset constants to factory values.

Possible causes of calibration failure:

- The Laser Locator was moved while a "StOP" instruction was displayed.
- Movements performed too fast, or jerkily.
- Strong magnetic disturbances in the vicinity.

If you get a "bAd Co", reattempt calibration until "Good Co" appears. Consider moving to an alternative position.

Problem	Possible cause	Solution
You cannot see a circular image with both eyes.	Eye-base or eyecup incorrectly adjusted.	Adjust the eye-base or eyecup following the instructions on page 8.
	Eyes are not positioned on the Laser Locator's optical axis.	Reposition your head, or the instrument.
Measurements cannot be taken.	The battery has run out.	Replace the battery. Preferably use SANYO type.
	Battery contacts corroded.	Clean the battery contacts.
	Low temperature reduces battery performance.	Carry the Laser Locator close to your body.
	Extreme heat shortens battery life.	Do not store the battery at temperatures in excess of +70°C.

Troubleshooting (continued)

Problem	Possible cause	Solution
"- - - -" appears in the display when distance is measured.	<p>The distance is outside the specified measuring range.</p> <p>Inadequate reflectance:</p> <ul style="list-style-type: none">• object too small or inaccurately targeted;• The Laser Locator was shaken during measurement;• Bad weather conditions (haze, fog, turbulence).	<p>See the specified measuring range on page 41.</p> <p>See the list of factors affecting measuring range on page 10.</p>

Troubleshooting (continued)

Problem	Possible cause	Solution
Distance display blinks.	Multiple object measurement is activated: "3dIS on".	Click the distance key to display distances in succession (see page 12).
The Laser Locator measures objects in front or behind the intended object (e.g. bushes -> object -> mountain).	The Laser Locator only displays the distance to the most reflective object in the line of vision.	Activate multiple object measurement: "3dIS on" (see page 25).
These symbols are displayed during azimuth measurement: _ - - _ - _ _ - - - - - _ - - -	The permissible angle of inclination of $\pm 45^\circ$ has been exceeded: tilted too far upwards tilted too far downwards tilted too far to the right tilted too far to the left	Do not over-tilt or bank the Laser Locator.

Troubleshooting (continued)

Problem	Possible cause	Solution
Inaccurate azimuth measurement values.	<p>Incorrect declination value has been stored.</p> <p>Disruptive magnetic fields at the measuring position.</p> <p>Calibration in an area with magnetic interference.</p> <p>Altered magnetic conditions within the instrument after a battery change.</p>	<p>Store the correct declination value (see page 28).</p> <p>See the factors affecting measurement accuracy on page 17.</p> <p>Recalibrate the compass (see pages 29-32).</p> <p>Recalibrate the compass.</p>
The expected display does not appear after clicking a key several times.	<p>Key was pressed too slowly, or with insufficient force.</p>	<p>Press and release the key in rapid succession. Always press the key down until there is an audible click.</p>

Troubleshooting (continued)

Problem	Possible cause	Solution
"Lo bAtt" is displayed.	The battery is used up. Reduced battery performance at low temperature.	You can still get some readings, but the battery needs to be replaced soon. You can still get some readings, but the Laser Locator or the battery needs to be warmed up (e.g. on your body).

Safety notices

Intended purpose

The Laser Locator

- is designed as a navigation aid;
- is to be used in addition to other instruments or techniques;
- must never be used as a sole navigation instrument.

Limitations of use

The Laser Locator must not be used in the vicinity of sensitive electrical equipment.

All other usage limitations are mentioned in the technical specifications.

Inappropriate use

- Laser Locator deployment without prior knowledge of the operating instructions and safety notices.
- Changes and modifications to the Laser Locator by the customer.
- Use of third-party accessories not expressly approved by Leica Geosystems AG.

Inappropriate use brings the risk of

- injuries;
- instrument errors;
- damage to property;
- malfunction;

Blinding hazard

- Do not look into powerful light sources with the Laser Locator.
- Do not open the Laser Locator. The built-in laser can cause eye injuries.

Explosion hazard

The battery must not be

- short-circuited;
- recharged;
- mechanically modified;
- placed in fire or heated above +85°C with the Laser Locator.

Safety notices (continued)

Physical injury hazard

- Do not place the Laser Locator on a vehicle parcel-shelf or dashboard – risk of injury when braking.
- Check the carrying strap at regular intervals, and replace it if damaged.

Environmental hazard

The Laser Locator contains certain components that should be treated as hazardous waste, and must therefore be disposed of via a specialist dealer.

Deposit used batteries at a proper collection point.

Avoiding storage and transport damage

- When not in use, always keep the Laser Locator in its pouch with the eyepiece protection caps fitted.
- Remove the battery prior to prolonged storage. Battery leakage can damage the Laser Locator!
- Observe the permissible storage temperatures.
- Do not expose the Laser Locator to strong mechanical shocks or abrupt temperature transitions during transport (moisture condensation).
- Use the pouch and transit case or equivalent packaging for shipment.

Avoiding measurement errors

- Note the factors affecting measurement accuracy (see pages 10, 17, 32).
- Always perform test measurements after the Laser Locator has been exposed to rough handling (vibration, falls, etc.), and before carrying out important measurement tasks.

The Laser Locator's performance and serviceability are conditional on regular care and immediate attention to problems:

- Do not touch glass lenses with fingers.
- Do not soil the operating keys with oil or grease.
- Avoid abrupt temperature transitions, since these can cause condensation moisture to develop inside the Laser Locator.

The Laser Locator does not need special care or cleansers.

Therefore

- do not use any kind of impregnated cloth intended for cleaning spectacle lenses,
- do not use any solvent except water, e.g. no alcohol or cleansers.

Lens cleaning

Particles of dirt should be blown off or removed using a soft brush. Finger prints may be cleaned first by wiping with a damp cloth, followed by soft, clean optical tissue or chamois leather.

Cleaning the casing

Wipe the casing with a damp cloth.

Pay special attention to dirt and grease around the keys.

Blow out the Laser Locator interface cable socket, and clean it carefully.

Allow the Laser Locator to dry fully before packing.

Cleaning the interface cable

Protect the cable from damp and dirt as much as possible! Wipe the cable with a damp cloth. Blow out soiled cable plugs with clean air, and leave them to dry.

Technical data

Optics

Magnification 7x
 Clear objective diameter .. 42 mm
 Exit pupil diameter 6 mm
 Eye relief 18,5 mm
 Field of view
 @ 1000 metres 120 m
 Axial resolution better than
 6 arcseconds
 Interpupillary distance
 adjustment 58,5-71,5 mm
 Focus fixed
 Dioptric correction > ±4 dpt

Pointing circle illuminates to
 indicate laser direction and
 approximate laser spot size on
 target.

Rangefinder

Laser type: IR diode
 Eye safety
 Safety standards
 Measurement range
 Spec. measurement range
 Visibility
 Target size
 Albedo
 Detection probability
 Accuracy (1σ) from:
 50 m - 2000 m
 2001 m - 4000 m
 False alarm rate
 Beam divergence
 Display resolution

Laser Locator

860 nm
 Class 1
 EN 60825 (91)
 IEC 825 (90)
 ANSI Z 136.1 (93)
 FDA 21 CFR,
 Ch 1§ 1040 (1988)
 5 m - 2500 m
 25 m - 1500 m
 10 km
 4 x 4 m
 0.4 at 860 nm
 >90%
 ± 1 m
 ± 3 m
 < 2%
 ≤ 1.5 mrad
 0.5 m < 999.5 m
 others 1 m,
 0.1 m in height

Laser Locator Plus

1550 nm
 Class 1
 EN 60825-1 (94)
 IEC 825-1 (93)
 ANSI Z 136.1 (93)
 FDA 21 CFR,
 Ch 1§ 1040 (1988)
 5 m - 6000 m
 25 m - 4000 m
 20 km
 8 x 8 m
 0.4 at 1550 nm
 >90%
 ± 2 m
 ± 3 m
 < 2%
 ≤ 2x2 mrad
 0.5 m < 999.5 m
 others 1 m,
 0.1 m in height

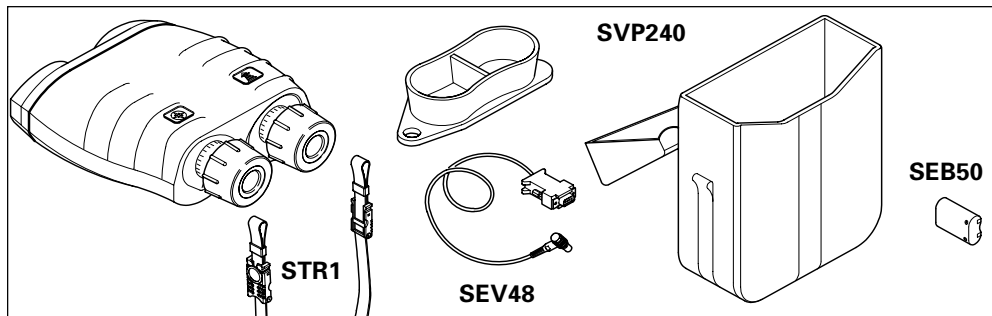
Technical data (continued)

Magnetic compass (azimuth and inclination)

Azimuth measurement
range 360°
Accuracy (1 σ):
Azimuth \pm 10 mil
Inclination \pm 3 mil
Display
resolution 10 mil / 1° / 1 gon
Maximum inclination /
bank angle \pm 45°
Compass calibration user
initiated, menu driven
Declination \pm 99° / 990 mil
(adjustable)

Miscellaneous

Power supply 6V lithium battery (type 2CR5)
Battery capacity approx. 2400 measurements
Protective covering environmentally sealed,
impact-resistant rubber armour casing
Immersion proofing 10 min. in 1 m depth of water
Operational temperature range -35° bis +63°C
Storage temperature range (without battery) -40° bis +85°C
Shock resistance 30 g / 11 ms / xyz axes
Vibration resistance 10 to 500 Hz for 10 minutes
Dimensions 205 x 178 x 82 mm
Tripod bush thread A 1/4"
Weight 1710 g (including eyepiece protection
and battery type 2CR5)
Interface RS-232, unidirectional output



Order no.	Description
—	Laser Locator / Laser Locator Plus
535 314	SEB50 lithium battery, 6 volt, SANYO type 2CR5
636 895	SVP240 grey pouch with accessories
636 965	STR1 neck strap

Optional equipment:

706 271	SEV48 interface cable, shielded, 3 m long
722 804	GEV154 interface cable to GPS

Customer service

Our customer and information service will be glad to offer assistance if your instrument requires maintenance, if it sustains damage, or if you require any other information:

Leica Geosystems AG
Defense & Special Projects
Heinrich-Wild-Strasse
CH-9435 Heerbrugg
(Switzerland)

Telephone: +41 71 727 31 31
Fax: +41 71 727 46 79
Internet:
www.leica-geosystems.com

Quality system

SQS certification attests that Leica Geosystems AG Heerbrugg operates a quality management system that complies with international standards for quality and quality management systems (ISO 9001) and environmental management systems (ISO 14001).



Total Quality Management – our commitment to total customer satisfaction. Ask your local Leica representative for more information about our TQM programme.

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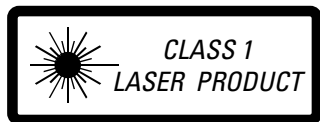
Eye safety

IEC 825-1 (1990 / 1993)

EN 60825 (1991 / 1994)

ANSI Z 136.1 (1993)

FDA 21 CFR Ch 1§ 1040 (1988)





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