

GeoDist® 60-GREEN

USER MANUAL



Dear Customer,

Thank you for your confidence in us, having purchased a geo-Fennel instrument.

For the optimum performance of the instrument, please read this manual carefully and keep it in a convenient place for future reference. This manual contains important safety information that should be read and understood before use.

Technical specification and design are subject to change without notification.

geo-FENNEL
Precision by tradition.

Contents

1. Supplied with	A
2. Power supply	B
3. Operational elements	C
4. Operation	D
5. Safety notes	E

A SUPPLIED WITH

- Laser distance meter GeoDist® 60-GREEN
- NiMH batteries AAA
- USB charging cable
- Holster
- Hand strip
- User manual

Technical data

Measuring distance	0,2 - 60 m*
Accuracy distance measurement	±2 mm**
Accuracy tilt measurement	± 0,3°
Laser class	2 / green
Power supply	NiMH
Temperature range	-10°C - +40°C
Measuring units	m / ft / in / ft+in
Dust / water protection	IP 65
Dimensions	115 x 50 x 26 mm
Weight (with batteries)	142 g

*May be shorter under unfavourable conditions

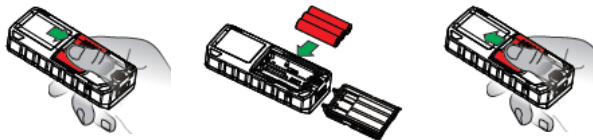
**Typical accuracy, may increase under unfavourable conditions

FEATURES

· Automatic shut-off	P. 18
· Measuring reference: front, tripod, rear	P. 18
· Addition / subtraction	P. 18
· Distance measurement (single measurement, continuous measurement, minimum/maximum)	P. 18
· Area calculation	P. 19
· Volume calculation	P. 19
· Pythagoras measurement 2-point	P. 19
· Pythagoras measurement 3-point	P. 20
· Pythagoras measurement 3-point (partial height)	P. 20
· Indirect measurement 1	P. 21
· Indirect measurement 2	P. 21
· Data storage	P. 22
· Trouble shooting	P. 22

B POWER SUPPLY

INSERT 3 X AAA NIMH BATTERIES



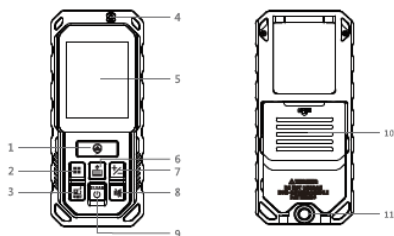
Ensure correct polarity when inserting the batteries.








CHARGE THE BATTERIES

Open the cover of the USB plug (**bottom of the instrument**) and charge the battery via the USB connection. For this use a standard USB charger, i. e. from a smart phone. When the charging process is completed close the USB plug.

Alternatively the instrument can be operated with standard AAA Alkaline batteries.

C OPERATIONAL ELEMENTS

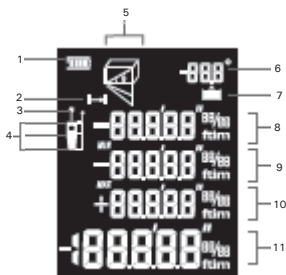


-  1. Measuring key (press briefly: single measurement / press long: continuous measurement)
-  2. Measuring mode: area, volume, Pythagoras, indirect measurement 1 + 2
-  3. Press briefly: measuring reference: front, rear, tripod
Press long: measuring units: m / ft / in / ft+in
- 4. Laser warning symbol
- 5. Display
-  6. Memory
-  7. In the modes distance, area, volume:
Press briefly: addition
Press long: subtraction
-  8. Sound on/off
-  9. Press briefly: clear / back
Press long: ON / OFF
- 10. Battery cover
- 11. Tripod thread

OPERATION

D

DISPLAY INDICATION



- 1. Battery status indication
- 2. Single / continuous measurement
- 3. Laser on
- 4. Measuring reference: front / tripod / rear
- 5. Measuring mode indication
- 6. Angle indication
- 7. Memory
- 8. Measuring value 1
- 9. Measuring value 2 / minimum
- 10. Measuring value 3 / maximum
- 11. Sum / last value / result

GENERAL NOTES

- After 3 minutes without operation the instrument powers off automatically.
- The instrument automatically saves the last 20 measured values.

MEASURING REFERENCE



FRONT




TRIPOD



REAR

ADDITION / SUBTRACTION

Press  briefly -> add

Press  long -> subtract

      etc.

SINGLE MEASUREMENT

Measuring mode: single measurement. Indication: 

For taking measurements press 

CONTINUOUS MEASUREMENT

Keep  pressed. Indication: 





Sweep slowly the laser back and forth over the selected target point.

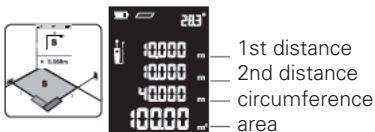
Press  to stop the continuous measurement.

Display indication: maximum, minimum and the last measured value.








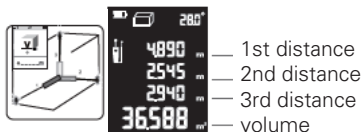
AREA CALCULATION

Press  until  appears
 Press  for the 1st distance
 Press  for the 2nd distance



VOLUME CALCULATION

Press  until  appears
 Press  for the 1st distance
 Press  for the 2nd distance
 Press  for the 3rd distance







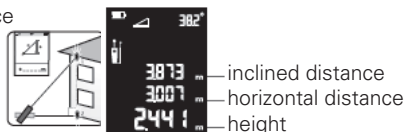
PYTHAGORAS MEASUREMENTS

IMPORTANT - it is essential to observe the following






- When measuring the horizontal distance (2nd dimension), the measurement must be taken at a 90° angle to the measuring surface. To do this, use the inclination indicator (0°).
- All measurements must be vertically in line (without lateral deviation).
- Use a tripod to increase the measuring accuracy.

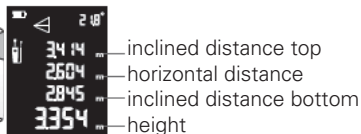
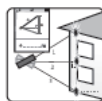
PYTHAGORAS (2-POINT)

Press  until  appears
 Press  for the inclined distance
 Press  for the horizontal distance








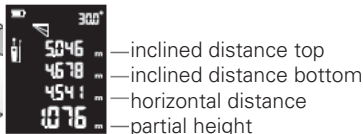
PYTHAGORAS (3-POINT)

- Press  until  appears
- Press  for the inclined distance top
- Press  for the horizontal distance
- Press  for the inclined distance bottom



PYTHAGORAS (3-POINT / PARTIAL HEIGHT)

- Press  until  appears
- Press  for the inclined distance top
- Press  for the inclined distance bottom
- Press  for the horizontal distance



INDIRECT MEASUREMENTS VIA INCLINATION WITH HIGH ACCURACY




Where direct measurements to the target are not possible, e.g. on glass facades without measurement reflection or when the measurement object is obscured:

Measure partial distances, the device will calculate the missing distances.

Here a general note:





- All measurements must be vertically in line (without lateral deviation).
- Use a tripod to increase the accuracy of the measurement.

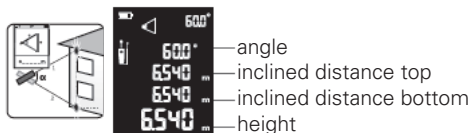
INDIRECT MEASUREMENT 1

Press  until  appears
 Press  for the inclined distance -
 measurement to the top point



INDIRECT MEASUREMENT 2

Press  until  appears
 Press  for the inclined distance top (top point)
 Press  for the inclined distance bottom (bottom point)



MEMORY

The instrument automatically saves the last 20 measured values.

Memory recall 

TROUBLE SHOOTING

Code	Cause	Corrective action
204	Calculation error	Repeat the measurement
208	Excessive current	Contact your dealer
220	Battery weak	Charge the battery
255	Signal too weak or measuring time too long	Change the target surface
256	Signal too strong	Change the target surface
261	Out of measuring range	Select the measuring distance within the range
500	Hardware error	Power on/off the unit several times. If the error code still appears contact your dealer.

SAFETY NOTES

E

INTENDED USE OF INSTRUMENT

The instrument emits a visible laser beam in order to carry out the following measuring tasks (depending on the instrument): distance measurements.

SPECIFIC REASONS FOR ERRONEOUS MEASURING RESULTS

Measurements through glass or plastic windows; dirty laser emitting windows; after the instrument has been dropped or hit. Please check the accuracy.

Large fluctuation of temperature: If the instrument will be used in cold areas after it has been stored in warm areas (or the other way round) please wait some minutes before carrying out measurements.

CARE AND CLEANING

Handle measuring instruments with care. Clean with soft cloth only after any use. If necessary damp the cloth with some water. If the instrument is wet clean and dry it carefully. Pack it up only if it is perfectly dry. Transport in original container / case only.

ELECTROMAGNETIC ACCEPTABILITY (EMC)

It cannot be completely excluded that this instrument will disturb other instruments (e.g. navigation systems); will be disturbed by other instruments (e.g. intensive electromagnetic radiation nearby industrial facilities or radio transmitters).

CE-Conformity

The instrument has the CE mark according to EN 61326-1:2013, 61326-2-2:2013, 300 328 v2.1.1:2016, 62479:2010, 61010-1:2010.

EXCEPTIONS FROM RESPONSIBILITY

1. The user of this product is expected to follow the instructions given in the user manual. Although all instruments left our warehouse in perfect condition and adjustment the user is expected to carry out periodic checks of the product's accuracy and general performance.
2. The manufacturer, or its representatives, assumes no responsibility of results of a faulty or intentional usage or misuse including any direct, indirect, consequential damage, and loss of profits.
3. The manufacturer, or its representatives, assumes no responsibility for consequential damage, and loss of profits by any disaster (earthquake, storm, flood etc.), fire, accident, or an act of a third party and/or a usage in other than usual conditions.
4. The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits due to a change of data, loss of data and interruption of business etc., caused by using the product or an unusable product.
5. The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits caused by usage other than explained in the user manual.
6. The manufacturer, or its representatives, assumes no responsibility for damage caused by wrong movement or action due to connecting with other products.

WARRANTY

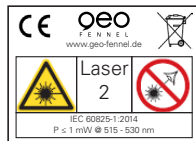
This product is warranted by the manufacturer to the original purchaser to be free from defects in material and workmanship under normal use for a period of two (2) years from the date of purchase. During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with the same or similar model at manufacturers option), without charge for either parts or labour. In case of a defect please contact the dealer where you originally purchased this product. The warranty will not apply to this product if it has been misused, abused or altered. Without limiting the foregoing, leakage of the battery, bending or dropping the unit are presumed to be defects resulting from misuse or abuse.

SAFETY INSTRUCTIONS

- Follow up the instructions given in the user manual.
- Do not stare into the beam. The laser beam can lead to eye injury. A direct look into the beam (even from greater distance) can cause damage to your eyes.
- Do not aim the laser beam at persons or animals.
- The laser plane should be set up above the eye level of persons.
- Use the instrument for measuring jobs only.
- Do not open the instrument housing. Repairs should be carried out by authorized workshops only. Please contact your local dealer.
- Do not remove warning labels or safety instructions.
- Keep the instrument away from children.
- Do not use the instrument in explosive environment.
- The user manual must always be kept with the instrument.

LASER CLASSIFICATION

The instrument is a laser class 2 laser product according to DIN IEC 60825-1:2014. It is allowed to use the unit without further safety precautions. The eye protection is normally secured by aversion responses and the blink reflex. The laser instrument is marked with class 2 warning labels.



Please note:

If you return instruments for repair / for adjustment to us please disconnect batteries or rechargeable batteries from the instrument - this is for safety reasons!

Thank you.

geo-FENNEL GmbH

Kupferstraße 6

D-34225 Baunatal

Tel. +49 561 / 49 21 45

Fax +49 561 / 49 72 34

info@geo-fennel.de

www.geo-fennel.de

**Technische Änderungen vorbehalten.
All instruments subject to technical changes.
Sous réserve de modifications techniques.**



Precision by tradition.

geo
F E N N E L