

INTENDED USE OF INSTRUMENT

The instrument emits a visible laser beam in order to carry out the following measuring tasks (depending on instrument): Setting up heights, horizontal and vertical planes, right angles.

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 EN 60825-1:2008-05. It is allowed to use the unit without further safety precautions. The eye protection is normally secured by the 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.



Follow us!

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YORK Survey Supply

S-Digit 60+ Inclinometer



Operating Instructions

Dear customer,

Thank you for your confidence in us having purchased a **geo-FENNEL** instrument. This manual will help you to operate the instrument appropriately.

Please read the manual carefully - particularly the safety instructions. A proper use only guarantees a longtime and reliable operation.

geo-FENNEL
Precision by tradition.

Contents

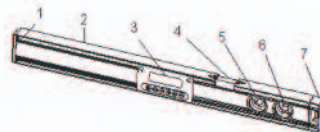
1. Supplied with	A
2. Features	B
3. Power supply	C
4. Keypad and display	D
5. Check and calibration	E
6. Safety notes	F

A SUPPLIED WITH

- Electronic slope measurer S-Digit 60 +
- Padded bag
- Batteries
- User manual

B FEATURES

1. Laser emitting window
2. Housing
3. Display
4. Vial
5. 45°-vial
6. 90°-vial
7. Hook



SAFETY NOTES

F

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 61326:1997, EN 55022, EN 61000-4-2/-3.

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.

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.

ADDITIONAL FUNCTIONS

Automatic shut-off

If no button is used for 20 min. the instrument will power off automatically.

Sound

Switch the sound function on. The instrument will now show by a sound signal if the horizontal or vertical position approaches. The closer the position is the denser the sound signal will be. If the instrument is in correct vertical or horizontal position the sound will be continuous.

Mode functions [1] - 5]

- 1) Slope indication in ° (14,5°)
- 2) Slope indicaton in % (25,9 %)
- 3) Indication IN/FT (3 1/8 IN/FT)
- 4) Indication IN/FT (3,10 IN/FT)
- 5) Indication mm/m (258,9 mm/m)

Keep the mode button pressed to have all mode functions switch fast. The display will not show any values. Release the mode button to return to the standard indication.

CONNECTION TO CAMERA TRIPOD

With 1/4"-thread (at the bottom side) S-Digit 60 + can be connected to a camera tripod.

SPECIAL FEATURE WITHIN THE RANGE OF 0° - 90°

O-setting in any position required:

In the range between 0° and 90° the ZERO layer can be defined in any position.

Start the calibration function in the position required (press **CAL** longer than 3 sec.) - wait 3 sec. - press **CAL** again - wait 3 sec. - press **CAL** again - finalized.
Do not turn the S-Digit 60 + during this process.

Now the ZERO layer is defined in the new position and the application required can be started.

ATTENTION:

We recommend to define the ZERO layer in the horizontal position again when you have finished your application. Otherwise it may happen that for the following measurements the results can be completely wrong (e.g. when you work the next day or if another user is working with the unit).

Technical Data

Working range	4 x 90°
Resolution	0,1 ° / 0,1 %
Accuracy inclination	0° + 90° = ± 0,1° 1° - 89° = ± 0,2°
Working range laser	20 m
Accuracy laser	± 0,5 mm / 1 m
Wave length	650 nm
Laser class	2
Power supply	3 x AA alkaline
Operating time	60 h
Weight	0,85 kg incl. batteries
Size	600 x 27 x 60 mm

POWER SUPPLY

Replace the batteries: Open the battery compartment cover and insert the batteries (ensure correct polarity)
When replacing the batteries always power off the instrument!



When the batteries have been replaced the instrument will power on automatically.

Display indication: „GOOD“, then „-0-“

Now a calibration must be made - see „Check and calibration“



Important:

If the battery symbol flashes the batteries need to be replaced.



D KEYPAD AND DISPLAY



1) ON/OFF

Power on/off S-Digit 60 +.

2) LASER

Press the button short to switch on/off the laser beam.

3) CAL

Press the button long to activate the calibration procedure (see „Check and calibration“).

4) MODE

Press the button short to select 5 different display modes (see chapter „Additional functions“).

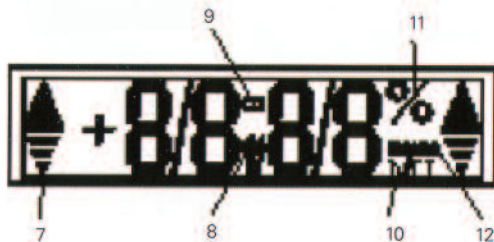
5) SOUND / ILLUMINATION

Press the button short to switch on/off the sound signal.

Press the button long to switch on/off the illumination.

6) HOLD

Press the button short to freeze the current reading.



- 7) Direction symbol (approching the 0°/90° position)
- 8) Symbol sound on/off
- 9) Battery status indicator
- 10) Unit symbol N/FT
- 11) Unit symbol %/°
- 12) Unit symbol mm/m

E CHECK AND CALIBRATION

IMPORTANT

Calibration of inclinometer:

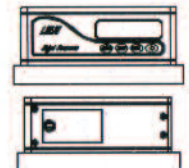
- before first use
- before important measurements
- after a hit or drop
- after a large fluctuation in temperature

CHECK OF CALIBRATION

Set the instrument down on a flat and even surface and switch it on. Wait 3 sec. and note down the measured value (A). Turn the unit by 180° and set it down on the same position as before. Wait 3 sec. and note down the measured value (B). If the deviation between the two values A and B is more than 0,2° the unit has to be calibrated.

CALIBRATION

Set the instrument down on the same flat and even surface, switch it on and keep the button **CAL** pressed until the display shows „-0-“. Wait approx. 3 sec. and press the button **CAL** again until the display shows „-1-“. Turn the unit by 180° and set it down on the same position as before. Wait approx. 3 sec. and press the button **CAL** again until the display shows „-2-“. Now the calibration is completed.



MEASUREMENT OF INCLINATION

The two arrows in the display indicate in which direction the instrument has to be moved in order to reach the 0° or 90° position.



The exact 0° or 90° position is shown by double arrows.



The display has an automatic digit inversion for overhead measurements.

