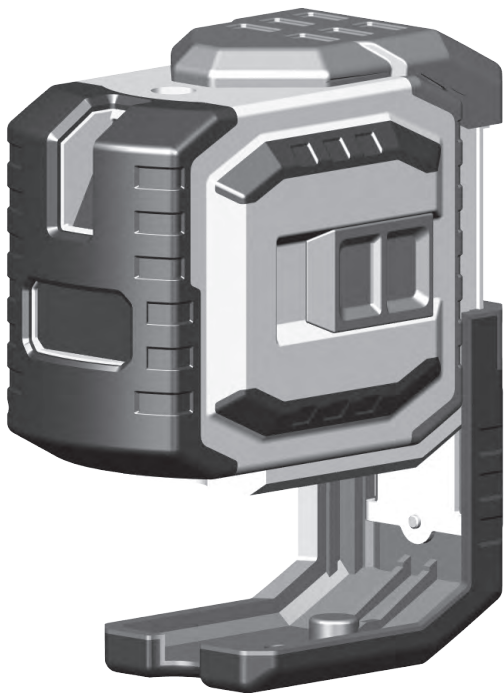


STABILA®



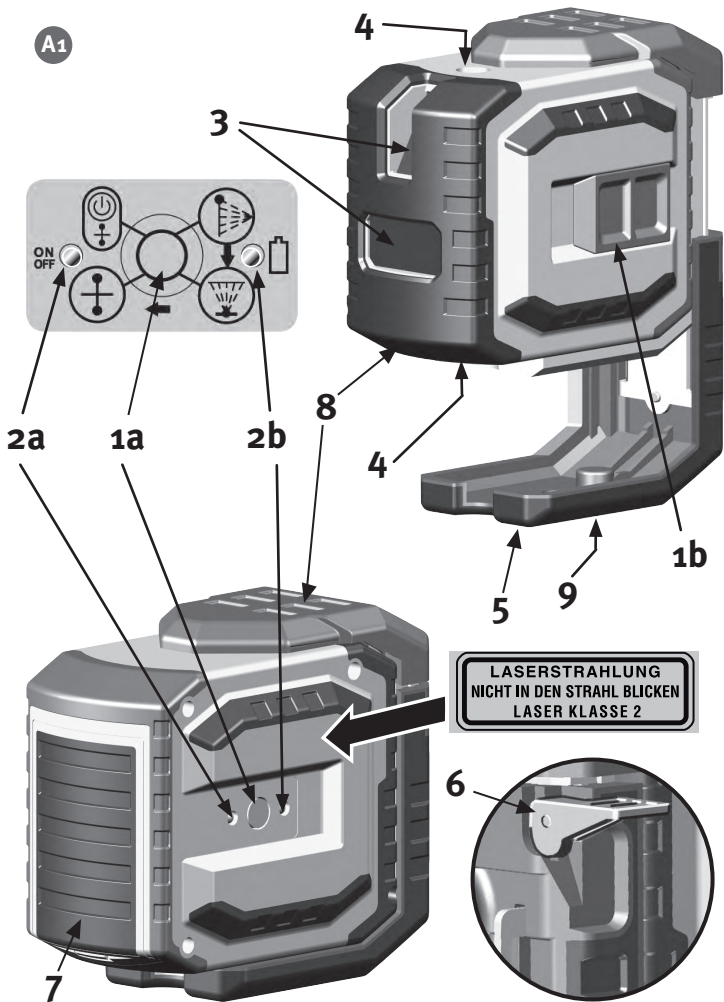
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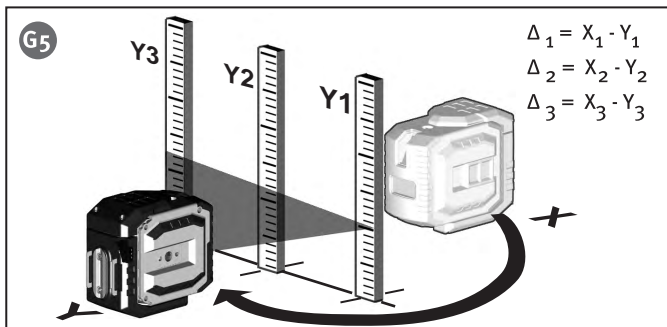
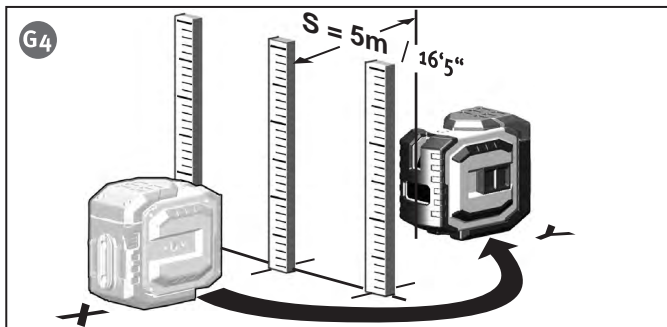
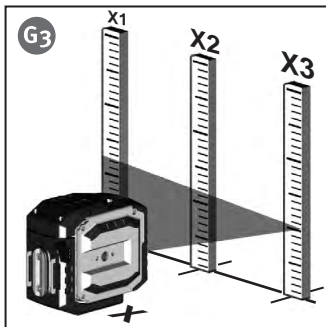
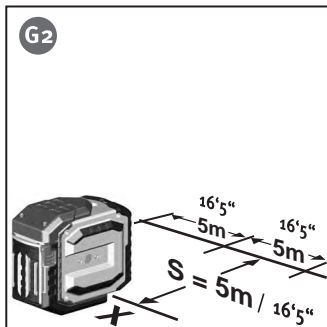


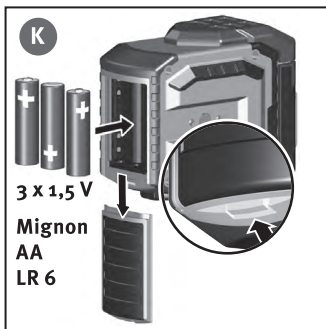
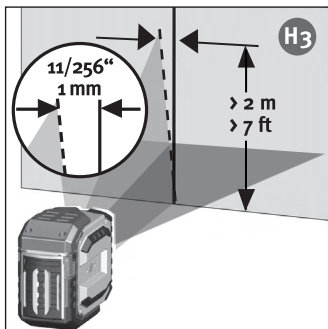
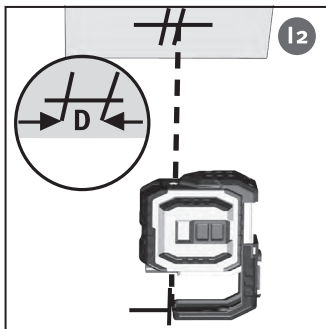
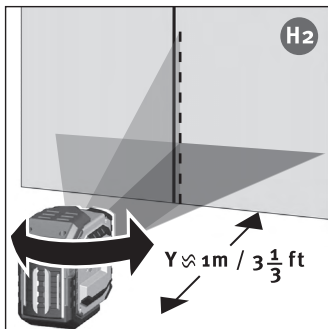
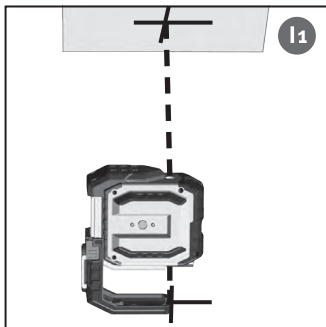
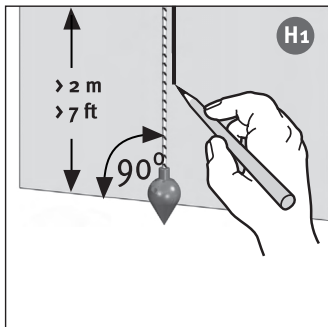
Laser LAX 300

en Operating instructions

A1







Operating instructions

The STABILA LAX 300 is an easy to use crossed line and plumb line laser. It is self-levelling in the range $\pm 4.5^\circ$ and enables levels to be determined quickly and accurately. The vertically and horizontally projected laser lines provide exact alignment / working .

The pulsed laser-line enables working over larger distances using a special laser-line-receiver (see line receiver manual) .

Read the User Manual along with the illustrated portion. Follow the general instructions on the handling, care and maintenance of the instrument.

Observe the safety instructions on laser beams.

We have endeavoured to explain the unit's handling and functioning in as clear and comprehensible manner as possible. If, however, you still have any unanswered questions, we should be pleased to provide advice over the telephone at any time on the following telephone number : 0049 / 63 46 / 3 09 - 0



Main components

- (1a) On/off button
- (1b) ON / OFF switch (for protecting during transport)
- (2) LEDs for displaying
 - (2a) Operating mode ON or READY
 - (2b) Battery voltag
- (3) Exit aperture for the horizontal and vertical laser lines
- (4) Plumb line laser outlet
- (5) Foot - extendable
- (6) Release lever
- (7) Battery compartment cover
- (8) Protective cover
- (9) 1/4" threaded connector for tripod
- (10) Magnets
- (11) Wall bracket

A1

Before initial start-up :

The warning notice in your language must be clearly affixed on the laser instrument at the position indicated. The appropriate stickers are enclosed.

LA S E R R A D I A T I O N
D O N O T S T A R E I N T O B E A M
LA S E R C L A S S 2

This sticker with the warning notice written in the usual language must be affixed here in place of the English text !

A2

A3

A1

Batteries must be inserted -> changing batteries

Main applications:

Operating modes

B₁

The LAX 300 can be used in 2 operating modes:

1. as a self-levelling line laser
2. as a laser instrument for marking
+ plumb line laser applications without the levelling function

B₂

Operating mode with self-levelling

A laser line can be selected in this mode.

C₁

Commissioning

The instrument is switched on with the on/off switch (1b). Horizontal and vertical laser lines and the plumb line points appear after switching on.

The laser will automatically level itself.

C₃C₄

Setting the type of line:

The vertical and horizontal laser lines with the plumb line point and the cross laser line can be set after each other by pressing the selector switch (1a).

A₄

The laser will flash if the inclination is too great !

- laser beam flashing->
- The unit is inclined too much
 - + is outside the self-levelling range
 - + the laser cannot level itself automatically

A₄

Operating mode without levelling function:

The on/off switch (1b) is switched off. In this mode the LAX 300 is only switched on or off with the selector switch (1a).

D₁

Plumb line function mode

D₂

The foot can be extended in order to improve the visibility of the lower plumb line point. The LAX 300 is positioned and switched on (switch 1b).

The laser down beam is aligned as required to the object or a mark.

D₃E₁

Mark the position of the up laser beam on the ceiling. The laser lines are always switched on at the same time as the plumb line laser points.

E₂

Always ensure that the centre of the laser line is marked !

E₃

Checking the calibration

LAX 300 crossed line and plumb line laser is designed for use on the construction sites and left our factory perfectly adjusted. As with any precision instrument, however, its calibration must be regularly checked.

The unit should be checked before starting any new tasks, particularly when the unit has been exposed to strong vibrations.

Horizontal checking

1. Horizontal checking - Line level

Two parallel wall surfaces at least 5 m / 16'5" apart are required for the horizontal check.

- Place the LAX 300 on a smooth surface or on a tripod at a distance of 50 mm to 75 mm in front of wall A and with the front side pointing towards the wall
- Switch the unit on (1b).
- Mark the position of the visible laser line cross on the wall A (point 1).
- Turn the complete unit 180° without altering the height of the laser.
- Mark the position of the visible laser line cross on the wall B (point 2).
- Now move the unit directly in front of wall B.
- Set the unit's height so that the laser dot's height matches that of point 2.
- Without changing the height of the laser, rotate it 180° to place the beam near the mark on the first wall (step 3 / point 1).

Measure the vertical distance between point 1 and point 3. The difference must not be greater than :

S	Maximum permissible difference	S	Maximum permissible difference
5 m	3,0 mm	16'5"	1/8"
10 m	6,0 mm	32'10"	1/4"
15 m	9,0 mm	49'3"	3/8"
20 m	12,0 mm	65'8"	1/2"

2. Horizontal checking - inclination of the laser line

Check the laser line for inclination and perfectly straight projection

- Mark three points (1, 2 and 3) on the floor at a distance of 5 m / 16'5" from each other; the points must be in a perfectly straight line.
- Position the laser at distance S = 5 m / 16'5" from the line and exactly in front of the middle point you marked = position X
- Switch the unit on.
- Measure the height of the laser line at the points. Measurements X1 - X3
- Reposition the instrument.
- Position the laser at distance S = 5 m / 16'5" from the line and exactly in front of the middle point you marked = position Y
- Measure the height of the laser line at the points. Measurements Y1-Y3
 $\Delta_1 = X_1 - Y_1$ $\Delta_2 = X_2 - Y_2$ $\Delta_3 = X_3 - Y_3$

The following applies for the differences :

$$\Delta_{ges 1} = \Delta_1 - \Delta_2 \leq \pm 2 \text{ mm } 5/64''$$

$$\Delta_{ges 2} = \Delta_3 - \Delta_2 \leq \pm 2 \text{ mm } 5/64''$$

When calculating, always take note of the preceding prefix !

F1

F2

F3

F4

F5

G1

G2

G3

G4

G5

Vertical check

- H1** You must create a reference to perform this test. Fasten a plumbline near to the wall. The laser unit should now be set up in front of this reference mark
- H2** (distance Y) and the vertical laser line compared with it.
- H3** The discrepancy between the centre of the laser line and the reference mark should be no greater than 1 mm (3/64") over a length of 2 m (8 ft).

Checking plumbline

1. Switch the unit on
- I1** 2. Place the laser so that its down beam is over a reference mark on the floor.
3. Locate the position of the up beam on the ceiling and make a mark.
- I2** 4. Rotate the laser 180° and realign the down beam over the reference mark on the floor.
5. Locate the position of the up beam on the ceiling and make a mark.
6. Measure the difference D between the two marks on the ceiling, which will be twice the actual error. The difference may not be greater than: 3 mm in 5 m (1/8" in 16'5").

Replacing the batteries

- K** Slide the battery cover (4) in the direction of the arrow and insert new batteries in accordance with the symbols in the battery compartment. Suitable batteries can also be used.

Technical data

Laser type:	Red diode laser, pulsed line-laser, wavelength 635 nm
Output:	< 1 mW, Laser Class 2 to IEC 60825-1:2007 This product compl. with the appl. requ. of 21CFR, parts 1040.10 and 1040.11.
Self-levelling range*:	ca. ± 4,5°
Levelling accuracy :	
A6 laser line horizontal*:	L1 = ± 0,3 mm/m middle of the laser line L1 = ± 3/16" over 50ft
A7 inclination of the laser line :	L2 = ± 0,2 mm/m laser line L2 = ± 1/8" over 50ft
Up Beam Accuracy*:	L3 = ± 0,3 mm/m ± 3/16" over 50 ft
Down Beam Accuracy:	L4 = ± 0,4 mm/m ± 1/4" over 50 ft
Batteries::	3 x 1,5 V cells Alkaline, Size AA, LR6 LR6
Operating life:	Approx. 20 hours (Alkaline)
Operating temperature range :	-10 °C to +50 °C / 14°F to +122°F
Storage temperature range:	-20 °C to +60 °C / -4°F to +140°F

Subject to technical modifications.

* When operated within specified temperature range