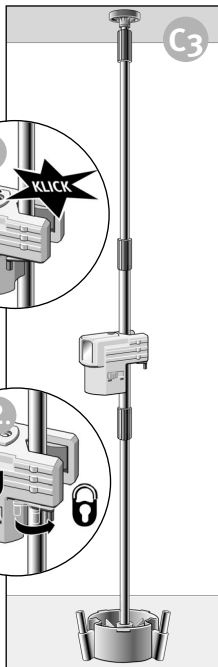
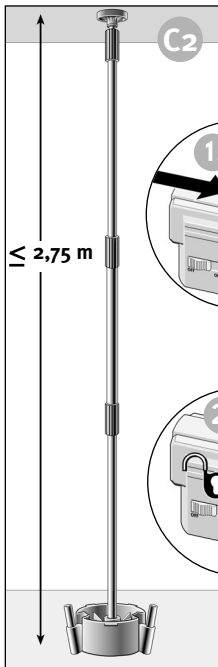
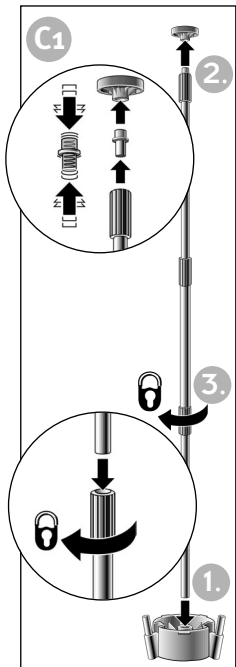
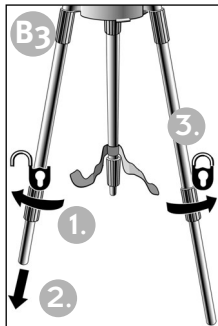
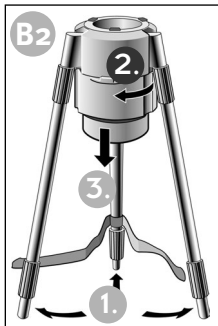
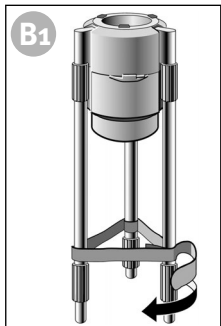


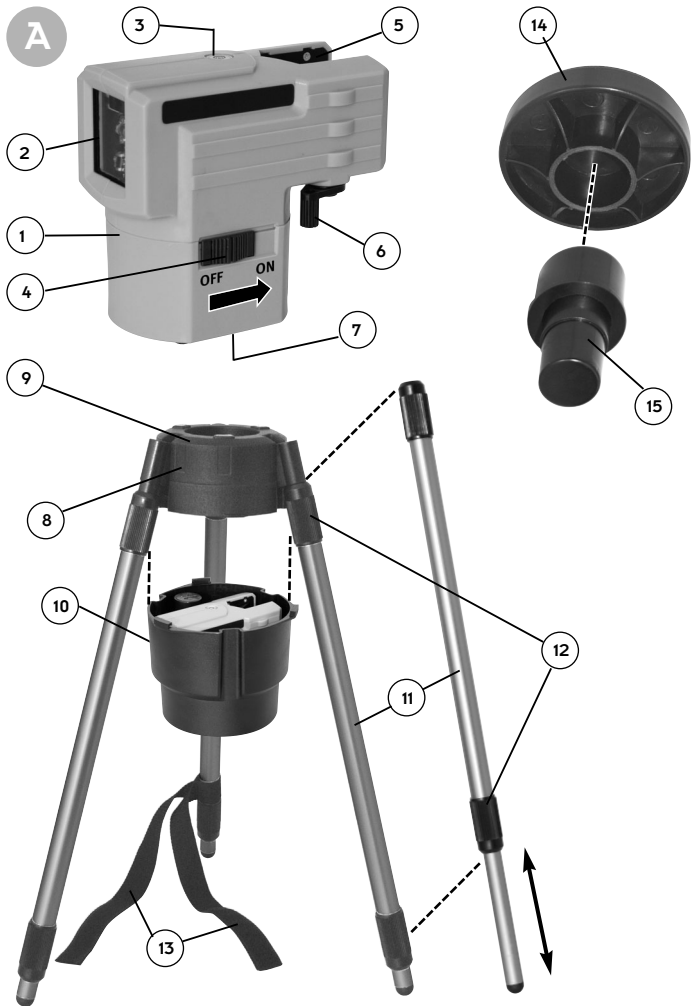
**STABILA®**

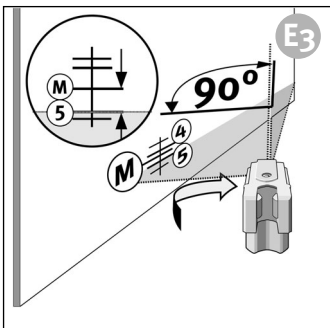
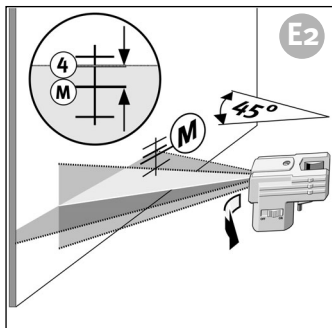
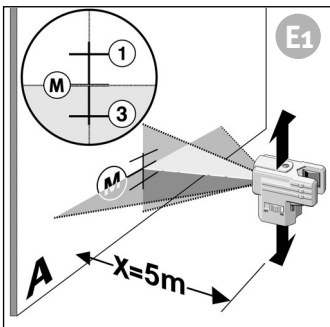
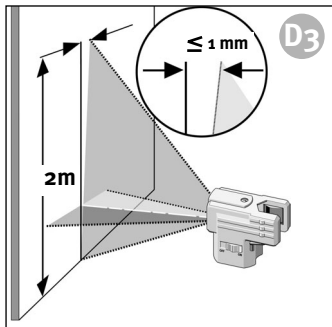
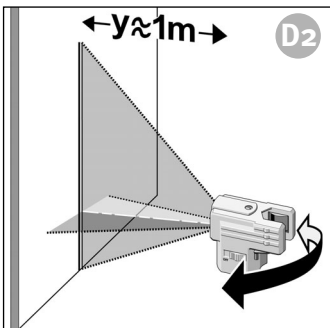
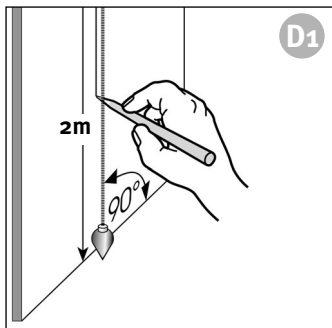


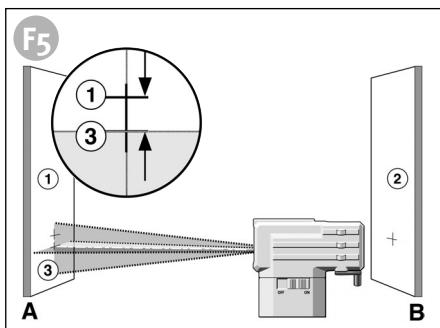
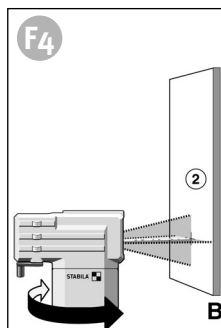
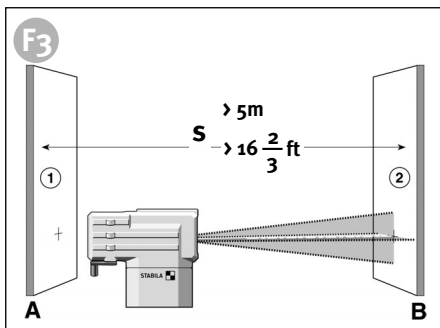
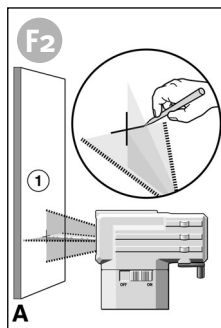
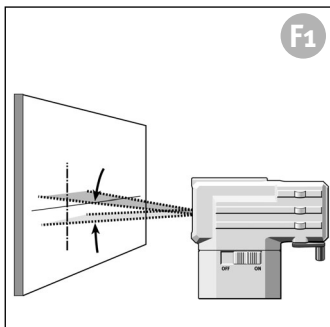
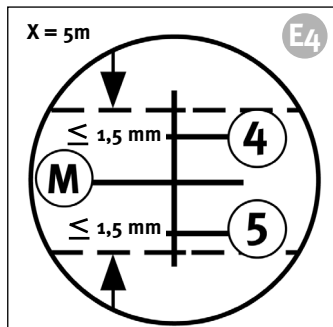
## **Laser LAX 50**

**en** Operating instructions









## Operating instructions

The STABILA-LAX-50 is an easy-to-use crossed 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 different parts of this set enable a tripod or a long support pole to be constructed to suspend the instrument between the floor and the ceiling.

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:

+49 / 63 46 / 3 09 - 0

A

## Main components

- (1) The LAX-50 laser
- (2) Exit aperture for the horizontal and vertical laser lines
- (3) Rough adjustment vial
- (4) On/off switch
- (5) Clamp
- (6) Locking lever for clamp
- (7) Battery compartment cover
- (8) Base unit
- (9)  $360^\circ$  scale
- (10) Carrying case
- (11) Telescopic poles
- (12) Locking screws
- (13) Securing strap
- (14) Securing plate
- (15) Spring



## NB:

In Class II laser equipment, your eyes are protected from accidental, short-term exposure to the laser beam by the lid-closing reflex and/or the reflex reaction to turn one's head. This equipment can therefore be used without additional protective measures. Nevertheless, you should not look directly into the laser beam.



**LASER RADIATION**  
DO NOT STARE  
INTO BEAM  
LASER CLASS 2

EN 60825-1 : 03 10

## CAUTION

**LASER RADIATION**  
DO NOT STARE  
INTO BEAM



630-680 nm / < 1mW  
CLASS II  
LASER PRODUCT

**Do not let the unit  
fall into children's  
hands!**

The laser goggles enclosed with these units are not safety goggles. They are designed to make the laser light easier to see.

## Main applications:

### Levelling with tripod function

- I. Opening the set.
- II. Remove the parts.
- III. Erect the tripod with the required height.
- IV. Position the laser.

B1

B2

B3



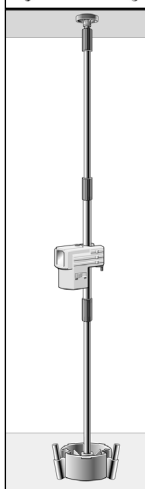
### Levelling at variable heights up to 2.75 metres

- I. Unscrew the telescopic poles from the base unit.
- II. Assemble the telescopic poles for a room height of up to 2.75 metres using the threaded sleeves.
- III. Secure the instrument firmly between the floor and ceiling using the spring unit, securing plate and base unit.
- IV. Position the laser. To secure in position, turn the locking lever until it is tight.

C1

C2

C3



## Commissioning

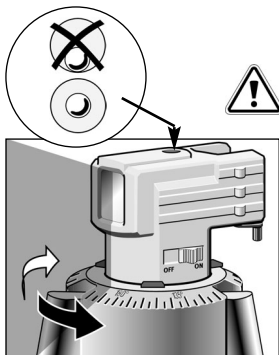
The instrument is switched on with the on/off switch (4). Vertical and horizontal lines will appear after switching on. The laser will automatically level itself.

The laser will flash if the inclination is too great.



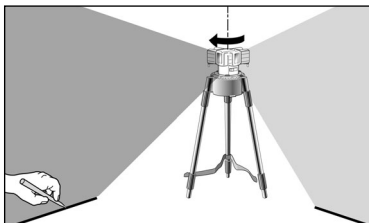
## 360° scale

The vertical laser line indicates the angular displacement of the laser unit and the laser line on the 360° scale of the base unit.



### Tip:

It's necessary to center the unit by using the vial!



## Checking the calibration

The LAX-50 crossed line laser is designed for use on construction sites and was perfectly adjusted when it left our factory. 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. After an impact, the unit should be checked throughout its whole self-levelling range.

### Vertical check

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



# Horizontal checking

## 1. Horizontal checking - Line level

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

- F1 1. Set the LAX-50 on a smooth level surface or on the tripod with the front facing the wall.
2. Switch the unit on.
- F2 3. Mark the position of the visible laser line cross on the wall A (point 1).
- F3 4. Turn the complete unit 180° without altering the height of the laser.
5. Mark the position of the visible laser line cross on the wall B (point 2).
- F4 6. Now move the unit directly in front of wall B.
7. Set the unit's height so that the laser dot's height matches that of point 2.
- F5 8. 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

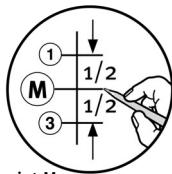
S	Maximum permissible figure
5 m	5,0 mm
10 m	10,0 mm
15 m	15,0 mm

## 2. Horizontal checking - inclination of the laser line

Check the laser line for inclination and perfectly straight projection.

Calculate the centre line between point 1 and point 3 and mark it (point M).

- E1 Place the instrument in front of wall A - distance X = 5 m.  
Using the horizontal laser line, align the instrument with point M.
- E2 Rotate the instrument through 45°. The distance of the laser line (≙ point 4) from point M must not exceed 1,5 mm.
- E3 Rotate the instrument through 90°. The distance of the laser line (≙ point 5) from point M must not exceed 1,5 mm.



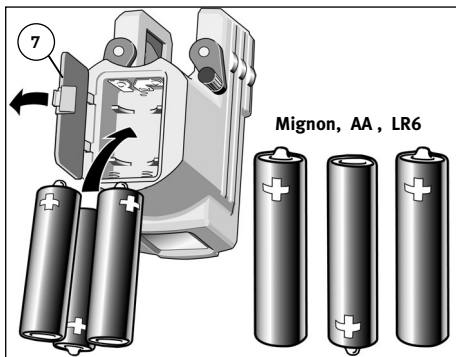
- E4 Maximum tolerances at different distances.

X	Maximum permissible figure.
5 m	1,5 mm
10 m	3,0 mm
15 m	4,5 mm

## Replacing the batteries

Slide the battery cover (7) in the direction of the arrow and insert new batteries in accordance with the symbols in the battery compartment.

3 x 1,5V  
alkaline mignoncells,  
size AA, LR6



Suitable batteries can also be used.



### Tip:

Remove the batteries if the unit will not be used for a long period!

Do not submerge the laser.



Do not store the laser when wet. Dry the laser and case before putting the laser away.

laser beam  
flashing

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



## Recycling programme for our EU customers:

In accordance with the WEEE regulations, STABILA provides a disposal programme for electronic products at the end of their service life. For more details, please contact: +49 / 6346 / 309-0



## Care and maintenance

- Dirty lens glass on the beam emitter detracts from the quality of the beam. It should be cleaned with a soft cloth.
- Clean the laser unit with a damp cloth. Do not spray or immerse the unit! Do not use solvents or thinners!

Like any precision instrument, handle the LAX-50 crossed line laser carefully and cautiously.

## Technical data

Laser type:	Red diode laser, wavelength 635 nm
Output:	< 1 mW, Laser Class 2 to EN 60825-1:03-10
Self-levelling range:	ca. $\pm 4,5^\circ$
Levelling accuracy:	$\pm 0,5$ mm/m
Batteries:	3 x 1,5 V mignoncells alkaline, size AA, LR6
Operating life:	approx. 30 hours (alkaline)
Operating temperature range:	-10 °C to +50 °C
Storage temperature range:	-20 °C to +60 °C

Subject to technical modifications.