

# Memo: DistoX Accuracy Precautions

11. 5. 2010 Beat Heeb

## **New Calibration:**

*When:*

After each battery replacement, if something happened to the batteries, or when the accuracy test shows a large error.

*How:*

See the calibration manual.

*Where:*

In a proper magnetic environment, far away from buildings and metallic objects. Preferably in a cave or in a forest.

## **Accuracy Test:**

*When:*

After each calibration and before each survey trip.

*How:*

Measure a defined line, preferably east – west, five times:

- Display up
- Display right
- Display down
- Display left
- Backwards (one back measurement is enough)

Results should match within about  $1^\circ$  (the real error is half of the largest difference).

*Where:*

In a proper magnetic environment, far away from buildings and metallic objects. Preferably in a cave or in a forest.

## **Further Precautions:**

The magnetic properties and the exact location of the batteries have a large influence on the accuracy of the device. It is therefore advisable to mark the position of the batteries with a pen. In addition, a folded paper strip should be used to secure the batteries in place (see pictures).

Strong magnetic fields can change the magnetic properties of the batteries, even from the outside through the closed case. Therefore, the Disto should never be stored or transported near magnetic parts. This may include tools and motors, for instance in a drilling machine.

Be careful when using or transporting the DistoX: The acceleration sensor used for the inclination measurement is a delicate part. It can be damaged mechanically by large accelerations (strokes or drops).

