3T

güralp

Installation

1

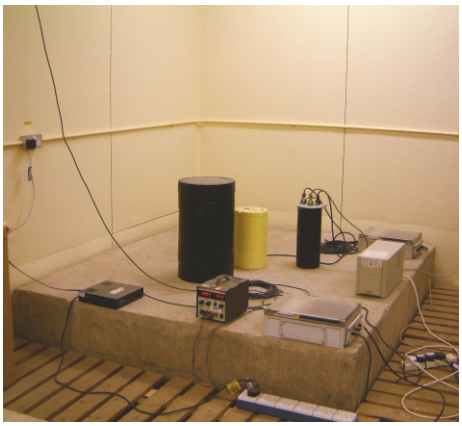


Check you have all components and cables:

- 3T weak-motion broadband seismometer;
- Thick grey signal cable;
- Sensor calibration document.

You will need a suitable digitizer or recording equipment, and a 10–36 Volt DC power supply.
For pit or posthole installations, follow the steps overleaf.

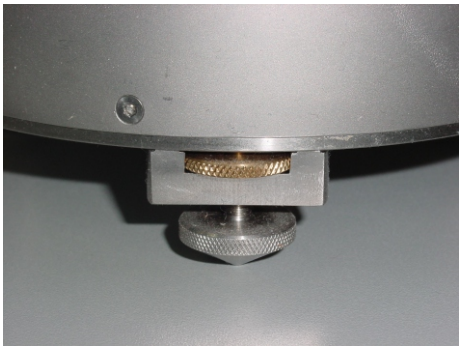
2



Choose a suitable site to install the sensor.
The sensor should be mounted:

- at, or ideally below, ground level;
- away from sources of natural noise (e.g. wind, surf);
- away from sources of cultural noise (e.g. traffic);
- in contact with bedrock or, if that is not possible, on a hard granite or concrete pier;
- in an environment with constant temperature;
- shielded from air currents (e.g. in a polystyrene box)
- away from electrical cables and appliances.

3



Loosen the brass locking nut on one of the adjustable feet, then turn the foot, screwing it in or out to level the sensor. Check using the spirit level on the sensor lid.

Repeat with the other adjustable foot, until the bubble in the spirit level lies entirely within the inner circle.

Tighten the brass locking nuts downwards to secure the feet.

4



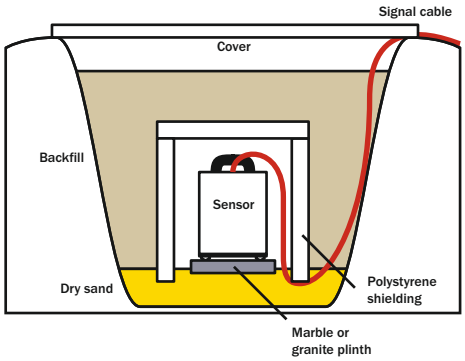
If you are using a breakout box, connect the signal cable between the sensor and the SENSOR connector of the breakout box, and connect the POWER connector to your power supply.

Hold down the ENABLE button on the side of the box, and press the UNLOCK button for seven seconds. The “BUSY” LED will light, and you should be able to hear the internal motors unlocking the masses. CENTRE the masses (in a similar way) if necessary.

See the full manual for detailed usage instructions.

Installing in a pit or posthole

1



Check you have all necessary equipment and select a suitable location for the pit installation. You will need:

- the sensor and other seismic equipment;
- an angle-grinder, if mounting on bedrock;
- otherwise, a supply of dry sand and a marble or
- granite plinth for mounting the sensor;
- a protective shield of polystyrene or other suitable material.

2



Dig a pit at least 60 cm deep at your chosen location, down to the bedrock if possible.

- On bedrock, use the angle-grinder to plane off part of the surface. Clean the hole and go to step 3 on this page.
- On compacted subsoil, pour a layer of fine sand over the bottom of the hole, and mount the sensor on the granite plinth on top of this sand layer. In rapid installations, a large stone may serve adequately instead of the granite plinth.

3



Connect the sensor cables, then level and unlock the components as described in steps 3 and 4 overleaf.

Check the system is working and cover the sensor with its protective shield.

4



If you are installing in a cased pit (as in this picture), install the digitizer and power supply inside if possible, then seal the installation with a weatherproof cover.

Otherwise, backfill over the shield with fresh soil. Mark the sensor position, e.g. with its GPS unit. Install the recording equipment and batteries, if used, in separate pits.