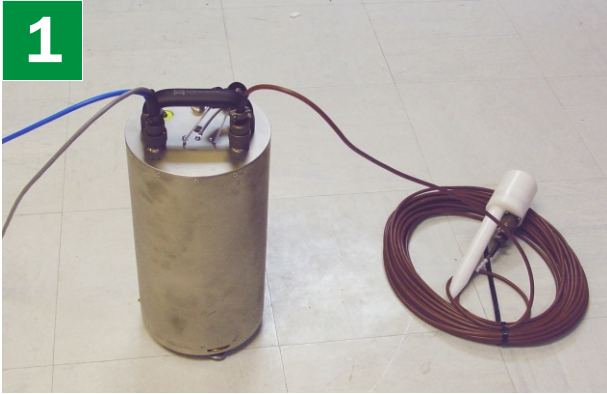# GURALP SYSTEMS

CMG-3TD
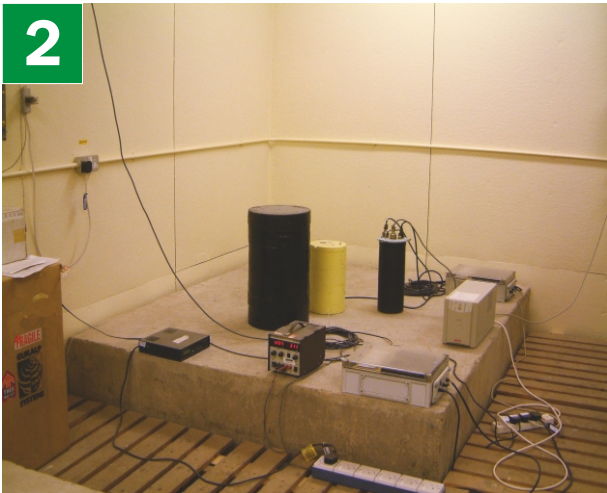## Digital sensor

Installation

1

Check that you have all components and cables:

- CMG-3TD digital weak motion seismometer;
- GPS receiver;
- Brown GPS↔sensor cable;
- Blue/grey combined sensor↔PC and power cables;
- Sensor calibration data booklet.

You will need a Windows or Linux PC with an RS232 serial (COM) port and a 12–24 V DC power supply.

2

Choose suitable sites to install the sensor and the GPS receiver. The sensor should be mounted:

- at or, ideally, below ground level;
- 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.

The GPS should be placed:

- within 15 metres of the sensor;
- with a wide view of the sky and a low horizon.

3
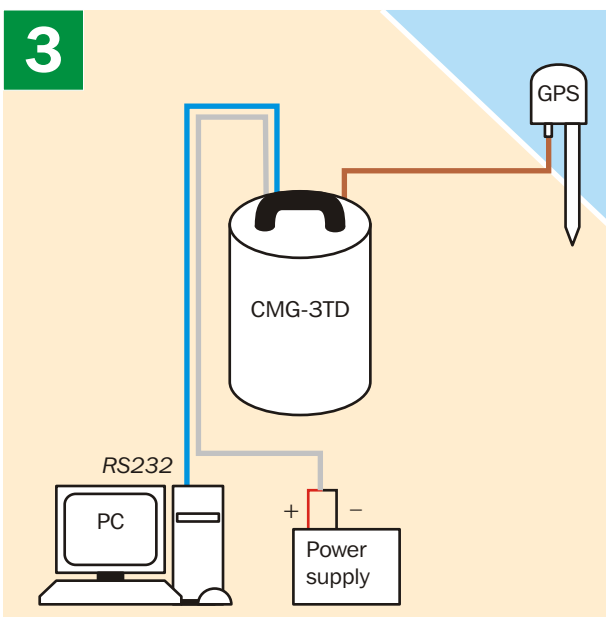
Connect the various components together:

- Connect the brown cable from the GPS receiver to the *GPS* connector on the sensor;
- Connect the 9-pin 'D' connector on the blue cable to your PC's serial (COM) connector;
- Connect the free, stripped end of the grey cable to the power supply. Connect the black wire to the negative (−) terminal and the red wire to the positive (+) terminal;
- The blue and grey cables are joined together at a 10-pin mil-spec socket. Attach this to the *DATA* connector on the sensor. *Do this step last.*
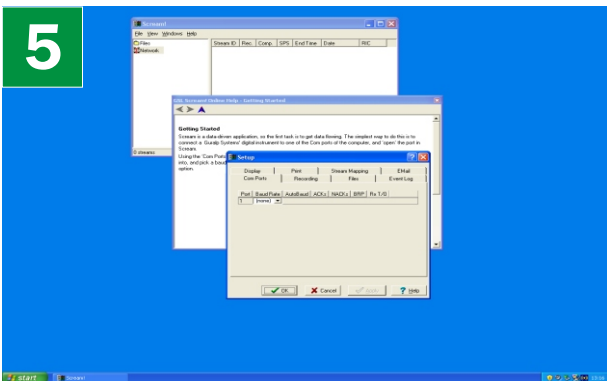
Installation

4
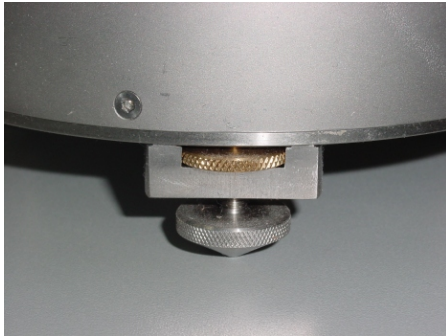
Loosen the brass locking nut on one of the adjustable feet. Turn the foot, screwing it in or out to level the sensor. Check using the spirit level on the sensor lid.

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

Tighten the brass locking nuts *downwards* to secure the feet.

5

Start the PC and run Güralp Systems' Scream! software.

If you have not run Scream! before, the *Setup* window will open. Otherwise, choose *File* → *Setup...* from the main menu and view the *Com Ports* tab.

Set the *Baud Rate* to 38,400 and click *OK*. Data streams should start appearing in the main window. *Note that this data will not yet reflect ground movements, because the masses are still locked.*

6
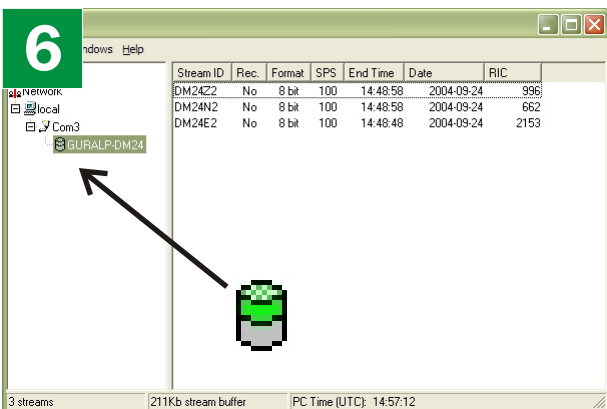
Look for the digitizer icon on the left side of the window, and right-click on it. Choose *Control...*, and view the *Mass Control* tab. Click *Unlock*, and wait for a few minutes: The top half of the digitizer icon on the left should change from grey to green.

  *If the top half fails to turn green, there is a problem receiving GPS signals.
  *If the bottom half turns red, the sensor is not level: Move the sensor to a more level surface and try again.

7
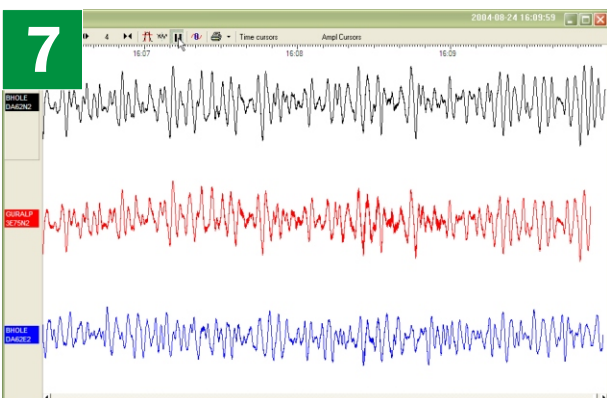
Select some data streams by double-clicking on them. A *Waveview* window will open on the streams. Check that all three outputs respond to vibrations near the sensor.

  *Do not move the sensor while the masses are unlocked. If you need to transport it, use the *Mass Control* tab to lock the masses first.

Please refer to the full manual for detailed usage instructions, calibration and troubleshooting.