GURALP SYSTEMS

# CMG-3ESPCD
## Digital sensor

## Installation

**1**

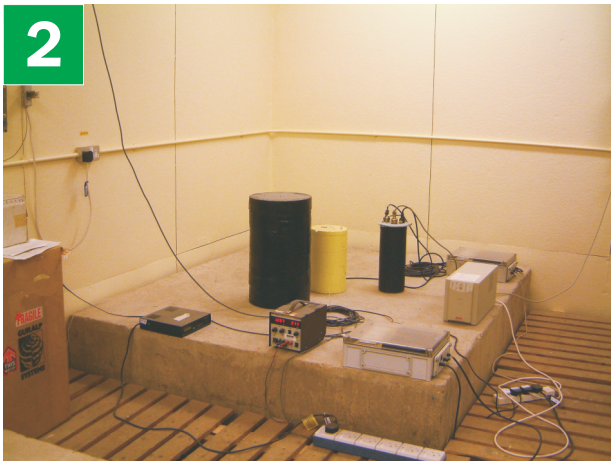



Check you have all components and cables.

- CMG-3ESPCD 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 port and a 12–24 V DC power supply.

**2**

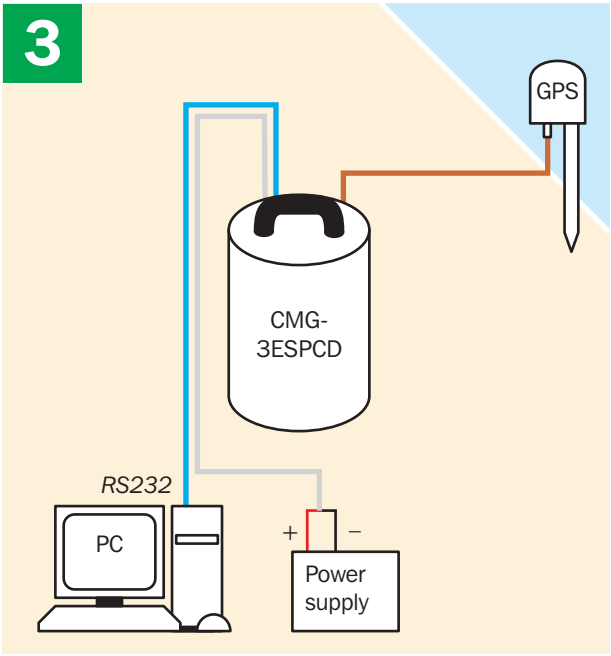


Choose suitable sites to install the sensor and GPS. The sensor should be mounted

- at, or ideally below, ground level
- in contact with bedrock, if possible
- otherwise, on a hard granite or concrete pier
- in an environment with constant temperature
- shielded from air currents
- away from electrical cables and appliances

The GPS should be placed
- within 15 m of the sensor
- in a place with a wide view of the sky and a low horizon.

**3**



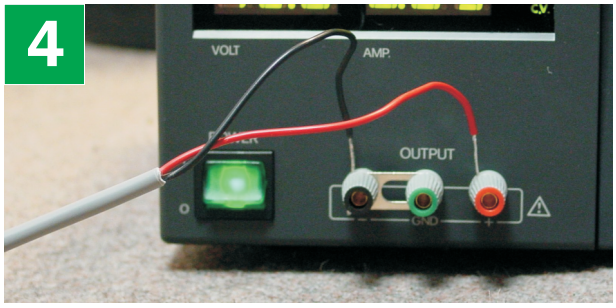

Connect the various parts together.

- Connect the brown cable attached to the GPS to the *GPS* connector on the sensor.
- The blue cable ends at a 9-pin RS232 socket. Connect this socket to your PC's serial connector.
- The attached grey cable ends in red and black wires. Connect the black wire to the negative (–) terminal of the power supply, 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.*

**To test the installation, follow the steps overleaf.**

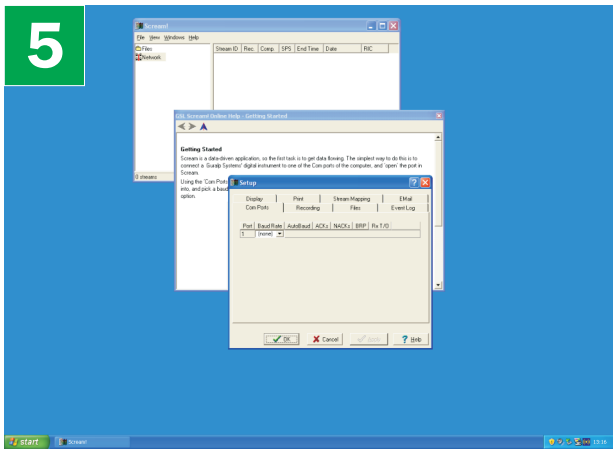
# Testing

**4**




Switch on the power supply and measure the current through the instrument. With the GPS connected and running, the current should be around 120 mA. Once a fix has been obtained, the digitizer will power down the GPS, and the current will drop to around 80 mA.

**5**

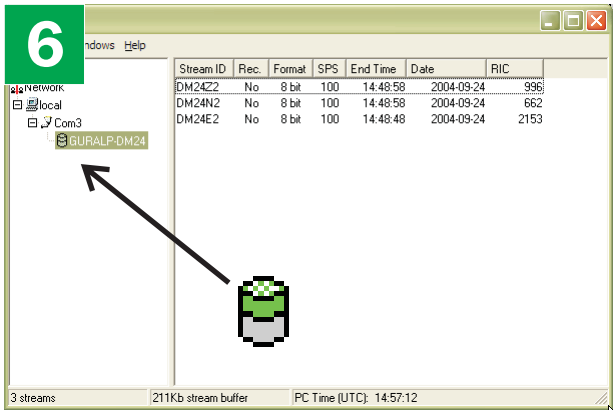


Start the PC and run Güralp Systems' Scream! software (provided, or available for download.)

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

Set the *Baud Rate* to 38400 and click *OK*.
Data streams should start appearing in the main window. This data will not reflect ground movements, because the masses are still locked.

**6**

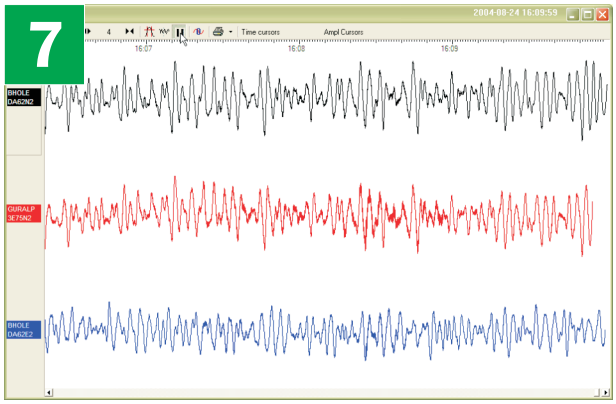



Look for the digitizer icon on the left side of the window, and right-click on it. Choose *Control...*, and view the *Mass Control* tab.

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. The status messages in the *****00* stream may help you diagnose the problem.

**7**



Select some data streams and double-click. A *Waveview* window will open on the streams. Check that the output responds to vibrations near the sensor.

Do not move the sensor whilst the masses are unlocked. If you want 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.**