

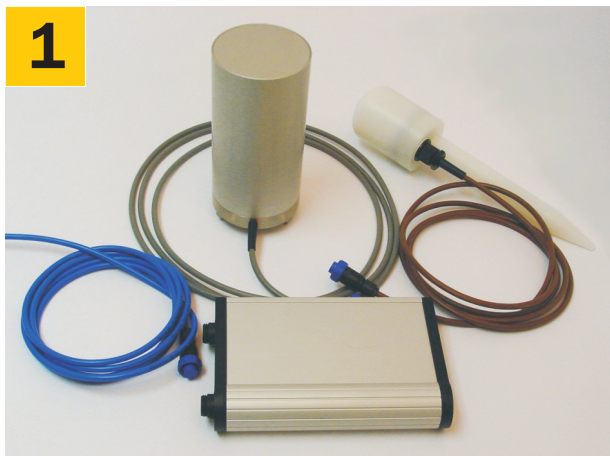


GURALP SYSTEMS

CMG-EDU Seismometer

Installation

1



Check you have all components and cables.

- CMG-EDU-V or H sensor
- CMG-CD24E1 digitizer
- GPS receiver
- Brown GPS—digitizer cable
- Blue/grey digitizer—PC—power cable
- Test and calibration data booklet

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

2

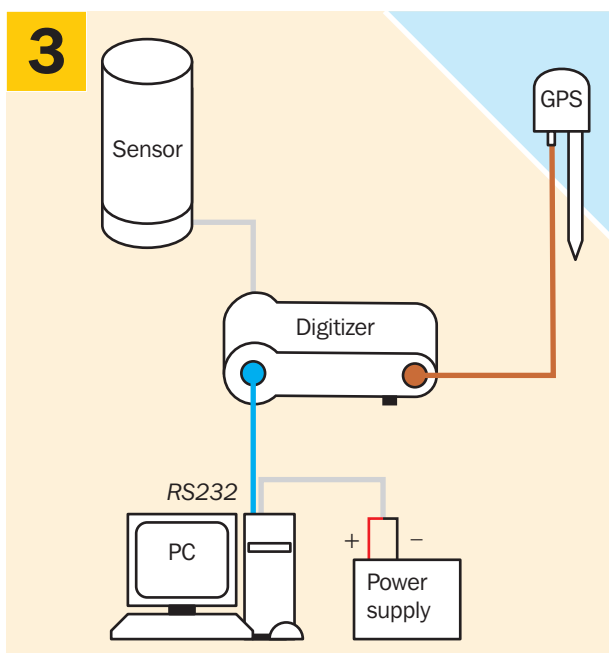


Choose suitable sites to install the sensor and GPS.
The sensor should be placed

- directly on a cement or concrete floor free from cracks
- at, or ideally below, ground level
- in an environment with constant temperature
- sheltered from air currents in a dark corner or box
- away from people and machinery
- away from electrical cables and appliances

The GPS should be placed somewhere with a good view of the sky, and within 15 m of the digitizer.

3

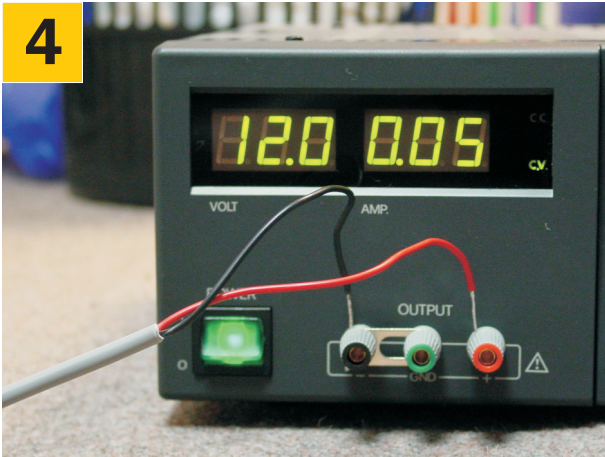


Connect the various parts together.

- Connect the grey cable attached to the sensor to the *SENSOR* socket on the digitizer.
- Connect the brown cable attached to the GPS to the *GPS* socket on the digitizer.
- The remaining blue and grey cables are joined together at a 9-pin RS232 socket. Connect this socket to your PC's serial connector.
- The grey cable from the RS232 connector 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 cable from the RS232 connector ends at a blue socket. Connect this to the *DATA* plug on the digitizer. *Do this step last.*

Testing

4

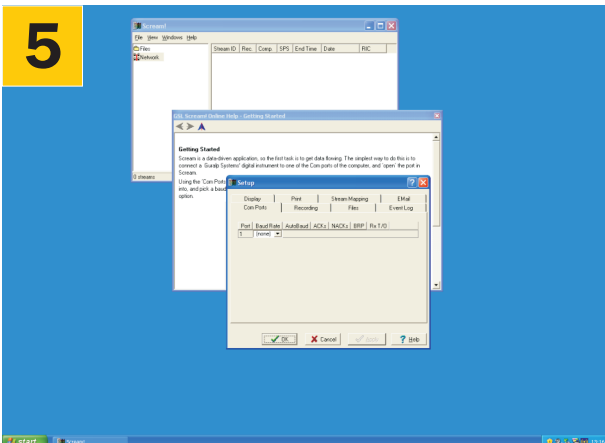


Switch on the power supply and measure the current through the instrument. Either

- measure it directly from your power supply, or
- insert a 1 Ω , 5 W resistor in series with the positive lead from the power supply, and measure the voltage drop across it with a voltmeter.

With the GPS connected and running, the current should be around 50–60 mA (0.05–0.06 A), so the voltage drop across a 1 Ω resistor will be 0.05–0.06 V.

5

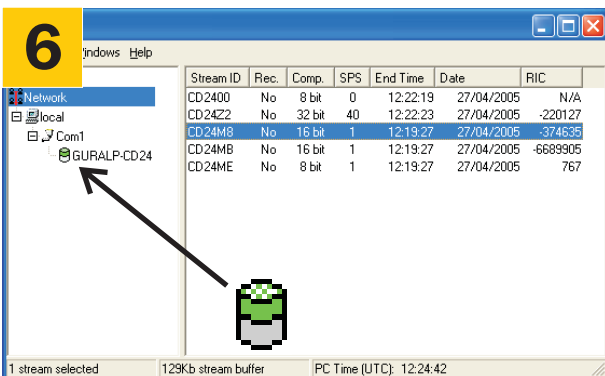


Start the PC and run G ralp Systems' Scream! software (provided, or available for download.)

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 19200 and click *OK*.

Data streams should start appearing in the main window.

6



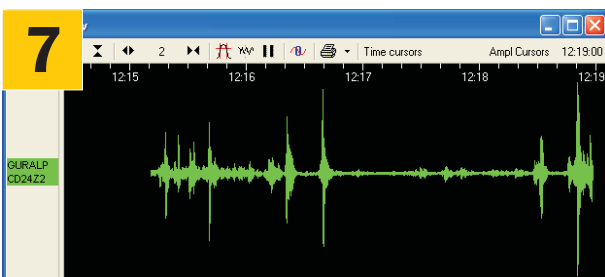
Leave the sensor running for a few minutes.

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 *CD2400* stream may help you diagnose the problem.

If the bottom half turns red, the sensor is not level. Move the sensor to a more level surface and try again.

7



Select the *CD24Z2* data stream and double-click it. A *Waveview* window will open on the stream. Check that the output responds to vibrations near the sensor.

The instrument is now ready to use.