



Installation

1



Check you have all components and cables.

- CMG-5TD strong motion broadband accelerometer
- GPS Receiver
- Blue/grey sensor↔data and power cable
- Brown GPS↔sensor cable
- Sensor calibration data booklet

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

Keep the packaging, in case you need to transport the sensor at a later date.

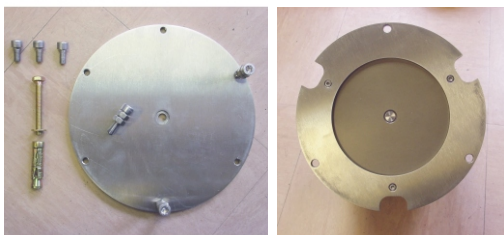
2

Prepare the installation site. The instrument should be installed on a solid surface, such as a concrete floor.

To create a suitable surface in a temporary site:

1. Dig a pit, or machine-auger a suitable hole for the sensor.
2. Prepare a quick-setting cement/sand mixture, and pour it into the hole.
3. Agitate (“puddle”) the mixture until the surface is level.
4. Leave the mixture for between 2 and 12 hours, depending on the type of cement used.

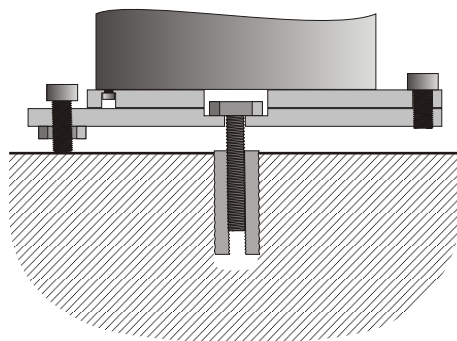
3



Scribe an accurate North/South line on the surface.

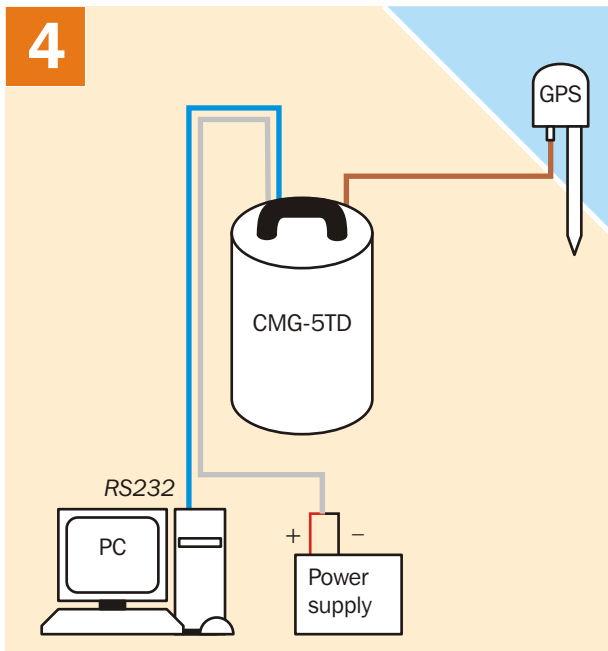
Place the sensor in position and rotate it until it's studs and orientation lines align with the scribed line.

If you are using a base-plate and ring:



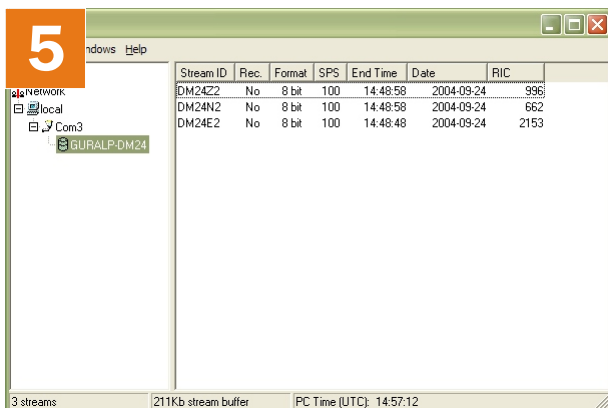
1. Fit the longer three screws half way into alternate holes in the round base-plate and add a lock-nut to each (left-hand top picture).
2. Drill through the centre of the North/South line and use the anchor bolt to fasten the round base-plate to the surface with the screw-heads uppermost. Rotate to the correct orientation before tightening.
4. Screw the indented mounting ring onto the bottom of the sensor (right-hand top picture).
5. Fix the sensor onto the base-plate using the shorter set of three screws through the mounting ring.
6. Use the bubble level to check the sensor attitude and adjust the mounting feet as required.

Installation



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.*



Start the PC and run Gralp 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. Highlight the Z, N and E streams by control-clicking them and press *Enter* to open a waveview window.



Remove the screw-on cap protecting the offset adjusters. With a small screwdriver, adjust each offset until the corresponding output in the waveview window is close to zero. Zoom in as necessary.

Replace the pressure cap. The sensor is now ready for use.

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