

## Grad601-2 Data Sheet

The Grad601 is a fluxgate gradiometer is used predominantly for archaeological prospection. Traditionally the survey area is divided up into a matrix of smaller regular grids, typically 30x30m grids, and data is collected by traversing parallel lines at a regular spacing. Measurements are recorded at a pace specified by the operator; an even walking pace is obtained by an audio metronome.



*Image courtesy of Bartington Instruments.*

The gradiometer sensor includes two fluxgate sensors, orientated vertically and separated by 1m. Measurements of the magnetic vertical gradient are recorded which has the advantage of enhancing near surface anomalies like; buried ferrous objects and concentrations of enhanced ferrous minerals, commonly associated with anthropogenic activity. Whilst removing geological and diurnal variations.

The instrument includes a simple on board nulling wizard which steps the operator through a sequence of measurements to balance the gradient measurements around a null value for all sensor orientations.

The Grad601-2 boasts two gradiometers separated by 1m, permitting two traverses to be acquired simultaneously. It is an efficient cheap solution for acquiring large areas of magnetic measurements. Geomatrix offer two Grad601-2 systems for rental.

### Product Dimensions

| Physical          | Dimensions (L x W x H) | Weight |
|-------------------|------------------------|--------|
| (instrument only) | 3.8cm x 105cm x 100cm  | 4.3kg  |

## Technical Specifications

|                                |   |
|--------------------------------|---|
| <b>Number of axes:</b>         | One (vertical).   |
| <b>Sensor element spacing:</b> | 1m.   |
| <b>Gradient range:</b>         | $\pm 100\text{nT/m}$ or $\pm 1000\text{nT/m}$ full-scale. |
| <b>Bandwidth:</b>              | DC to 14Hz with -40dB 50Hz/60Hz rejection.                |
| <b>Sensitivity:</b>            | 0.03nT/m (max effective).                                 |
| <b>Calibration error:</b>      | $\pm 2\%$ .   |
| <b>Maximum ambient field:</b>  | $\pm 100\text{T}$   |
| <b>Drift:</b>                  |   |