







## Grad-01-1000L Sensor



The Grad-01-1000L is a high stability fluxgate gradient sensor, with a 1m separation between the sensing elements and an effective sensitivity of 0.03nT/m. The exceptional temperature stability of this sensor ensures minimal drift during surveys, and reduces the need for adjustment to a minimum. Each sensor contains electronics and non-volatile memory for calibration data storage, and can be operated independently, over long cables, if required.

The sensors may also be fitted to the Non-Magnetic Cart, also available from Bartington® Instruments, for surveys over wider areas.

Specification	
Number of axes	One (vertical)
Sensor element spacing	1m
Gradient range	$\pm 100\text{nT/m}$ or $\pm 1000\text{nT/m}$ full-scale
Bandwidth	DC to 14Hz with -40dB 50Hz/60Hz rejection
Sensitivity	0.03nT/m (max effective)
Calibration error	$\pm 2\%$
Maximum ambient field	$\pm 100\mu\text{T}$
Drift	<1nT in 24 hours
Dimensions	38mm diameter x 1050mm in length
Weight	0.83kg
Connector	12-way Tajimi R04-R12M
Power supply current	60mA
Minimum sensor spacing in multi-sensor array	250mm between sensors





## BC601 Battery Cassette

The Lithium Ion battery is housed in a sealed cassette, which also contains the charging circuitry. The battery is charged by the mains adaptor supplied, or any isolated 9-18V DC supply (at 1.2A minimum) in 6 to 8 hours. One charge will operate the system for up to 24 hours with two sensors, or 36 hours with one. A push-button charge indicator is provided.



Specification - BC601 Battery Cassette	
Battery	10.8V 72Wh UN approved Lithium ion battery
Battery charging	6 to 8 hours with mains adaptor supplied (automatic termination)
Indicators	Red LED lit when charging, off when complete
Fuse	2A 20mm anti-surge internal
Dimensions (H x W x D)	120 x 210 x 25mm
Weight	0.91kg including battery
Connectors: charger input output	2.1mm socket 2-way 62GB type on 250mm cable



## Grad601 Carrying Bar

An appropriate carrying bar is supplied for each configuration, Grad601-1 or Grad601-2. The sensors are attached at the ends of the carrying bar by quick release clamps.

The data logger and battery cassette are normally left attached to the carrying bar. All cables are routed through the carrying bar.

For ease of use during surveys, green and red push-buttons are provided on the carrying bar, near the operator's hand, as alternatives to the keypad ENTER and ESC keys.

The dual-sensor carrying bar is attached by swivel mounts to an abdominal spacer bar to assist in keeping the sensor vertical. The spacer bar is attached to the harness by shock absorbing rubber rings.

## Accessories

Each gradiometer system is supplied in a universal rugged carrying case with cut-outs for either a single or dual system, together with:

- Carrying harness with spare rings (Grad601-2 only). The harness can be adjusted to fit the operator and enables the gradiometer to be positioned at the required carrying height. A bag in the back of the harness can be water-filled to counter balance the instrument.
- Mains adaptor: 110V-240V/47-63Hz, charging current 1.25A maximum
- In-car charger: regulated 12V-24V DC-DC, 2A current rating, short circuit protected, automatic thermal and overload cut-off
- 9-pin serial cable and USB adaptor
- Downloading software on CD
- Grad601 Operation Manual on CD



## Software

Most users will find that processing and interpretation of survey results is greatly simplified if graphical mapping software is used. The typical graphical image plots shown here indicate how detected features can be clearly identified.

## Grad601 Download Software

This utility is supplied free of charge and allows survey data to be downloaded to a Windows™ PC. Several file formats (including 'xyz', 'z data' and 'spreadsheet mode') are available, and are compatible with most common mapping software packages (e.g. Surfer™, Geoplot). The plots on the right illustrate how the 1m vertical spacing of the sensors on the Grad601 provides an increased depth of response compared to a 0.5m spacing gradiometer.

## TerraSurveyor by DW Consulting

TerraSurveyor (formerly ArcheoSurveyor) is a fully featured and powerful graphical imaging application, specifically designed for archaeological geophysics. It can read data directly from the Grad601 Gradiometer (and other commonly used survey instruments such as resistivity) via the serial/USB connection. The user can then apply a wide variety of data filters and algorithms (e.g. clip, destripe, destagger, etc.) to enhance the clarity of any magnetic anomalies.

TerraSurveyorLite is a 'lite' version of this graphical mapping software, providing the user with the majority of functions needed to process instrument data. There is a simple upgrade path to the full version when further features become necessary.

TerraSurveyor and TerraSurveyorLite demonstration versions can be downloaded from the DW Consulting website at [www.dwconsulting.nl](http://www.dwconsulting.nl).



Example of survey from Grad601-2 plotted in TerraSurveyor

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The specifications of the products described in this brochure are subject to change without prior notice.