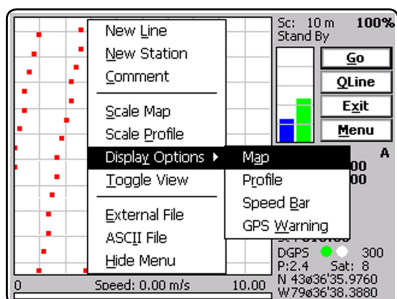


# TrackMaker601 data logging system for Windows Mobile

## Grad601

The **TrackMaker601** system for Bartington Grad601 fluxgate gradiometer consists of two programs: field data acquisition component (**NAV601**) and the MS Windows (XP/7) based data processing software (**TrackMaker601**).



Options available during logging

**TrackMaker601** software works with virtually any GPS receiver by supporting NMEA messages: GGA, POS, GLL, LLQ, LLK, GGK, and Leica and Trimble Robotics Total Stations, and collects Grad601 and GPS

data into one file simultaneously, while providing a graphical view of the collected GPS positions to better control the survey line direction and coverage. A profile view of the collected Grad601 data is provided for the improvement of field data quality analysis. The field software recognizes computer screen orientation and resolution automatically.

It also provides a view of any previously collected data files with any other instrument that is supported by the **TrackMaker** software and will assist the operator to return to previously collected stations.

In addition to acquiring magnetic data the **TrackMaker** system will convert your hand held field computer to a stand-alone logger for GPS/DGPS data collection. Just disconnect Grad601 and start position site features using **TrackMaker**.



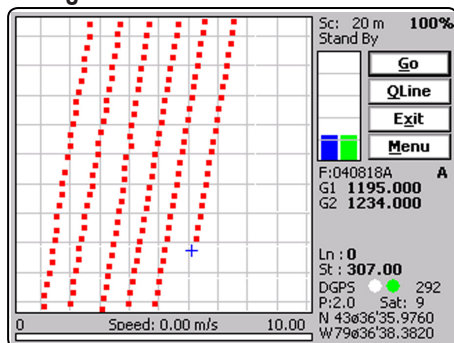
Grad601 with TrackMaker601 (photo courtesy of VAC GROUP, Australia)

The **TrackMaker** system will allow you to perform surveys faster by covering sites with uniformly spaced lines while avoiding skipping areas, and preventing the potential unnecessary overlap of survey lines. And with these features also comes the simultaneous full control of the specific Grad601-2 or Grad601-1 output, data quality, instrument connection, as well as GPS signal quality parameters and Latitude/Longitude coordinates display.

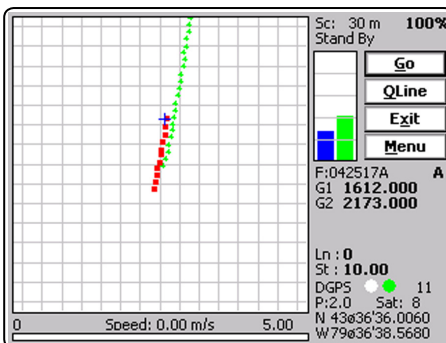
In the event of any field obstruction or any pause you can resume your survey line at a precise location, without using conventional methods of positioning (tapes, stakes, etc.). You can complete your survey even with low visibility or darkness and still maintain full control over the area of coverage and the quality of magnetic instrument readings.

## NAV601 Display Modes in the Horizontal Screen Orientation

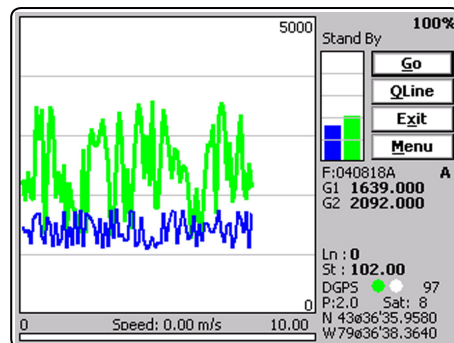
### Navigation Mode



### Fill In Mode



### Profile Mode



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## NAV601 Features (data acquisition program)

### Display functions:

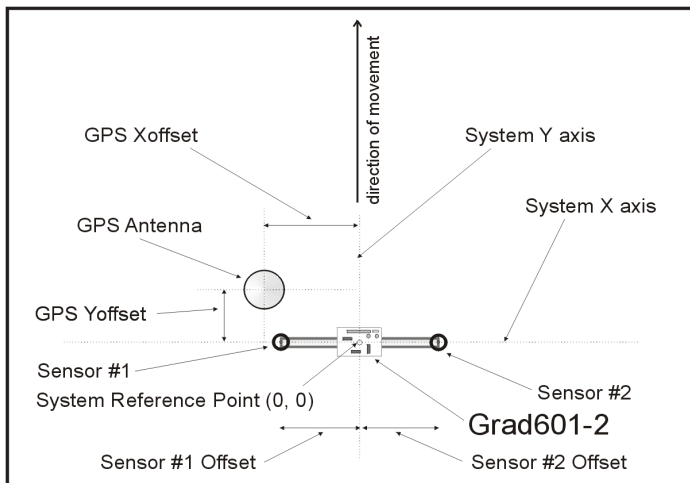
- Displays locations of logged GPS positions and current location of an operator in real time while in Navigation mode, the screen is updated at the rate of the GPS receiver frequency
- Colours and size of current cursor position, logged and external positions in Navigation mode, and colour and thickness of profiles in Profile mode are user specified
- Scale of map and grid lines interval are user specified (m or ft) and the screen scrolls automatically once the display limit is reached
- Grad601 channels 1 and 2 are displayed with moving graphic bars and in numeric form, instrument connection is also monitored and warning is displayed in case of any problem
- Current GPS antenna position in Latitude/Longitude, type of differential corrections (DGPS and various modes of RTK), PDOP or other equivalent parameter (depends on NMEA used), number of satellites, and number of GPS positions in the file are updated at a GPS stream rate
- Monitoring the user specified GPS Warning Mask and displaying indication whenever it is surpassed
- Actual speed of the system is continuously displayed
- Display of stations from other TrackMaker (for any supported instrument) files which are entered as an external file allow you to repeat survey layout (with another instrument), fill in new lines, or to re-start survey at adequate location
- Positions of interpreted anomalies which are entered as an ASCII file allow you to navigate to points of interest

### Survey parameters:

- Rate of data acquisition at the instrument stream rate (at 1 Hz GPS output)
- New Line, New Station, Comment entry
- Change of scale in Navigation and Profile modes at any time

### GPS functions:

- Configuration of logger serial port to accommodate any GPS settings
- GPS output monitoring
- Support for NMEA messages: GGA, GGA/GSA, GLL, POS, LLQ, LLK, GGK, and Trimble and Leica Robotics Total Stations
- Offset for GPS antenna in any direction
- Option to act as a stand-alone GPS logger which allows data to be collected in GXY file format (compatible with any TrackMaker or Multi program), supports comments entry

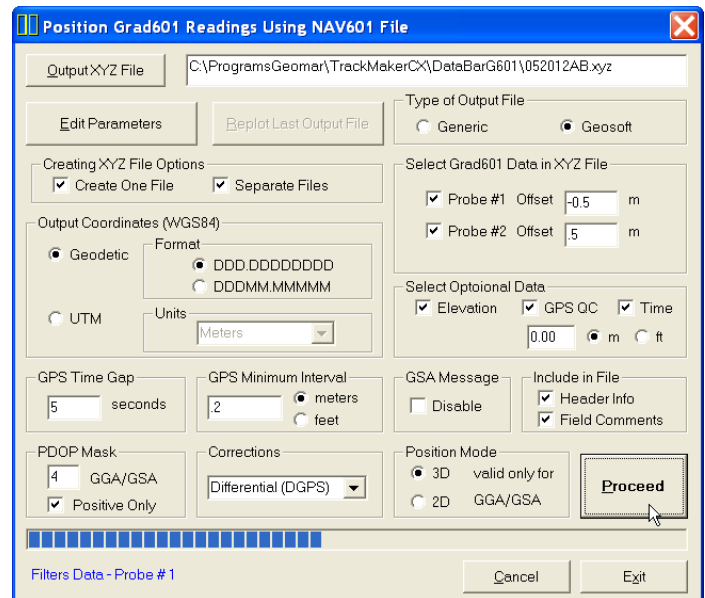


System geometry for Grad601-2

## TrackMaker601 Features (data processing program)

### Position readings of each Grad601 probe and create XYZ file based on standalone NAV601 file:

- Apply GPS antenna offset in any direction (as entered in the field with option of correcting this parameter during data processing)
- Include elevation data with correction for antenna height
- Filters the quality of positioned data based on GPS parameters as PDOP (or equivalent) and the degree of differential corrections
- Further enhancement of the Grad601 readings position is obtained by specifying the GPS Time Gap and GPS Minimum Interval.
- Choice of coordinates in generated XYZ file: Geodetic coordinates (Latitude/Longitude in degrees) or in UTM coordinates (meters, feet or US Survey Feet, WGS1984 datum)



### Position NAV601 readings collected along grid (This function is used when the survey is conducted without GPS receiver)

- Position readings along S-N or W-E oriented survey lines
- Edit each survey line geometry with instant update of 2-D view

