GEOMETRICS
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MagMap 2000™
Data Processing Software

Free Magnetic Data Software

Powerful Windows program downloads survey and base station data, and provides basic data processing filters for quick analysis of the magnetic, OhmMapper, and EM61 data.
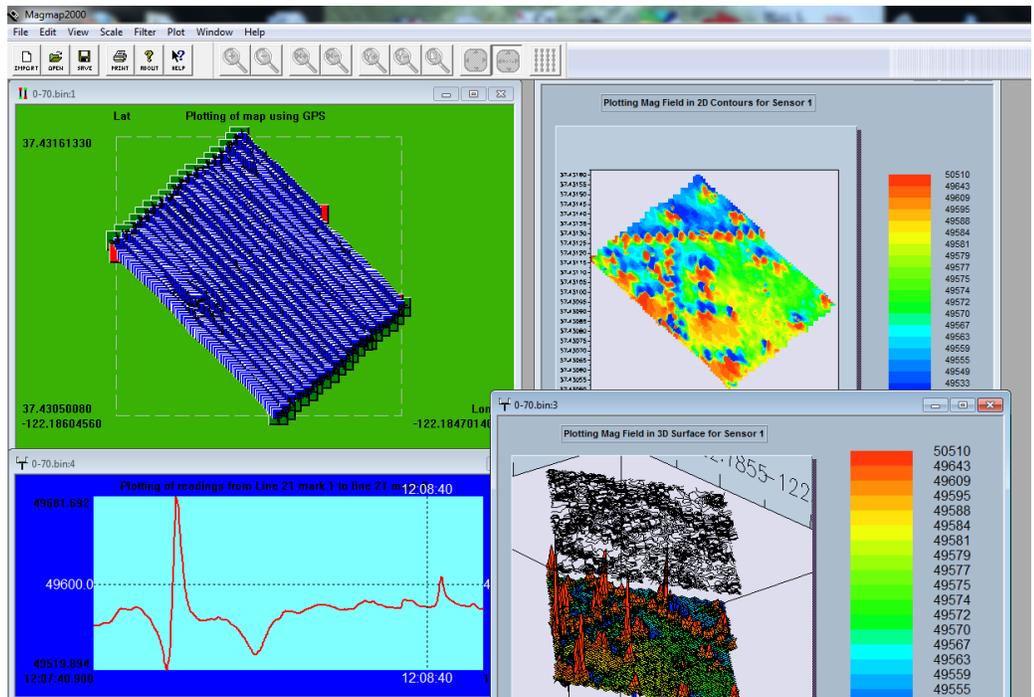
Facilitates data download from Geometrics magnetometers, applies diurnal correction upon export and generates 2D/3D color contour plots and shaded relief maps.

MagMap2000™ offers full GPS support with UTM conversion; sensor-GPS antenna offset computation as well as GPS file integration with basic magnetic data.

Profile Analysis and Operations

Data review screens

The magnetic data collected can be checked for accuracy either as a complete profile of the survey, with each transect stitched together, or on a line-by-line basis. There is a zooming feature to focus the window on a point of interest or to determine the validity of a series of readings. The Time, Date and reading numbers can be seen in the bottom panel for reference. Data can be shown for each individual mag, both sensors on the same plot to examine consistency, or as a pseudo-gradient.

Erroneous data due to spikes can be eliminated with the despiking function by using a user-selectable maximum and minimum window to cut the data outside of this range. Drop outs due to entering a dead zone or loss of signal can be removed entirely or interpolated between the beginning and end to estimate the actual values.

2D/3D Grid Views

Data can be seen in a traditional 2D image plot or shaded relief to examine the size and nature of each anomaly. The 3D plot is a colored wireframe plot to give a visual representation of the strength of each anomaly as well as a comparison between two features.

The 3D grid option also allows you to zoom in on areas of interest for a closer examination of subtle differences in the data.

GPS Corrections

MagMap2000™ allows the user to include GPS offsets in the X, Y, and Z plane to correctly associate location information with each magnetic data point. Smoothing parameters are also available to reduce relative positioning errors in the GPS readings.
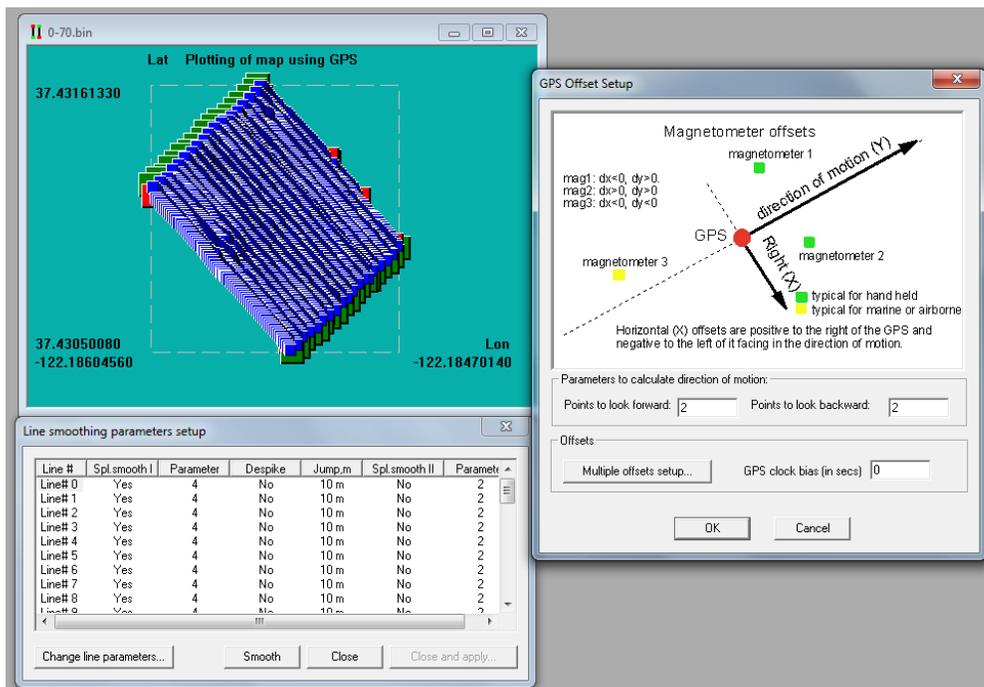
Correcting GPS data for offsets

Merging GPS and Magnetic Data Files

If you collect magnetic data and do not have an integrated GPS unit you can still merge both datasets in MagMap2000^{TM}. It is important that both files contain accurate time stamps and were recorded simultaneously in marry the two datasets together.

It is necessary to download GPS Babel prior to attempting to merge GPS and magnetic data. A link to the download website is provided in the software.

Constant Updates

MagMap2000^{TM} is constantly being updated and improved to address customer recommendations and produce higher quality data. MagMap2000^{TM} has a built in feature where it checks our FTP site to see if there is a new release of the software. As long as you have an internet connection you can travel with the latest and greatest version of this free software. Also, the latest version of the manual is imbedded into the software as a PDF for information about each function.

Data Destriping

Heading and operational errors can be removed with the destriping function. It also employs a high frequency filter to remove small sinusoidal noise typically representative of the walking gait of the operator.
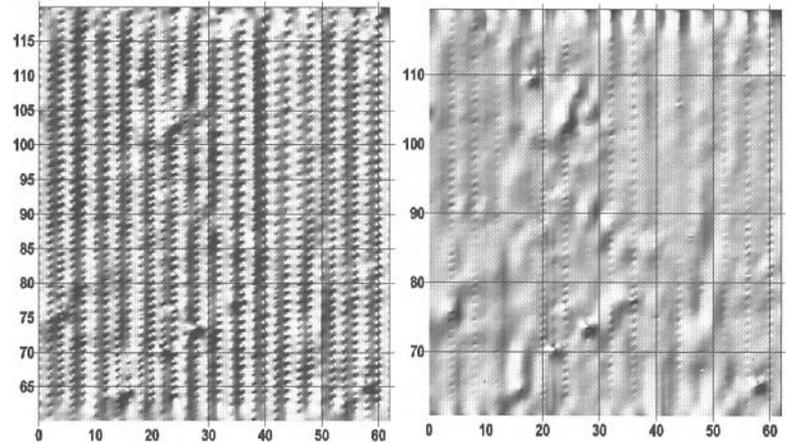
Results of Destriping and Periodic Noise Removal Feature

OhmMapper

MagMap2000^{TM} also downloads data from the OhmMapper and can create 2D image plot showing differences in the resistance of the survey area. Using multiple receivers for a survey also allows you to create multiple depth slices to see how the resistance differs at different depths, as well as creating vertical profiles of a transect. GPS offsets can be incorporated to properly position the resistance data.

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