

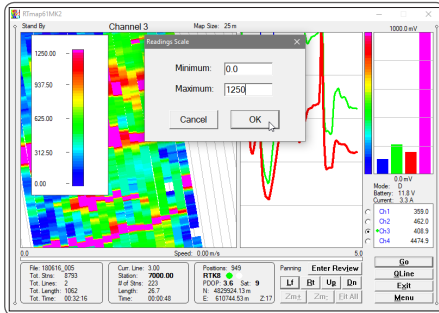
Version 2

RTmap data logging & mapping system for MS Windows 10 based tablets/laptops EM61-MK2

The **RTmap** system for Geonics EM61-MK2 consists of two programs: the MS Windows 10/7 data acquisition component **RTmap61MK2** for field tablets and laptops, and data processing software **RTM61MK2**. All types and models of EM61-MK2 are supported. Features new in V2.00 are listed on the next page.



(photo courtesy of Geomodel, Inc.)



Amplitude Color Scale dialog available during logging

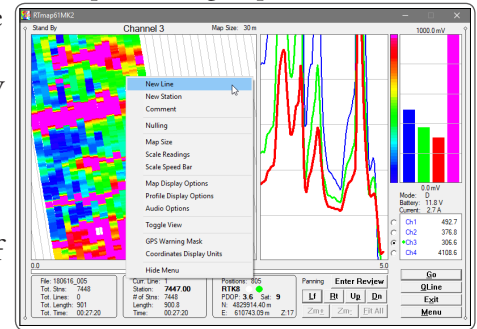
RTmap61MK2 software works with virtually any GPS receiver by supporting several NMEA messages, and Trimble and Leica Robotics Total Station. It features real time colour image of recorded EM61-MK2 amplitude and navigation while providing simultaneous graphical and numerical view of the collected EM data, and GPS parameters and coordinates.

The **RTmap61MK2** system will provide unmatched real time QA/QC in the field. Viewing the displayed spatial colour image will also allow the user to adjust the survey speed according to where anomalies are seen. The **RTmap61MK2** 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.

A new option for appending data files also provides a view of any previously collected data set will assist the operator to return to previously collected stations.

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.).

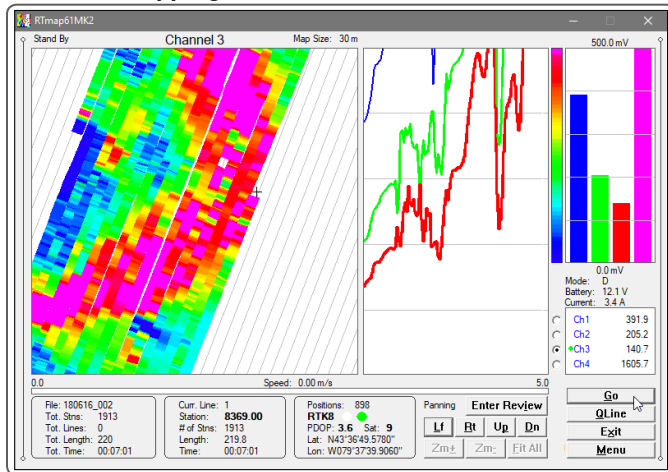
You can complete your survey even with low visibility or darkness and still maintain full control over the area of coverage and the quality of electromagnetic readings.



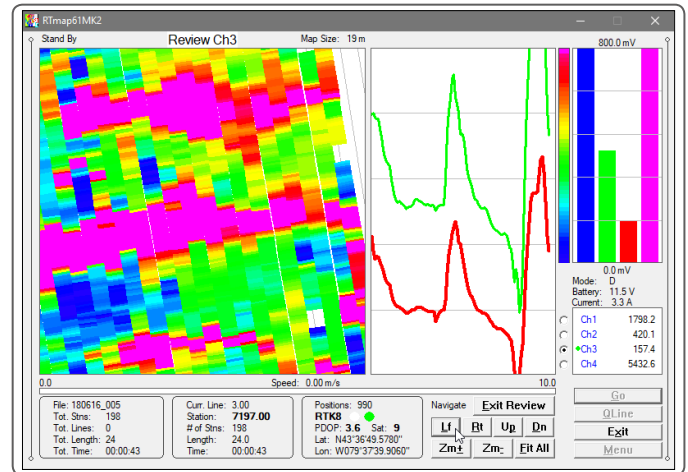
Numerous options for various parameters are available

Examples of RTmap61MK2 Display Modes

Standard Mapping Mode



Review Mode



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RTmap61MK2 Features (data acquisition program)

New in Version 2.00:

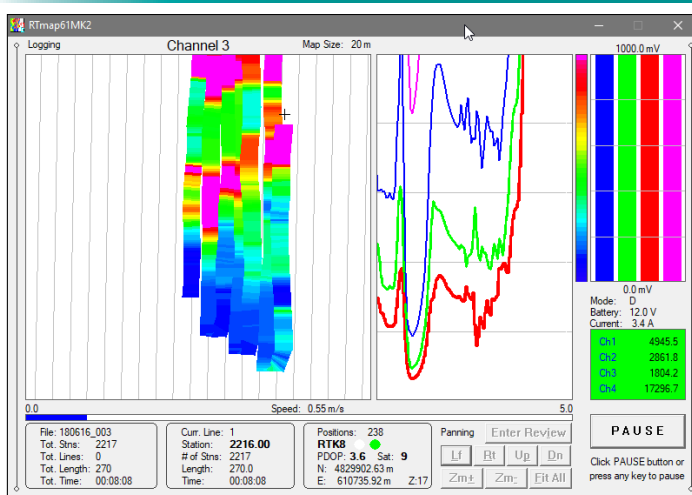
- New type of real time colour imaging of recorded amplitudes for selected EM61-MK2 channel at user specified range of colour scale
- Entirely new graphic engine that makes program smoother during screen scrolling and during re-scaling. Also, faster graphic operation will provide more uniform data at the maximum update rate
- Real time calculated and displayed sensor offset from GPS antenna
- Append data files option
- Guiding lines with user specified separation and tilt angle
- Grid setup (alternative to Guide Lines) - unlimited number of cells
- New Audio functions: Tik-Tak during indicating data recording, Alarm Ring for any hardware (EM61-MK2 or GPS) disconnection, Alarm (more gentle than Alarm Ring) for GPS Warning Mask setting
- Improved interface for Windows 10/7 based tablets, most fonts and dialog controls are enlarged to make easier touch screen operation, and dialogs are positioned for easy soft keyboard entry

Main Display functions:

- Mapping mode: real time display of locations of recorded EM61-MK2 readings in form of colour scaled pseudo-grid of the selected channel and current location of an operator, the map is updated at the rate of the GPS receiver frequency
- Review mode: collected data can be reviewed in form of pseudo-grid using Zoom In and Out, and Pan function in any direction, step for Zoom and Pan, and selection of viewed EM61-MK2 channel
- EM61-MK2 Channels 1, 2, 3, and 4 or T displayed as profiles, moving graphic bars and in numeric form while using any display mode, instrument battery level and cable connection are also monitored
- Scale of map and grid/guide lines interval are user specified (m or ft)
- Indicator of GPS activity is provided by two highly visible green and white circles alternating with a frequency of GPS stream, they change to red when the user specified GPS Warning Mask is surpassed
- Actual speed of the system is continuously displayed

Main GPS functions:

- Configuration of logger serial port to accommodate any GPS settings
- Continuous GPS output monitoring and display: position in Lat/ Lon or UTM m/ft, corrections (DGPS and various RTK), PDOP or equivalent, number of satellites and GPS positions in the file
- Support for NMEA messages: GGA, GGA/GSA, GLL, POS, LLQ, LLK, GGK, and selected Trimble and Leica Robotics Total Stations
- User specified GPS Warning Mask (PDOP, Quality Indicator, Satellites number), can be modified at any point during survey
- Offset for GPS antenna in any direction
- Option to act as a stand-alone GPS logger

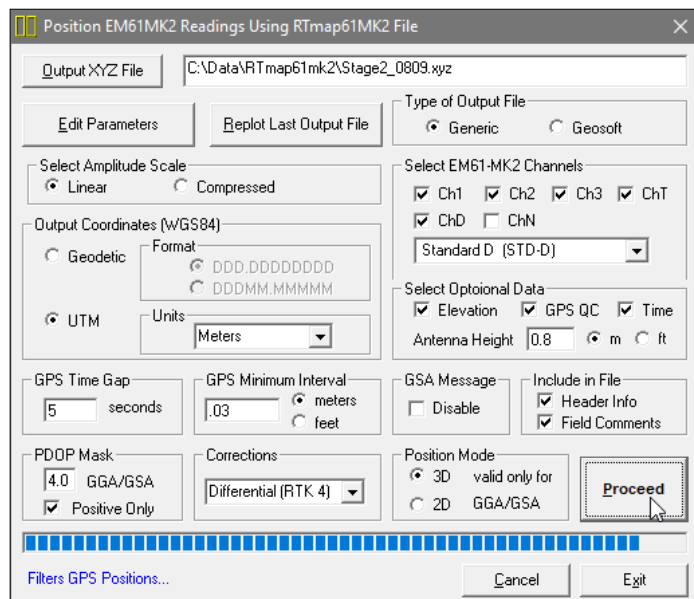


Example of RTmap61MK2 in Logging mode, green numeric window confirms recording

RTM61MK2 Features (data processing program)

Position EM61-MK2 readings and create XYZ file based on standalone RTmap61MK2 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 EM61-MK2 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 EM61-MK2 readings and create XYZ file based on external GPS file (This function is used when real time GPS differential corrections are not available, or when further post processing of GPS data may improve positioning accuracy)

- Apply GPS antenna offset in any direction (as entered in the field with option of correcting this parameter during data processing)
- Further enhancement of the EM61-MK2 readings position is obtained by specifying the GPS Time Gap and GPS Minimum Interval

Position EM61-MK2 readings edited in DAT61MK2 (This function is used when RTmap61MK2 readings were converted to M61 format and processed in DAT61MK2 program)

Miscellaneous:

- GPS QC parameters (Quality Indicator, number of Satellites and PDOP) are written into the generated XYZ file
- View all field parameters, edit, and save RTmap61MK2 data file
- Convert RTmap61MK2 files to Geonics DAT61MK2 format
- Convert RTmap61MK2 files to general format ASCII file
- Convert GXY file to ASCII file containing positions and elevations
- Retrieve and position field comments from RTmap61MK2 file
- Apply System Time Constant delay (latency) in generated XYZ file
- View 2-D layout of created XYZ files

Add real time colour mapping to your EM61-MK2 surveys

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