MALÅ MIRA

MALÅ Imaging Radar Array

3D ground penetrating radar solution for high resolution mapping and imaging

MALÅ high resolution MIRA controller is based on ProEx technology.

Productive, efficient and high resolution

Praised by utility locators, archaeologists and road surveying companies, and with a production rate of up to 50,000 m² per day, the MALÅ MIRA is the most efficient mapping and detection ground penetrating radar solution in the world. There are currently no alternatives to MALÅ MIRA for high density, cost effective large scale mapping.

Rising from the need of mapping large areas in high resolution, MALÅ MIRA is the ultimate solution combining efficient high density data collection and delivery of clear results. MALÅ MIRA is an integrated solution including acquisition, positioning, processing and reporting.

MALÅ MIRA uses parallel processing technology to maintain its high acquisition speed regardless of number of antennas (data channels) used. Each data point collected is associated with a precise coordinate obtained in real time from a linked RTK GPS or Robotic Total Station system. The rSlicer processing software is designed to treat true 3D data and creates stunning detail and accuracy in interpretations. Results are exported into common formats used by GIS and CAD software packages.

"MALÅ's Imaging Radar Array (MIRA) is the most advanced and complete multichannel ground penetrating radar 3D array system on the market."

- Ludwig Boltzman Institute , Austria

Defining 3D GPR Arrays

In the late 1990-ies when MALÅ Geoscience scientists and development engineers were looking at ways to further improve usability and efficiency of GPR solutions, it was concluded that the future of GPR would rest on productive, high resolution, 3D-GPR Array solutions. The intense research work at MALÅ resulted in what today defines 3D ground penetrating radar arrays.

A true 3D-GPR Array system is defined by four different criteria, namely:

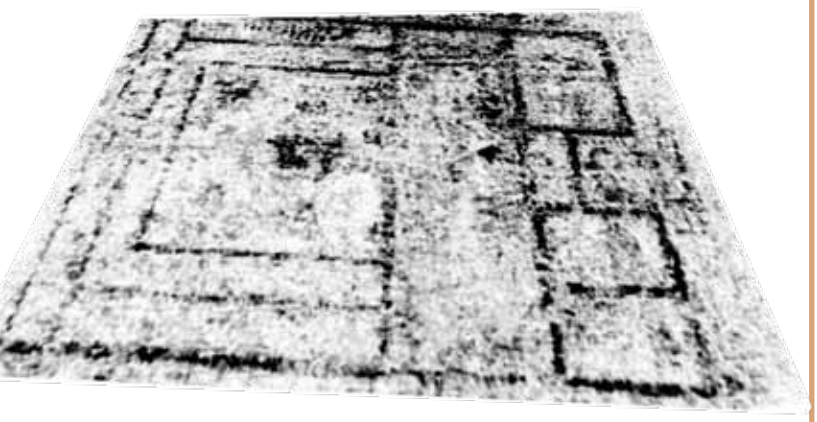
1) Channel spacing must be within 1/4 of centre wavelength of transmitted signal in media of observation

2) Cross-channel communication is required

3) Signature and polarization of all involved antennas must be as identical as possible

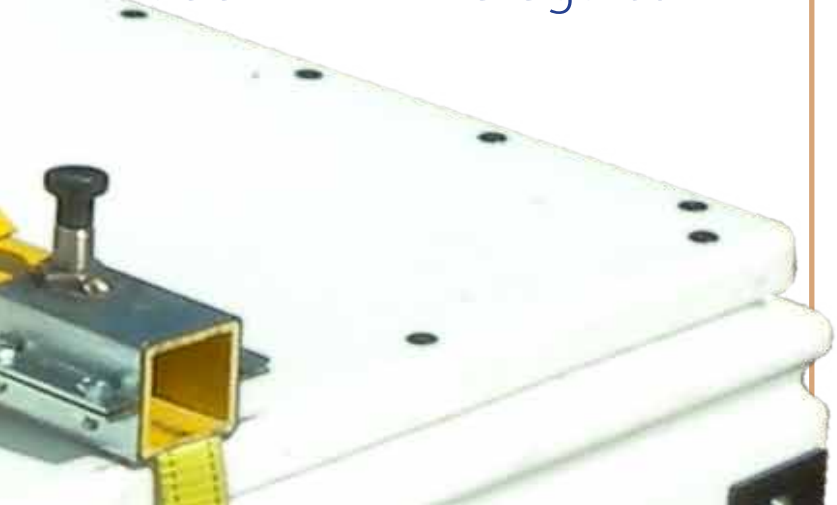
4) Accuracy of the positioning device used must be less than half the channel spacing

MALÅ MIRA is currently the only ground penetrating radar array system conforming to the above criteria.



MALÅ MIRA data showing remains of a XXX settlement near XXXXXX, U.K. Data courtesy of GSB Production Ltd. UK.

For more information, see www.malags.com



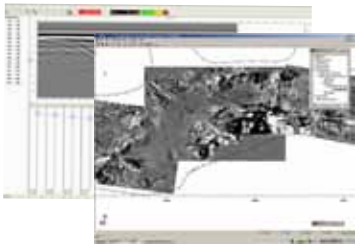
MALÅ MIRA 1.3 GHz Antenna:
The MALÅ MIRA 1.3 GHz is a shileded separable antenna designed for collection of high resolution 3D array data. The pair can also be used with ProEx as a single channel separable antenna system.

MALÅ MIRA 400 MHz Antenna:
The MALÅ MIRA 400 MHz is a separable and shileded mid-range frequency antenna. It is the standard MIRA 3D Array antenna used for utility detection and archaeology work. The antenna can be used (with ProEx) as a shileded, separable, single channel system.

MALÅ MIRA 200 MHz Antenna:
The shielded MIRA separable 200MHz antenna is 3D Array antenna delivering medium penetration at medium resolution. with the MALÅ ProEx, the pair can be used as a single separable GPR antenna.

MALÅ MIRA Carrier solution:
The flexible MIRA Carrier solution is designed to make surveys simpler and safer. There are solutions to attach the MIRA array at the front or behind a vehicle as well as for pushing the entire array by hand. MALÅ recommends a vehicle based solutions for any MALÅ MIRA solution including more than 16 channels.

MALÅ MIRA software solutions:
All MALÅ MIRA solutions are accompanied by a suite of software specifically designed to aquire, quality control, process and interprete true 3D ground penetrating radar data. MIRAsoft and rSlicer were created in conjunction with MIRA hardware development.



MALÅ MIRA Array solutions:
The MALÅ MIRA solution can be customized for various applications areas using different number of active data channels. MALÅ has created standard configurations using from 8 up to 32 data channels but the system is in theory designed to be completely independent of data channels used in the array.

MALÅ Geoscience is the Global Leader in Ground Penetrating Radar (GPR) with users in 113 countries and more than 60 distributors.

With offices in Sweden, USA, China, Malaysia and Australia, and service centers in 3 continents, the company offers an outstanding level of service to customers and business partners worldwide.

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