MALÅ ProEx

Professional Explorer Solutions

MALÅ

Exact
EXACT GLOBAL TEKNOLOGI

The most versatile Ground Penetrating Radar solution on the market





A versatile full-range Ground Penetrating Radar (GPR) system based on cutting-edge technologies.

Exact
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Maximum gain with cutting-edge technology

The MALÅ ProEx Control Unit is the backbone of all MALÅ ProEx Systems and designed to meet the needs of the advanced professional user, using a completely new technical platform. The design and the technical features of the MALÅ ProEx Control Unit makes it the most versatile control unit in the MALÅ Geoscience range.

The interchangeable features of the MALÅ ProEx Control Unit make it available as a single or dual-channel system in the basic configuration or a true multi-channel system with the optional expansion units. The MALÅ ProEx Control Unit is fully compatible with all MALÅ GPR Antennas offering configurations between 30 MHz to 2.3 GHz, with up to 16 simultaneous recording channels. The MALÅ MIRA option extends, in theory, the system to an unlimited number of recording data channels without reduction in speed.

Ethernet communications between the MALÅ ProEx Control Unit and the MALÅ XV Monitor or a notebook PC ensure safe and reliable data transfer at high speed. Depending on the configuration and the antennas used, the MALÅ ProEx Control Unit can perform various types of measurements, including standard reflection surveys, tomography, or velocity (CMP/WARR) measurements, for virtually any kind of application.

"With each generation of equipment, MALÅ continues to improve on an already outstanding ground penetrating radar (GPR) platform. The durability of their equipment and their superior customer service has been a great asset to the continued growth of our company"

- GeoView Inc., USA



The anatomy of MALÅ ProEx

Replacing one of the market's most respected GPR control units, the MALÅ RAMAC/GPR CUII, was an ambitious undertaking. After tens of thousands of development hours, the engineers at MALÅ created the next generation of GPR control unit that they playfully nicknamed ProEx – an abbreviation of Professional Explorer. That nickname stuck and so has the technology – five years on and the MALÅ ProEx still lays claim as the undisputed leading platform for GPR systems. The secret behind the MALÅ ProEx's success lies in the versatility, scalability and unparalleled computing power of the platform's architecture. Let's take a closer look at ProEx to understand just how such bold claims can be made.

The MALÅ Professional Explorer (ProEx™) controller is a modular, full-range Ground Penetrating Radar (GPR) controller designed to meet the needs of the advanced GPR professional. With built-in multi-channel parallel processing capability and support for all MALÅ antennas, MALÅ ProEx is the most versatile GPR controller on the market. Since the MALÅ ProEx can handle any type of GPR investigation, including multi-channel road measurements, concrete analysis, landscape profiling or utility detection, it is an ideal solution for general geophysics contractors, consultants and multi-disciplinary research organizations – and practically any organization in between that requires a non-destructive assessment solution.

Antennas supported by the MALÅ ProEx controller



For more information, see www.malags.com



MALÅ ProEx Optical Module:
The MALÅ ProEx Optical Module allows the connection of all MALÅ GPR antennas that utilize an optical interface. This includes MALÅ Shielded, Unshielded, RTA and Borehole antennas.



MALÅ ProEx HF Module:
The MALÅ ProEx High Frequency (HF) Module allows the connection of the MALÅ HF Antennas including those with EM-option.



MALÅ ProEx Coax Module:
The MALÅ ProEx Coax Module allows the connection of deep MALÅ Borehole Antennas System utilizing winches. It also supports the MALÅ Separable Shielded Antennas with separable transmit and receive antenna elements.



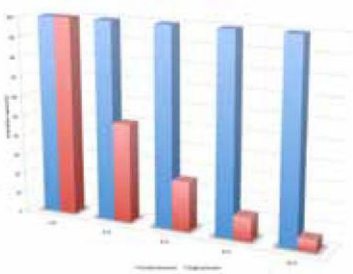
MALÅ ProEx Expansion Unit:
In the basic configuration the MALÅ ProEx Control Unit can support two individual antennas, however, with the addition of one or more (3 max) MALÅ ProEx Expansion Units, this can be increased up to a maximum of 8 individual antennas.



MALÅ ProEx Array Option:
The MALÅ ProEx Array Option attached to the MALÅ ProEx Control Unit is the controller for the MALÅ MIRA System. The MALÅ ProEx Array option, expandable up to 16 individual receiver and transmitter antennas, is configured with a specific number of antenna interfaces.



The MALÅ ProEx was created with multi-channel and array data collection in mind from start. Using multiple processors, one per data channel, the ProEx system will maintain its high data acquisition rate regardless of number of data channels used.



Acquisition speed of the ProEx (blue) compared to standard single processor GPR control unit (red) with one or more data channels.

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.



MALÅ

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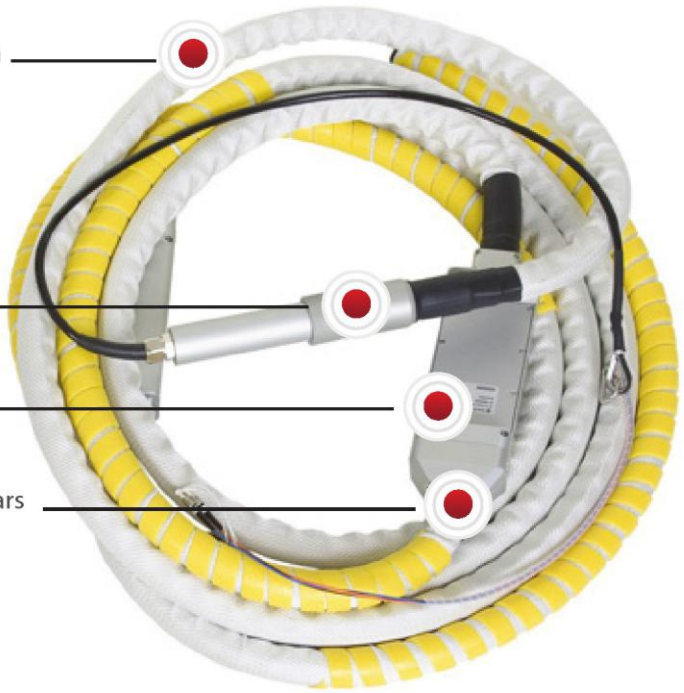
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Compact shipping / storage


Rechargeable batteries


Battery housing protectors


A typical system set-up



MALÅ Rough Terrain Antennas

MALÅ Rough Terrain Antenna (RTA) series changes the face of low-frequency Ground Penetrating Radar (GPR) surveying. The unique in-line, all-in-one, antenna design provides improved performance for deeper penetration. The flexible "snake" like design allows the antenna to be maneuvered easily and efficiently through the densest or most uneven of terrain without affecting ground contact, providing optimum results in the most difficult of environments.

The most important benefit being that the operator doesn't have to clear an access path or route prior to the profile or survey.

Even in relatively easy environments the MALÅ RTA out performs the rest, with proven results showing a significant reduction in survey time and manpower costs. Existing users of the MALÅ RTA report reductions in survey time and manpower requirements to a third of those experienced when using traditional unshielded antennas.

Brief Description & Technical Specification

Typical system set-up comprises a MALÅ ProEx control unit mounted in a backpack, MALÅ XV Monitor, the RTA, rechargeable batteries and a triggering mechanism (survey wheel, hip chain, or time).

The whole design is rated to IP65 and complies with the European ETSI EN 302 066-1 standard.

30MHz

The MALÅ RTA 30 MHz is suitable for investigations requiring the deepest possible depth penetration.

Length : 13.06 m (distance Tx-Rx: 6 m)

Weight: 7.8 kg



50MHz

The MALÅ RTA 50MHz is suitable for investigations that require medium to deep depth penetration. This was MALÅ Geoscience's first antenna in the MALÅ RTA series and has found wide appeal since it was released in 2004 with a proven track record.

Length : 9.25 m (distance Tx-Rx: 4 m)

Weight: 7.0 kg



100MHz

The MALÅ RTA 100MHz is suitable for investigations that require medium depth penetration with reasonable resolution.

Length : 6.56 m (distance Tx-Rx: 2 m)

Weight: 6.0 kg



Applications

The MALÅ RTA series is recommended for deep geological layer investigations. Although, other applications include: glaciology, archaeological / anthropological investigations, mapping of groundwater resources and depth to bedrock mapping.

Accessories

A number of accessories are available for the MALÅ RTA antennas, including :

- Towing belt
- Skid plates
- Hip chain

See our webpage for latest information