

3D radar system for utility mapping and soil classification

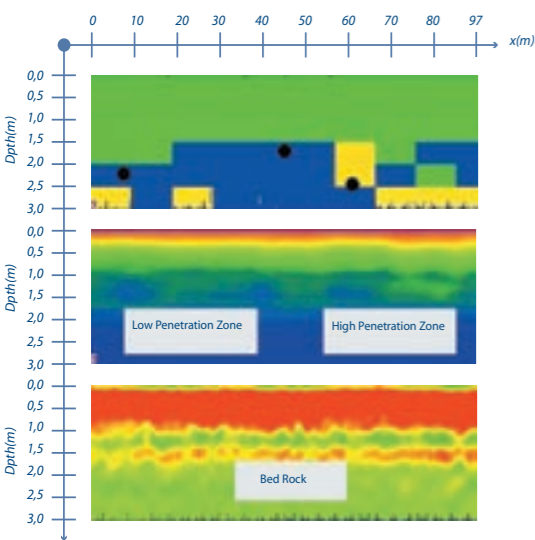
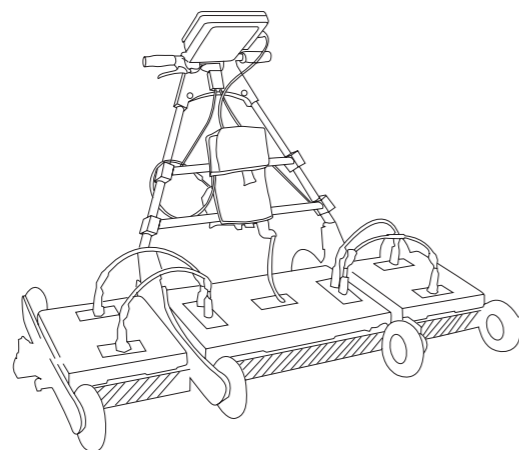
RIS-MF is the top-level product of the RIS family. Based on multi frequency and multi polarization antennas, it offers high performance detection and underground mapping of utilities.

The RIS-MF combination of multiple frequency (200 to 600 MHz) and multi polarization antennas provides:

- Greater soil penetration
- Detection of shallow and thin cables
- Subsoil classification for trenching and drilling operations

Features

- The antenna array provides high detection capability and productivity
- Detects both shallow and deeply buried pipes and cables made from all types of materials
- Soil type classification
- Subsoil 3D reconstruction
- Modular structure; can be reassembled for use in narrow urban passages
- Automatic data transfer onto CAD maps
- Dedicated Data Base to store and retrieve acquired data



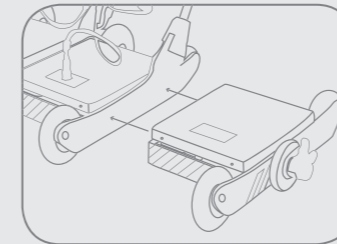
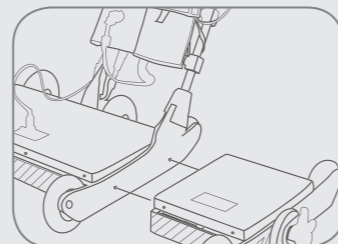
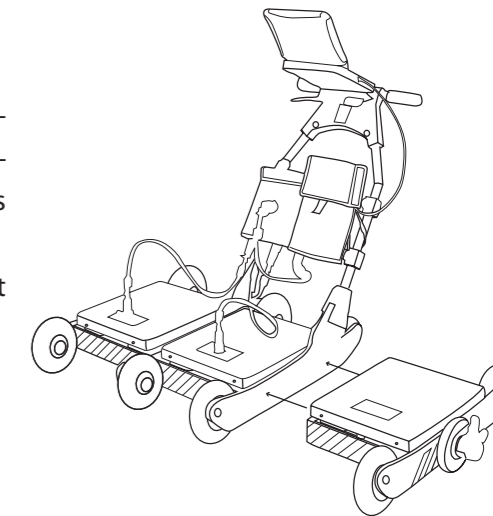
GRES/SubReM application package is designed to satisfy the requirements of No-Dig operators by showing ground characteristics which can be helpful when a utilities installation has to be planned.

3D radar system for utility mapping

RIS-S is an array system of multi-frequency antennas used to accurately detect and map all types of pipes and cables.

RIS-S offers 3 configurations to suit different working conditions:

- array of 3x400 MHz antennas
- array of 1x200 + 2x400 MHz antennas
- array of 1x400 + 2x600 MHz antennas



Ris MF specifications

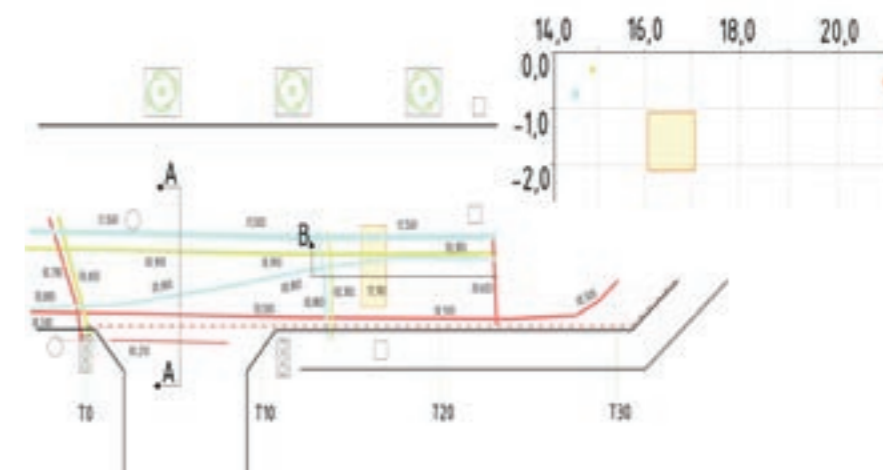
- Survey path width: 2 meters
- Antenna elements: 11
- Antenna frequencies: 200 and 600 MHz
- Multi-polarised antennas
- Positioning: metric wheel or GPS interface
- Battery operating time: > 5 hours
- Weight: 41 Kg (full configuration)

Ris S specifications

- Survey path width: 1.6 meters
- Antenna elements: 6
- Antenna frequencies: 400MHz and 200MHz or 600MHz if required
- Positioning: metric wheel or GPS interface
- Battery operating time: > 5 hours
- Weight: 34 Kg (full configuration)

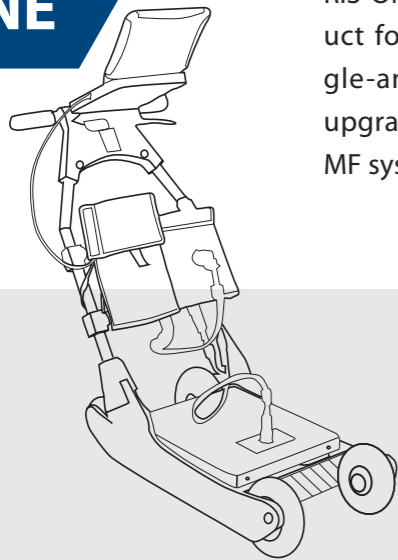
Features

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RIS

RIS-ONE



Single-antenna GPR system

RIS-ONE is the IDS entry-level product for utility detection. This single-antenna GPR can be easily upgraded to the 3D RIS-S or RIS-MF system.

Although a single-antenna system cannot provide the same productivity and performance as the 3D systems, RIS-ONE is ideal for users who currently only need to detect utilities but intend to move on to utility mapping jobs in the future.

RIS



RIS: It's not a matter of luck! 3D array radar systems

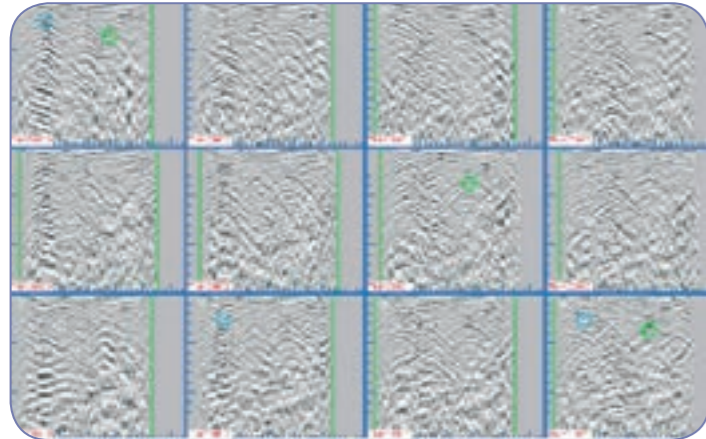


Utility Mapping

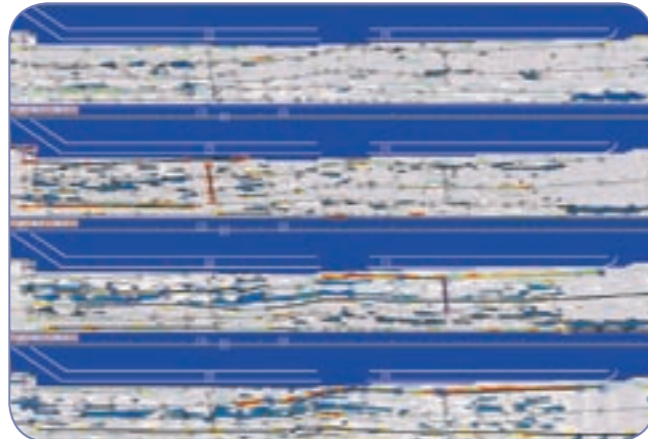
RIS PROCESSING SOFTWARE

The suite of IDS software is a professional tool dedicated to utilities detection and mapping. Results of the data analysis can be transferred to CAD by means of an interactive link or at the end of the work.

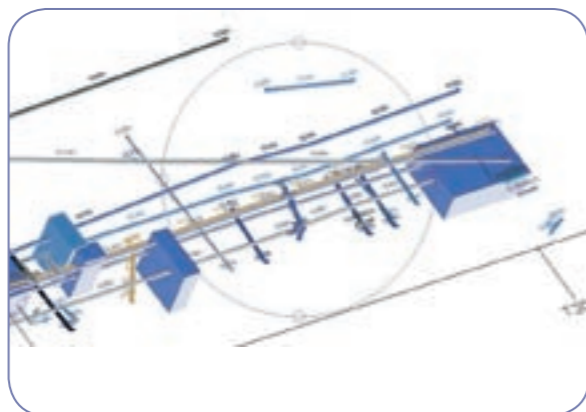
The combination of elaboration tools, database and CAD makes the IDS software suite (IDS gred in road) a complete working "environment" for the production of accurate results.



Multi-channel Radar maps



Tomographic map



Cartographic map

IDS
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RIS MF



Ground Penetrating Radar for utility detection and mapping

The first to introduce the array concept to GPR, IDS offers specific high-performance products for all those needing extensive underground utility mapping. The RIS systems have been specifically designed for utility mapping and their multi-frequency

arrays provide great location accuracy and penetration depth with high levels of productivity.

1. RIS-MF for utility mapping and soil classification
2. RIS-S for utility mapping
3. RIS-ONE for utility detection

**IDS: The leader in multi-frequency
and multi-channel Ground Penetrating Radar**