

RIS MF Hi-Mod

The end-to-end solution for accurate underground utility mapping and GIS map creation

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UTILITY MAPPING ARRAY RADAR SYSTEM COMBINING BOTH HIGH PERFORMANCE AND HIGH PRODUCTIVITY

RIS MF Hi-Mod

RIS MF Hi-Mod is a robust high performance multi-use ground penetrating radar system capable of scanning large areas in a short period of time and providing an accurate 3D view of the subsoil with a high resolution and depth of penetration. RIS MF Hi-Mod provides a complete end-to-end solution from the initial data acquisition in the field to final output production in the form of CAD or GIS maps. RIS MF Hi-Mod's software includes automated tools which reduce the time taken to produce meaningful and unambiguous results.

RIS MF Hi-Mod Benefits

- **End to end procedure** ensuring professional results in mapping underground utilities and anomalies.
- **High productivity** with specific software tools for automatic target recognition and transfer to CAD/GIS maps.
- **Highest detection percentage level**, combining longitudinal and transversal scans and several frequencies.
- **Modular array**, easy to set up and reconfigure in the field.



RIS MF Hi-Mod: surveying on rough terrain

RIS MF Hi-Mod Features

- **Deep and shallow antennas in one compact box:** Two antennas in the same box, with the option of choosing 200 MHz & 600MHz or 400 MHz & 900MHz, help the operator to locate pipes and cables by providing the proper frequency for a specific search parameter. It provides a real-time display of deep and shallow antennas on the same screen.
- **Modular:** Antenna boxes can be quickly added in "chain connection" while in the field (no tools required) with up to 8 in operation simultaneously. As a result, the system is able to work in any available space.
- **3D Radar Tomography:** Multi-frequency data fusion and a consolidated procedure to collect the data enable accurate 3D images of the subsurface to be achieved, helping the operator to distinguish individual anomalies and buried targets.
- **Professional utility mapping capability:** The result can be exported in several formats including GIS and CAD (AutoCAD or MicroStation) for a professional survey.
- **Flexible:** Powered by the IDS Multi-channel Control unit, the system can be used to drive every IDS antenna.



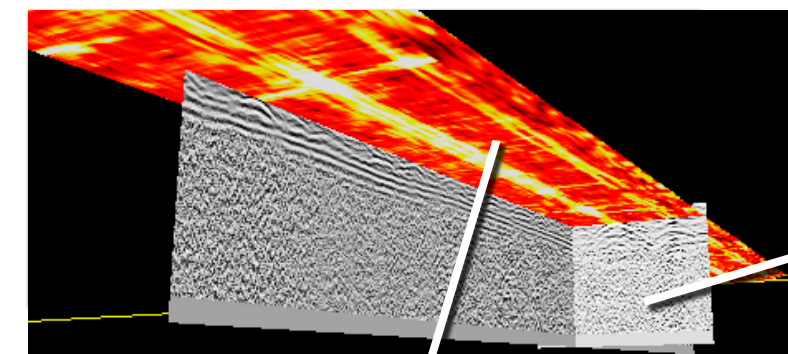
RIS MF Hi-Mod: 1 and 2 antenna configurations



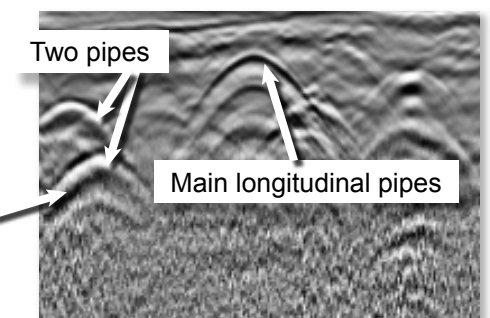
RIS MF Hi-Mod: 3 and 4 antenna configurations

GRED HD 3D software

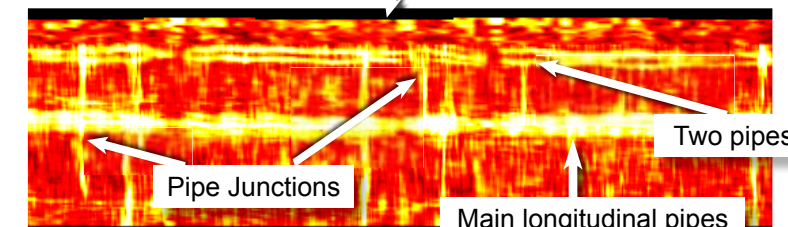
The software is able to present a 3-dimensional view of the subsurface, with a complete set of options for navigate within it, cutting it and marking anomalies. The software is also able to export 2D plan-view slices of the subsurface from which the operator can best interpret anomalies and pipes. The pipes and cables detected can be marked with a dedicated tool where the operator can specify a color for each pipe and the depth. The marked targets can be extracted into digital maps.



3D subsurface view



Single radargram



Data can be exported to CAD and GIS digital maps

SYSTEM SPECIFICATIONS		
OVERALL WEIGHT (PC NOT INCLUDED)	31 kg (68 lbs) @ 1 antenna 58 kg (128 lbs) @ 4 antennas	
RECOMMENDED LAPTOP	Panasonic CF-19 Tough-Book	
MAX. ACQUISITION SPEED (@ STD. SCAN INTERVAL)	9 kph (5.6 mph)	
POWER CONSUMPTION	13.3 W @ 1 antenna 26.6 W @ 4 antennas	
POSITIONING	Magnetic wheel and/or GPS or total station	
NUMBER OF CONTROL UNIT	1 DAD MCH FW	
SCAN RATE: (@512 SAMPLES/ SCAN)	from 741 scan/sec. to 181 scan/sec.	
SCAN INTERVAL	42 scans/m	
POWER SUPPLY	SLA Battery 12VDC 12 AH	
ANTENNA SPECIFICATIONS		
ENVIRONMENTAL	IP65	
ANTENNA FOOTPRINT	38x43 cm (single antenna)	
NUMBER OF HARDWARE CHANNELS	from 2 to 8	
ANTENNA CENTER FREQUENCIES	200MHz/600 MHz or 400MHz/900MHz	
ANTENNA POLARIZATION	HH	
ANTENNA SPACING	50 cm	
CERTIFICATION	EC, FCC, IC	

SOFTWARE SPECIFICATIONS

- Tomographic map view (C-Scan) including radar scan fusion
- 3D data visualization
- Advanced targeting using radarscan and tomographic view
- CAD, GIS exportation of GPR data and target
- Synthetic map (only for the Stream family of products)
- Radarscan viewer, filter and advanced filtering macros, multiple radar scan viewer
- Layer picking for automatic analysis of sub-layers
- GPS and map track viewer including X, Y and Z axis and digital map importation
- Video handling (option)

GRED HD
GRED HD 3D
GRED HD 3D CAD