www.geomatrix.co.uk
sales@geomatrix.co.uk
Tel: 01525 383438

TriVue Data Sheet

The Trivue is a multi-frequency Ground Penetrating Radar (GPR) system comprising three bistatic bow tie antenna oriented around an identical common mid-point, and housed within a light weight rugged casing. The antenna also houses all electronics enabling data to be recorded to a rugged tablet or laptop running Windows OS (XP to 10) via wired or wireless network. An internal Li- Ion battery can run the system for up to 10 hours with the option of connecting an external battery for extended operation.

The high pulse repetition frequency coupled with unique stacking functions permit the three different frequency datasets to be recorded simultaneously without cross talk. The record length for each channel is independently selectable permitting the operator to have complete control over data acquisition. The intuitive user interface and versatile display tools help an operator to quickly and easily analyse data in the field and implement quality control measures.

the wired network permits the antenna to be up to 250m from the laptop data recording device making the system ideal for use on quarry faces or earthen/concrete dams.

The 4 wheeled cart provides a robust stable platform for the antenna, allowing it to move freely over uneven ground surfaces. On very uneven ground the handle on the cart can be inverted to allow the system to be pulled behind the operator. Alternatively the TriVue can be fitted with a variety of trailing odometer wheels.

Geomatrix Earth Science Limited, Unit 20 Eden Way, Pages Industrial Park, Leighton Buzzard, Bedfordshire, LU7 4TZ

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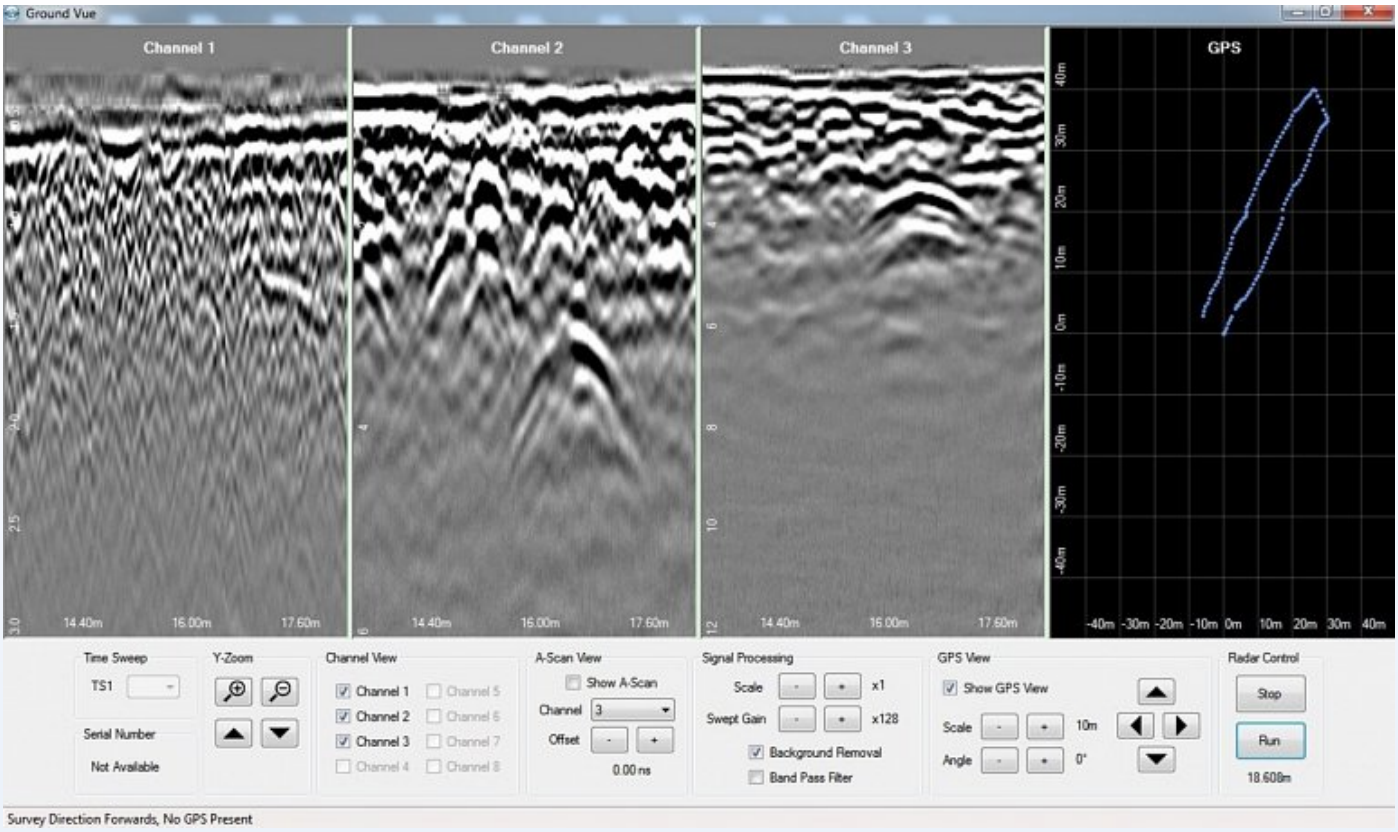
A built in GPS chip accurately time stamps each trace and provides simple positional information to aid corroborate field notes. An external survey grade GPS can be connected directly to the TriVue, jumping the internal GPS, for integrating accurate positioning. The GPS positions are received by the TriVue PCB to avoid any latency at high recording speeds. An optional Inertial Measurement Unit (IMU) can be fitted within the antenna to interpolated between GPS positions where dropouts are likely to cause positional difficulties. Heading can be used to record the line path where GPS positions are not available and itch and roll information permits advanced topographical corrections to be undertaken.

With a bandwidth of 125MHz-2GHz the Trivue is ideally suited for utility detection, ground engineering projects, environmental applications, and road and railway ballast assessment. The three antenna- 250MHz, 500MHz and 1GHz central frequency bowtie- mean the system analyses the subsurface in great detail and ensures an operator is equipped for all eventualities.

The system is ideal for many engineering and geotechnical studies, including; Utility detection, brownfield site mitigation, railway ballast assessment, road sub-base delineation. TriVue data can be processed in a multitude of third party software packages including RelfewW, GPR SLICE, GPRSoft or RoadDoctor.

The Latest version of the GroundVue data acquisition software can be accessed from this link - GroundVue Software.



TriVue data acquisitions screen showing each recording channel and GPS trace.

Product Dimensions

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Physical	Dimensions (L x W x H)	Weight
(instrument only)	73cm x 44cm x 23cm	11.6kg

Technical Specifications

Channels:	3
Record Length:	10 to 160ns independently selectable for each channel. Extended time sweep available on re-quest.
Samples per trace:	256 or 512.
Digitisation:	16 bit A/D converter.
Data Format:	Utsi Electronics: .hrd RADAN: .dzt SEGY: .sgy
Anti-alias filter:	10kHz
Transmitter pulse repetition frequency:	2.5MHz (jittered to reduce EMC interference).
Dynamic range:	126dB (the ratio of transmit power and receiver noise).
Scan rate:	Max 532Hz with 3 channels and 256 samples. Max 266Hz with 3 channels and 512 samples.
Stacking:	Automatic stacking. Number of stacks calcu-lated off the selected record length, number of samples per record and scan rate. Faster scan rates result in less stacking.
Triggering:	Single TTL pulse. Dual A/B inputs for directional information. Self-trigger (continuous recording).
Power:	Internal 12V Li Ion battery for 7 hours operation. External supply -11 to 15V, 400mA.
TX/RX Separation:	250MHz - 416mm 500MHz - 188mm 1GHz - 70mm
Impulse width:	250MHz - 1ns 500MHz - 600ps 1GHz - 300ps
Transmission voltage:	250MHz - 20V 500MHz - 12V 1GHz - 8V
Bandwidth:	250MHz - 125MHz to 500MHz 500MHz - 200MHz to 800MHz

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	1GHz - 500MHz to 2GHz
Internal GPS:	SPS GPS precision.Records NMEA GPGGA &GNGAA sentence.
Skid plate:	Fabricated from Ultra high molecular weight polyethylene.

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