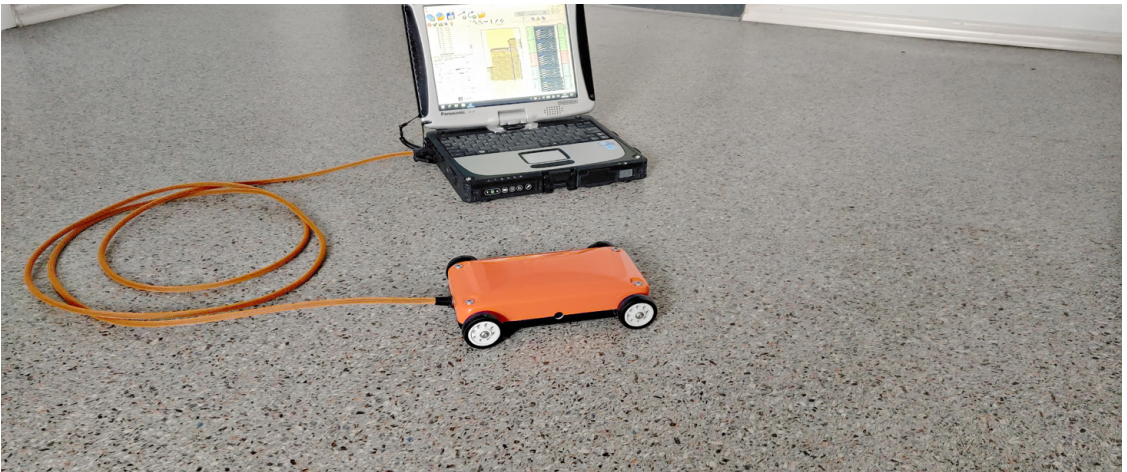


VIY5-1500

Ground Penetrating Radar



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All pictures in this User Manual are given for reference purpose only, and may differ from actual product appearance.

Product design and specification may be changed by manufacturer without notification.

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General information

VIY5-1500 Ground Penetrating Radars.

Ground Penetrating Radar (GPR) is designed for non-destructive scanning and inspecting of different structures and underground objects.

VIY5-1500 GPR can be applied by contractors and other specialist for scanning structures from concrete, bricks and others building materials.

VIY5-1500 Ground Penetrating Radar (GPR) has antenna with central frequencies of 1500 MHz.





Package options

The VIY5-1500 set consists of

- 1500 MHz antenna unit
- Backpack
- Telescopic pole TP2
- User manual

✓ Laptop is not included in any GPR set and should be purchased separately

List of Equipment and Accessories

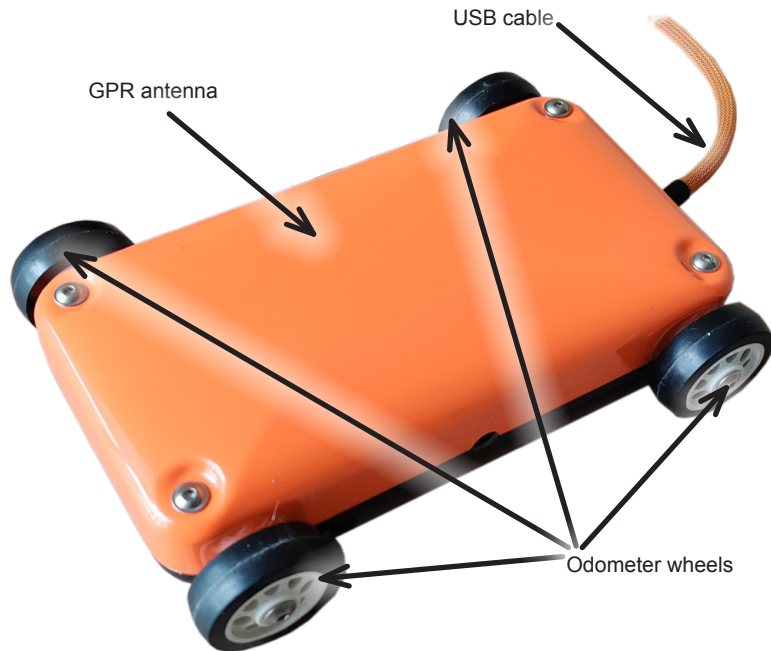
Item	View	Description
AB5-1500		900 MHz antenna unit with digital output. Built-in inclinometers. Supports optional connection of GPS and measuring wheels.
Laptop holder		Laptop holder, designed for fastening the laptop to the operator's backpack.
GPR telescopic pole TP-2		The pole for moving of antenna forward and backward. Can be easily mounted to antenna. Designed to be used with VIY5-1500 GPR
Backpack		The backpack for GPR antenna, accessories, laptop, and Battery Box.

Main components description

GPR consists of antenna unit connected via USB to a computer (laptop). Operator controls antenna unit through VIY software.

GPR antenna has four wheels. All wheels are connected and are odometer wheels.

GPR antenna does not have battery, it is powered by USB cable when it connected to the laptop.



Picture below shows general view of the VIY5-1500 GPR with a transportation pole TP-2.



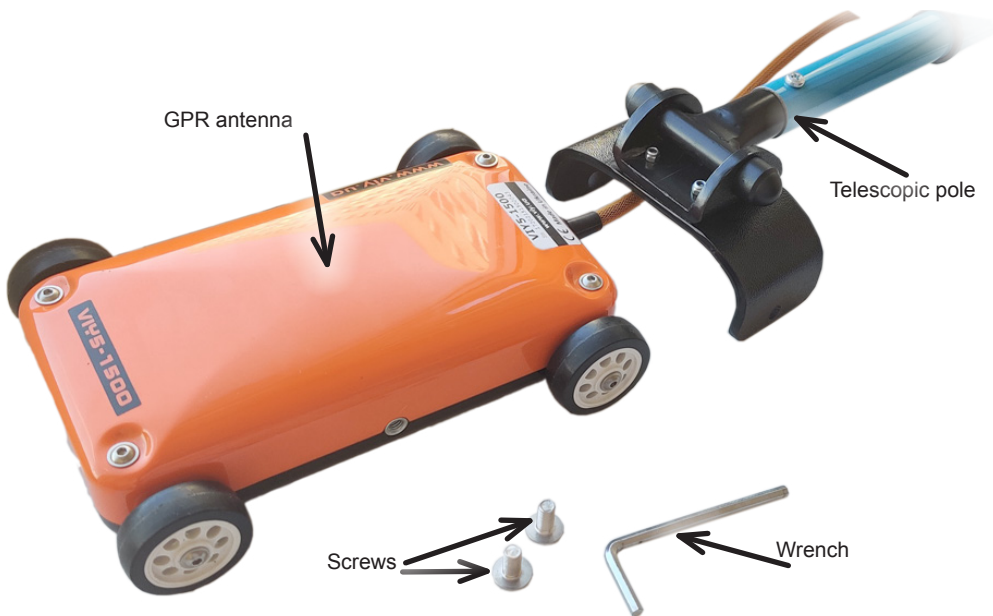
Main components description

Connecting telescopic pole TP-2

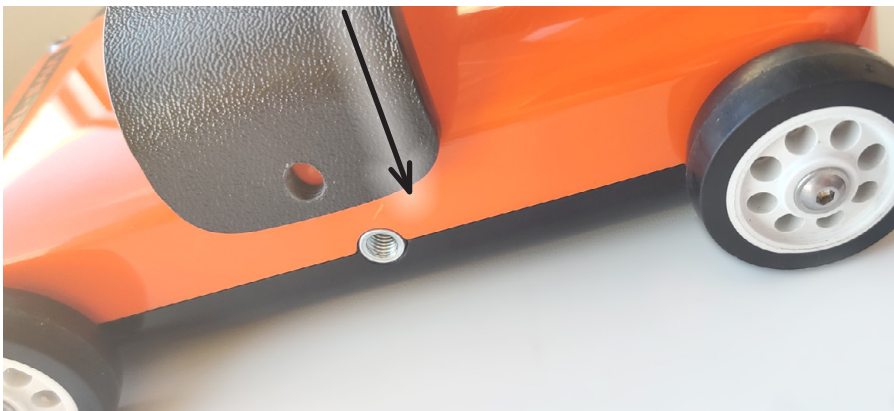
- ✓ Use the supplied wrench to screw/unscrew the screws.



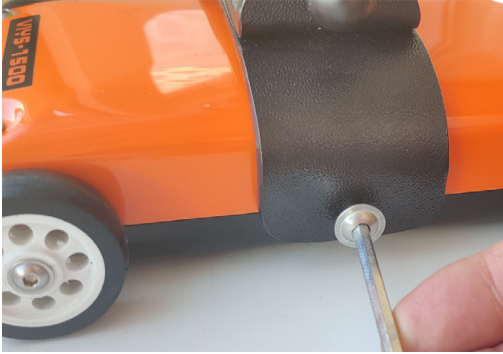
Prepare GPR antenna, telescopic pole TP-2, two screws, and wrench.



Slide the pole bracket onto the antenna



Then tighten the screw on one side.

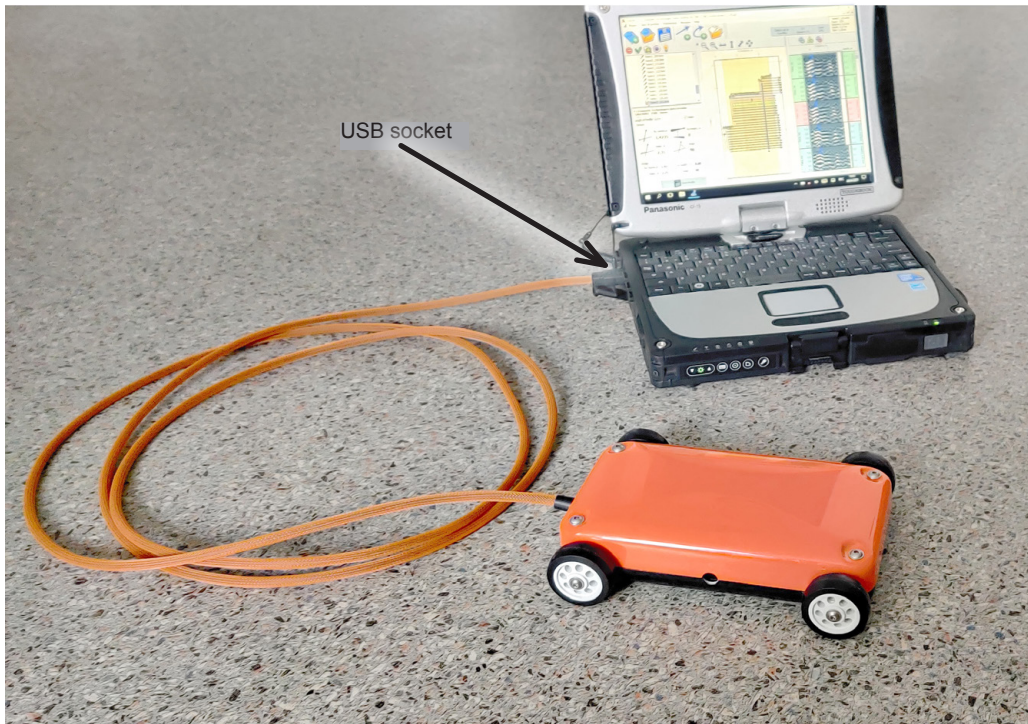


Then on the other side.

Getting Started

Connecting antenna unit to a laptop

Connect USB plug into laptop's USB socket.



GPR is ready to work!

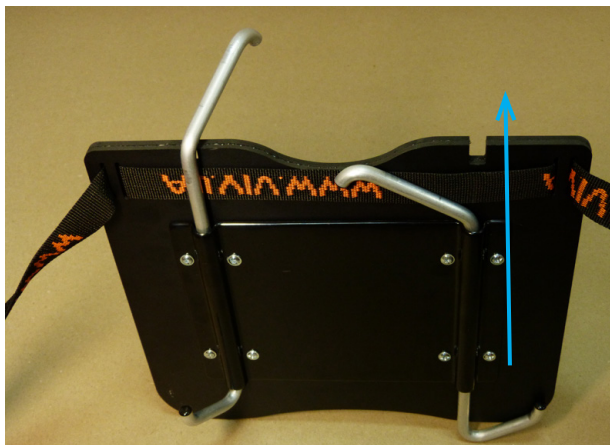
Mounting the laptop shelf on the operator's backpack

If GPR is used together with telescopic pole, the laptop can be mounted on the special portable shelf that should be fastened to the operator's backpack.



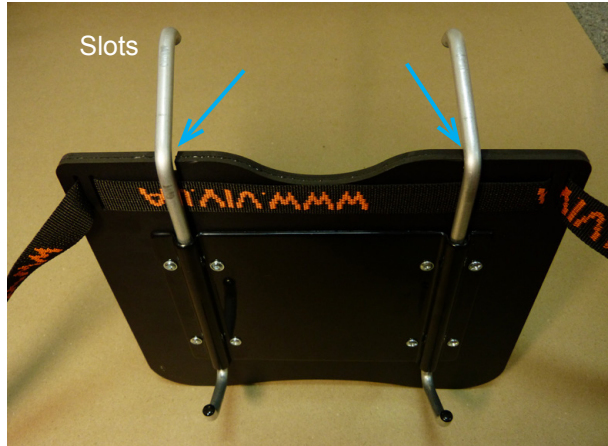
To mount the laptop shelf follow the next steps:

- Take the laptop shelf out of the backpack.
- Stick the Velcro tape on the top of shelf and on the laptop bottom in some places (the Velcro tape is included in GPR set).
- Turn the shelf over and pull out the metallic holders (in direction shown by an arrow below).



Getting Started

- Turn the metallic holders 90 degree aside and put them into slots as shown on the picture below.



- Put the backpack on, adjust the backpack side stripes and fasten the backpack belt.
- Fasten operator's shelf locks to the corresponding locks on the backpack's stripes



- Tuck the lower holders of the shelf behind the operator's backpack belt.



- Mount the laptop on the shelf, fastening it on the shelf with Velcro tape.



- When the work is finished, fold the shelf in the back order and pack it to the backpack.



GPR parameters setting and GPR calibration

Please read [User Manual part 2. Software](#) to find instructions about setting up all the main GPR parameters, its calibration and directions of using Synchro and Planner software.

Specifications

Specifications

Model of GPR	VIY5-1500
Antenna unit, MHz	1500
Max sounding depth, meters (depending on soil properties)	0.5
Survey window, nsec	8, 12, 16, 20
Spatial resolution, meters, (not worse)	<0.03 m
Maximum number of samples per trace	1000
Data acquisition rate, traces per second*	up to 150
Dynamic range	not less than 135 dB
Interface	USB2
Trigger mode	single, internal, external
Analogue-to-Digital Converter range	18 bit
Weight of antenna, kg	0,6
Dimensions of antenna, L x W x H	190 x 140 x 40 mm
Operating temperature range	-20°C to 40°C
Environmental rating	IP65
Continuous operation time	Limited only working time of the laptop

* Data acquisition rate depends on samples per trace and trace stacking.

Limited Warranty

1. **Warranty.**

Transient Technologies LLC warrants the enclosed hardware products to be free from defects in material and workmanship for a period of 12 (twelve months) from the date of original retail purchase.

2. **Repair Procedures, Exclusive Remedy.**

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