USERS MANUAL

GEOTECH PVT
GATEWAY SETUP SOFTWARE

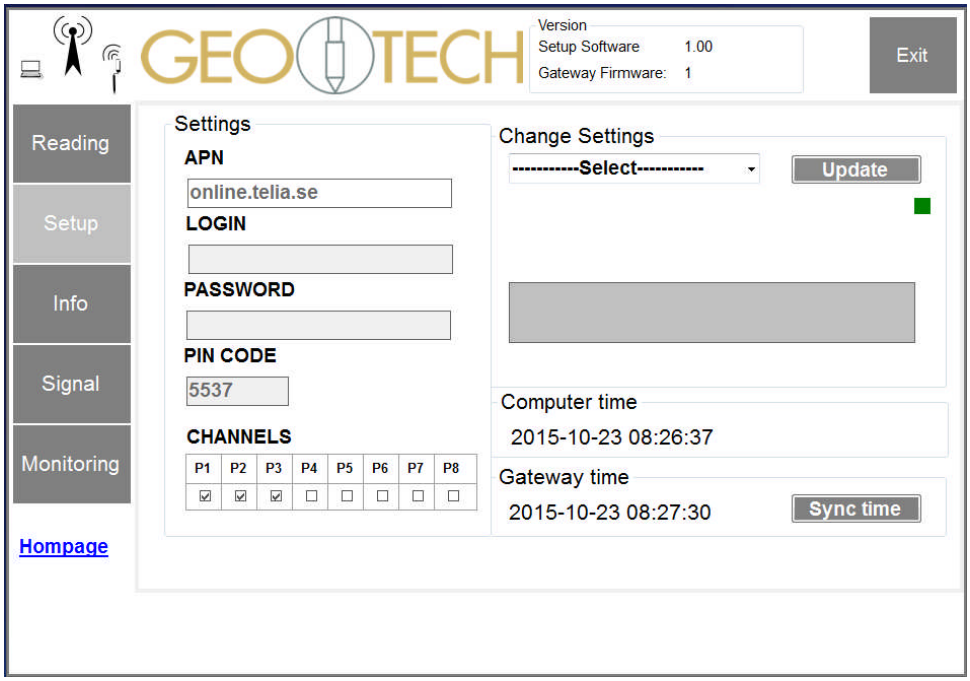

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Table of Contents

DOCUMENT HISTORY

Date	Comment	Sign
2015-10-21	Upgraded functionality.	mcn
2015-10-27	New screen shots, revised 2.2 and Appendix 1.	mcn
2015-11-30	Revised 2.4, licensing terms etcetera.	mcn

1 General Information

1.1 Foreword

This manual contains important information for the proper use and safe operation of the equipment

Read the manual carefully before you start operating the system. Also read the maintenance instructions before performing any maintenance work. The warranty from Ingenjörsfirman Geotech AB is valid only if the instructions in this manual are followed.

Always keep the manual by the equipment and replace it immediately if it should become wholly or partially unusable. A new copy can always be ordered from Ingenjörsfirman Geotech AB.

1.1.1 Content

The information in this publication is on the basis of information that was available at the time that the publication was written.

The information can change at any time. Ingenjörsfirman Geotech AB reserves the right to change or update the content of the manual without prior notice.

1.2 Safety

The user must be alert to potential hazards. The user should also have the necessary training, skills and tools to perform these functions properly.

The important safety messages in this manual are presented as follows:

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

This warning identifies important messages in this manual, e.g. information on risk for costly damage. Carefully read the message and inform your colleagues.

2 Product Information

2.1 General Description

You can connect of up to eight piezometers to the gateway. It receives settings and sends logged data via the mobile phone network. Log in on the server web site from your office, or any other place with Internet access, for programming time between loggings, setting alarm levels or downloading log data.

The gateway box comprises a separate air pressure sensor and a rechargeable battery. The unrivalled energy saving features and low-leakage battery makes it possible to plan for long time between visits. The built-in battery can easily be exchanged upon visit or charged on site from via the separate USB charger.

The unit can optionally be equipped with a photovoltaic solar panel.

The gateway communicates with via the 3G cellular phone network. Subscription and SIM card to be provided locally by the customer (mini-SIM 25 x 15 mm). Please check coverage and compatibility with your service provider.

The GEOTECH PVT SETUP SOFTWARE is to be installed on your computer and used for setting Gateway properties.

2.2 Application Examples

Fig. 1 – Remote read-out solution example: Monitoring of pore pressure in clay at different depths under a road. The gateway receives settings and sends logged data via the mobile phone network.

2.3 Intended use

The system is designed for geotechnical and hydrological monitoring, and may only be used for this purpose. All other use is prohibited.

2.4 System components overview

Item No.	Item	Illustration	Description
		Remote Gateway Setup Software	
28947	PVT Gateway setup software.	 	Software to be installed in your portable computer for set-up and trouble shooting. Refer to separate manual for details. License with right to use with one gateway. *Medium for delivery may change without prior notice.*
		COMPATIBLE EQUIPMENT	
		Remote Gateway	
28738	PVT Remote Gateway.		Remote gateway for connection of up to eight piezometers. Including air pressure sensor, rechargeable battery and setup software. Prepared for charging from solar panel (not included). The gateway communicates with via the 3G cellular phone network. Subscription and SIM card to be provided locally by the customer (mini-SIM 25 x 15 mm). Dimensions: 180 x 255 x 110 mm Weight: 2.2 kg
		Server Access	
	PVT Server Access		Right to use the Geotech PVT Server Solution for collecting logging data and to setting logging and alarm functionality of Geotech PVT Remote Gateway and connected sensors. Refer to separate manual for details. Different business models are possible.

The GEOTECH PVT product family is being continuously developed and improved. We therefore reserve the right to changes of the information above.

3 Operation

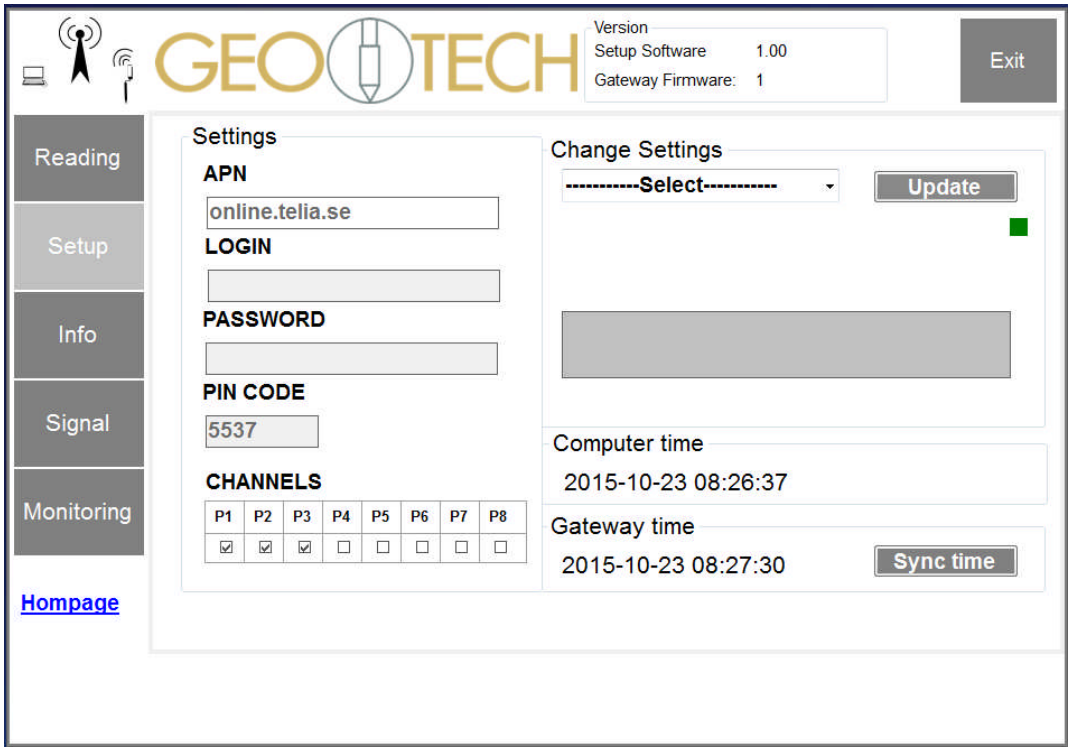
3.1 Preparation

Install the software on your computer (MS Windows 7 with .NET Framework 4.5 or later). Install driver.

Connect the PVT Gateway to a USB outlet (refer to the Gateway manual) and start up the program.

Preparations and initial set up of the Gateway can preferably be made at the office prior to going to the site for installation.

3.2 Setup



The valid Gateway settings are shown in the “Settings” part of the screen.

Use the “Change Settings” part to select and change settings.

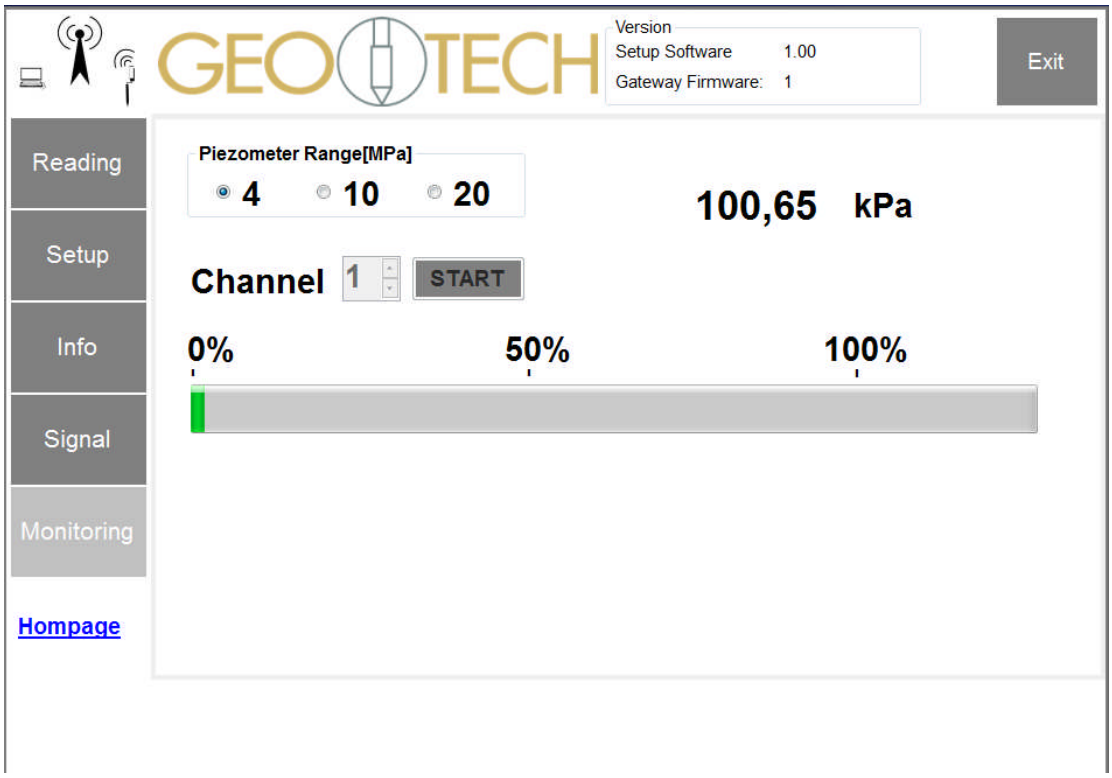
Enter the APN of your service provider and PIN code for your SIM card. Depending on market, you might in addition need to enter login information to access the services of your service provider.

Activate the channels of connected piezometers.

Use “Clear EEPROM” to remove all Gateway settings, e.g. if moving it to a new project.

Klick “Sync time” to copy the time of your computer to the Gateway.

3.3 Monitoring



Use this function for continuous real-time reading from the selected piezometer, e.g. to make sure that total pressure does not exceed maximum rating of the piezometer during installation.

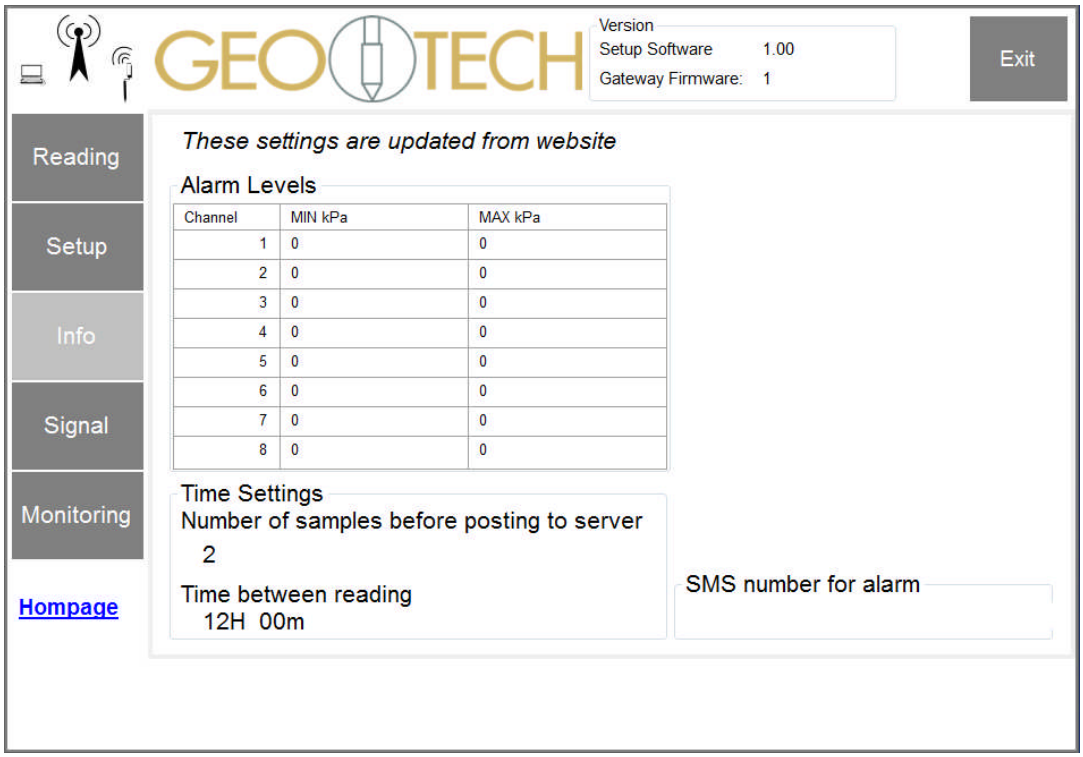
Select piezometer range (choose 4MPa for 40m H_2O)

Select channel (same as terminal number).

Klick Start.

Pressure will be shown in digits and as a graph relative to the range.

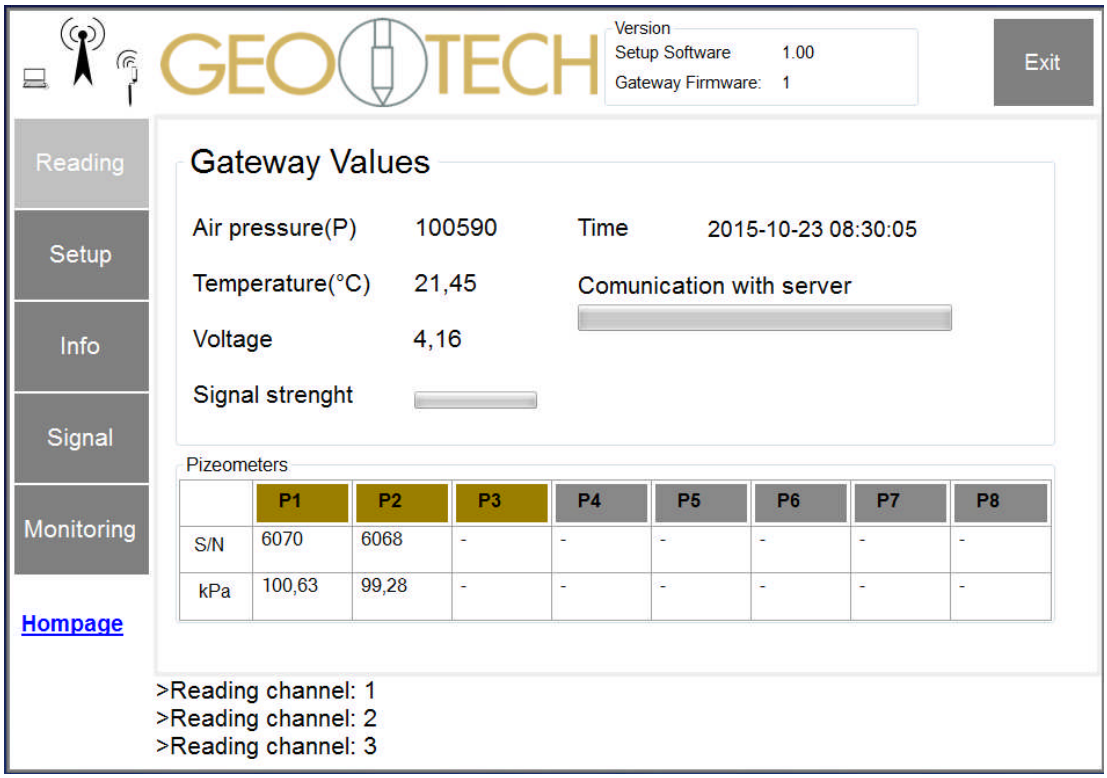
3.4 Info



On the “Info” screen you can view Gateway settings that have been made from the server (view only):

- Alarm levels
- Time between readings
- Number of readings between transfers (calculated)
- Phone number for alarms

3.5 Reading



The Gateway reads data once from internal sensors and all connected piezometers. Data will be sent to the server and also shown on the screen.

Latest settings will be downloaded from the server and implemented.

Finally the Gateway goes into sleep mode and starts the timer for next automatic reading.

3.6 Signal

Use this function as help during installation. It will provide information about mobile phone network coverage and GPS position.

“Start signal mode”
Used for testing of the relative signal strength of the mobile phone network. There is a time delay of up to 10 seconds until the accurate value will be shown.

“Start GPS mode”
Used for acquiring GPS position of the Gateway. It may take several minutes to acquire the position.

“Test SMS”
Use this function for testing the text message function. Enter your phone number and click “Send”

3.7 Exit

Click “Exit” to close the program.

4 Support

4.1 Contact information

For support and repair please contact:

Ingenjörsfirman Geotech AB
Datavägen 53
SE- 436 32 Askim
SWEDEN

info@geotech.se
+46 31 289920

For customs reasons, please declare **serial number** of probes etcetera when sending equipment for service.

4.2 Trouble Shooting

The trouble shooting table below is not complete, nor subject to any quality assurance, and thus published as indication only. Please feel free to revert with additional questions and suggestions.

Issue:	**Finding possible causes:**	**Actions:**

Appendix 1

Common APN codes

Country	Service Provider	APN
Sweden	Telia	online.telia.se
Norway	Telenor	internet.telenor.se
Finland	Sonera	internet
Denmark	TDC	internet
Germany	T-Mobile	internet.t-mobile
Estonia	EMT	internet.emt.ee
Latvia	LMT	internet.lmt.lv

Please refer to information from your mobile phone service provider for further information!

Notes

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