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> PQWT S300 Automatic Mapping Geophysical Water Detector Instruction Manual

## PQWT S300

# PQWT S300 Automatic Mapping Geophysical Water Detector Instruction Manual

Brand: PQWT | Model: S300

## 1. PRODUCT OVERVIEW

The PQWT S300 is an advanced automatic mapping geophysical instrument designed for underground water detection, aquifer surveying, and well location. Utilizing resistivity sensor technology, it provides efficient and accurate geological prospecting. This manual provides detailed instructions for the proper setup, operation, and maintenance of your PQWT S300 device.

# PQWT S300

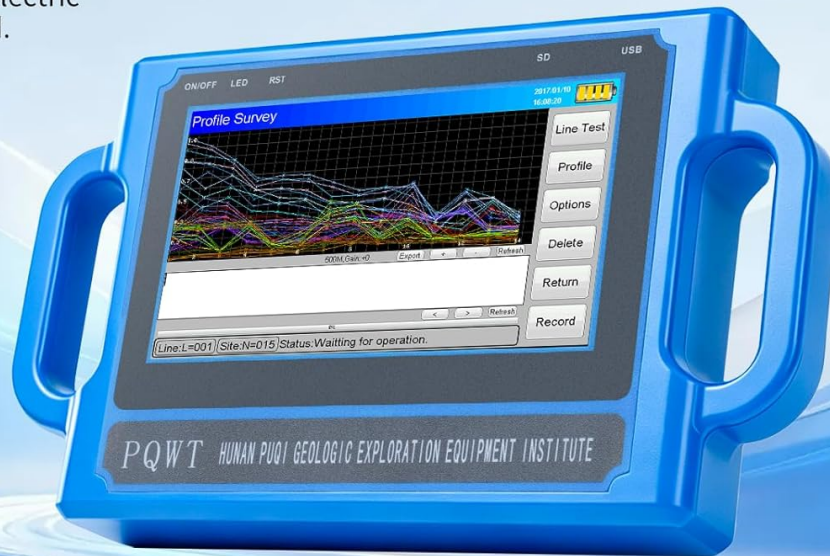
PQWT

## GEOPHYSICAL PROSPECTING INSTRUMENT

Mapping With One Button Underground water detector

**DEPTH: 150M/300M**

No artificial electric field required.



Using PQWT-S300, Simply measure multiple points and automatically generate curve and geological profile maps — quickly identifying strata, caves, and aquifers with precision.

*Image: The main unit of the PQWT S300 Water Detector, showcasing its display and robust design.*

## 2. PRODUCT CONTENTS

Verify that all components listed below are included in your package:

# PRODUCT CONTAINS



*Image: All components included with the PQWT S300 Water Detector, neatly arranged in its protective case.*

- Host Machine (Main Unit)
- Special Cable (10M Measuring Cable)
- Alloy Electrode Bar
- Copper Electrode
- Charger
- USB Data Line
- Universal Adapter
- Strap
- Aluminum Case

### 3. SPECIFICATIONS

The following table details the technical specifications of the PQWT S300 Water Detector:

# PRODUCT SPECIFICATIONS



MODEL	S150	S300	S500	
DEPTH	150m	150m/300m	150m/300m/500m	
MEASURING FREQUENCY	Single, Triple and 36 frequency	Single, Triple and 36, 40 frequency	Single, Triple and 36, 40, 56 frequency	
CONTROLLER	32 bit high speed CPU		POWER	About 4W
CHANNEL GAIN	1-500 thousand times		A/D SWITCH	16bit 3.6MSPS
MEASUREMENT ACCURACY	0.001mV		TEMPERATURE	-20~+50°C
MEASUREMENT CHANNEL	Single		WEIGHT	0.7kg (Host Machine)
MEASURING RANGE	0-6000mV Automatic conversion range		POWER SUPPLY	26650 Battery*2 3.7V / 4000mAh (Single cell)
UNIT OF MEASUREMENT DATA	Electric field components of different frequencies of magnetotelluric field Vs (mV)		DISPLAY	7-inch capacitive touch screen (800*480)

Image: A detailed table showing the specifications of the PQWT S150, S300, and S500 models, highlighting the S300's capabilities.

Feature	Specification
Model	S300
Depth Options	150M/300M
Measuring Frequency	Single, Triple, 36, 40 frequency
Controller	32 bit high speed CPU
Power Source	Battery Powered (2 Lithium Ion batteries included)
Voltage	3.7 Volts (DC)
Control Method	Touch
Sensor Technology	Resistivity Sensor

Feature	Specification
Item Weight	8.5 Kilograms
User Interface Languages	English, French, Spanish, Arabic, Russian, Polish, Turkish, Italian, Portuguese

## 4. SETUP

Proper setup is crucial for accurate measurements. Follow these steps to prepare your PQWT S300 for operation:

- 1. Site Preparation:** Select a tape of 50 meters and pull it open along a straight line at the location to be explored. Mark the starting point. For geophysical prospecting, the line should be perpendicular to the tectonic line.
- 2. Instrument Connection:** Insert the electrode cable into the main unit. Long press the power button to enter the start interface.
- 3. Measurement Method Selection:** From the main menu, select "Profile Survey" to enter the measurement interface.
- 4. Depth and Line Configuration:** Click "Options" and choose the desired depth (e.g., 300M) and line number (e.g., 001) according to your measurement requirements.
- 5. Electrode Placement:** Insert one electrode near the host into the tape position of 0 meters. Insert the other electrode into the tape position of 10 meters.
- 6. Line Test:** Cross and put the two connected electrodes together. Click "Line Test" on the instrument. A green test light indicates the line is normal.

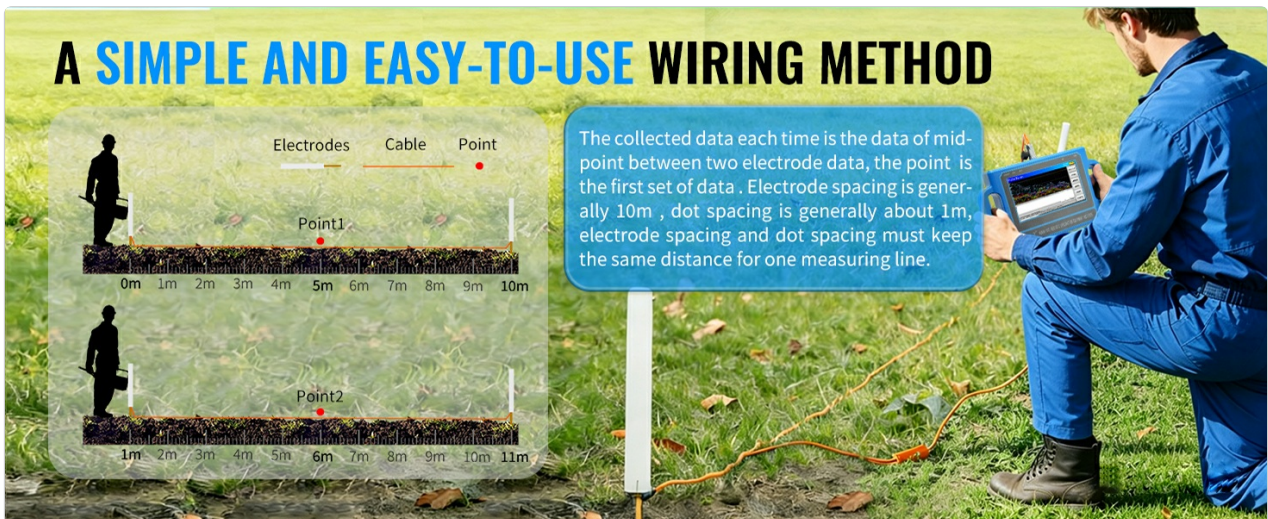


Image: A visual guide illustrating the seven steps for using the S Series Water Locating Instrument, from setup to drilling.

## 5. OPERATING INSTRUCTIONS

Once the setup is complete, proceed with the measurement process:

- 1. First Point Measurement:** Click the "Record" button for the first measurement point. The instrument will display data acquisition. Once completed, it will notify "Record Completed" with a voice prompt. Note that each measurement point is in the middle of the two electrodes.

2. **Subsequent Point Measurement:** Move both electrodes forward simultaneously by a distance of one meter. Click "Record" again for the next point. Repeat this process for all desired measurement points along the line.
3. **Curve Chart Analysis:** When a line measurement is finished, the screen automatically displays the curve chart. A smooth curve indicates uniform strata, while curves shaped like "V", "W", "L", or "A" often reveal geological anomalies such as faults, fractures, or aquifers.
4. **Profile Map Generation:** Click "Profile" to automatically generate profile maps. You can click "+" or "-" to adjust the map as needed. Colors from blue to red indicate increasing data values, representing geological or lithological characteristics from soft to hard.
5. **Multi-Line Measurement:** If you need to measure the next line, adjust the line number (e.g., to 002) in the "Options" menu and repeat the measurement steps.

*Video: A comprehensive demonstration of the PQWT S Series Automapping Geo Water Locator in operation, covering wiring, measurement, and data analysis.*

## 6. IMPORTANT SAFETY NOTES

Adhere to the following safety guidelines during operation:

- The electrode rod must not be shaken, and the copper electrode must not touch metal objects while recording.
- It is suggested that one line should be measured with more than 15 points for optimal accuracy.
- Instruments are strictly prohibited for use during thunderstorms.
- Wiring needs to avoid areas with high voltage lines and significant ground drops.

## 7. MAINTENANCE

To ensure the longevity and optimal performance of your PQWT S300, follow these maintenance tips:

- Keep the device clean and free from dust and moisture.
- Store the instrument in its aluminum case when not in use to protect it from physical damage.
- Ensure batteries are charged regularly and stored in a cool, dry place.
- Inspect cables and electrodes for any signs of wear or damage before each use. Replace damaged components immediately.

## 8. TROUBLESHOOTING

If you encounter issues with your PQWT S300, refer to the following common troubleshooting steps:

- **No Power:** Ensure the batteries are fully charged and correctly inserted. Check the power switch.
- **Line Test Failure:** Verify all cable connections are secure. Inspect the cables and electrodes for any breaks or damage. Ensure electrodes are properly inserted into the ground.
- **Inaccurate Readings:** Check for any nearby high voltage lines or large ground drops that might interfere with measurements. Ensure proper electrode spacing and alignment.

- **Software Issues:** If the device is unresponsive, try restarting it by long-pressing the power button. If issues persist, consult the support hotline.

## 9. WARRANTY AND SUPPORT

The PQWT S300 host is backed by a lifetime maintenance service. For any technical assistance, inquiries, or to send data for professional analysis, please contact our specialists:

- **Consulting Hotline:** 0086-731-82237112
- **Mobile/WhatsApp:** 008613548970999 (Mr. Frank)
- Users can send pictures of their geophysical water detecting data through mobile phones to our online platform for communication with our hydrogeology specialists.