

PQWT PQ125B

PQWT 125B Water Leak Detector Instruction Manual

Model: PQ125B

1. OVERVIEW

The PQWT 125B Water Leak Detector is a professional acoustic leak detection instrument designed for outdoor underground pipe leak detection. It features a professional RCS-S3 sensor optimized for low-frequency resonance, allowing effective penetration of thick-walled pipes and deep burial layers up to 3 meters. This device is suitable for external network pipes, industrial water supply pipes, and underground water supply systems.

Key features include precise positioning with General Detection Mode for rapid investigation and Location Mode accurate to within 50cm, an intuitive touchscreen interface, and an ergonomic design for convenient use.

WIDE RANGE OF APPLICATION

PQ125B



ACOUSTIC CHAMBER RESONANCE SENSOR RCS-S3

Used for outdoor hard and soft ground, detecting pipeline networks with metal or plastic pipe diameters ≤ 100 mm and burial depths up to 3 meters.



LISTENING ROD

Used to connect RCS-S3 sensors when detecting soft muddy ground.

Figure 1: PQWT 125B Water Leak Detector in an outdoor application.

2. SAFETY INFORMATION

- **Do not immerse the sensor in water.** The sensor is designed for contact with surfaces above or near pipes, not for submersion.
- Handle the sensor and all components gently to prevent damage.
- For optimal results, conduct measurements under circumstances with minimal environmental disturbance. Measurements conducted at midnight are often ideal due to reduced ambient noise.
- If the instrument is not used for a long time, it should be recharged once every month to maintain battery health.
- When conducting measurements in soft soil, connect the sensor with the sound pole and insert it into the soil to achieve the best effect.
- Always wear the provided headphones during operation to protect your hearing and clearly discern leak sounds.

3. PACKAGE CONTENTS

Before beginning, ensure all components are present and undamaged. The standard package for the PQWT 125B Water Leak Detector includes:

- Host machine (main display unit)
- Headphones
- 2 detector sensors (RCS-S3)
- Control handle
- Connecting wire
- Listening Rod (Sound Pole)
- Strap
- USB Data Cable
- Charger
- Universal Adapter

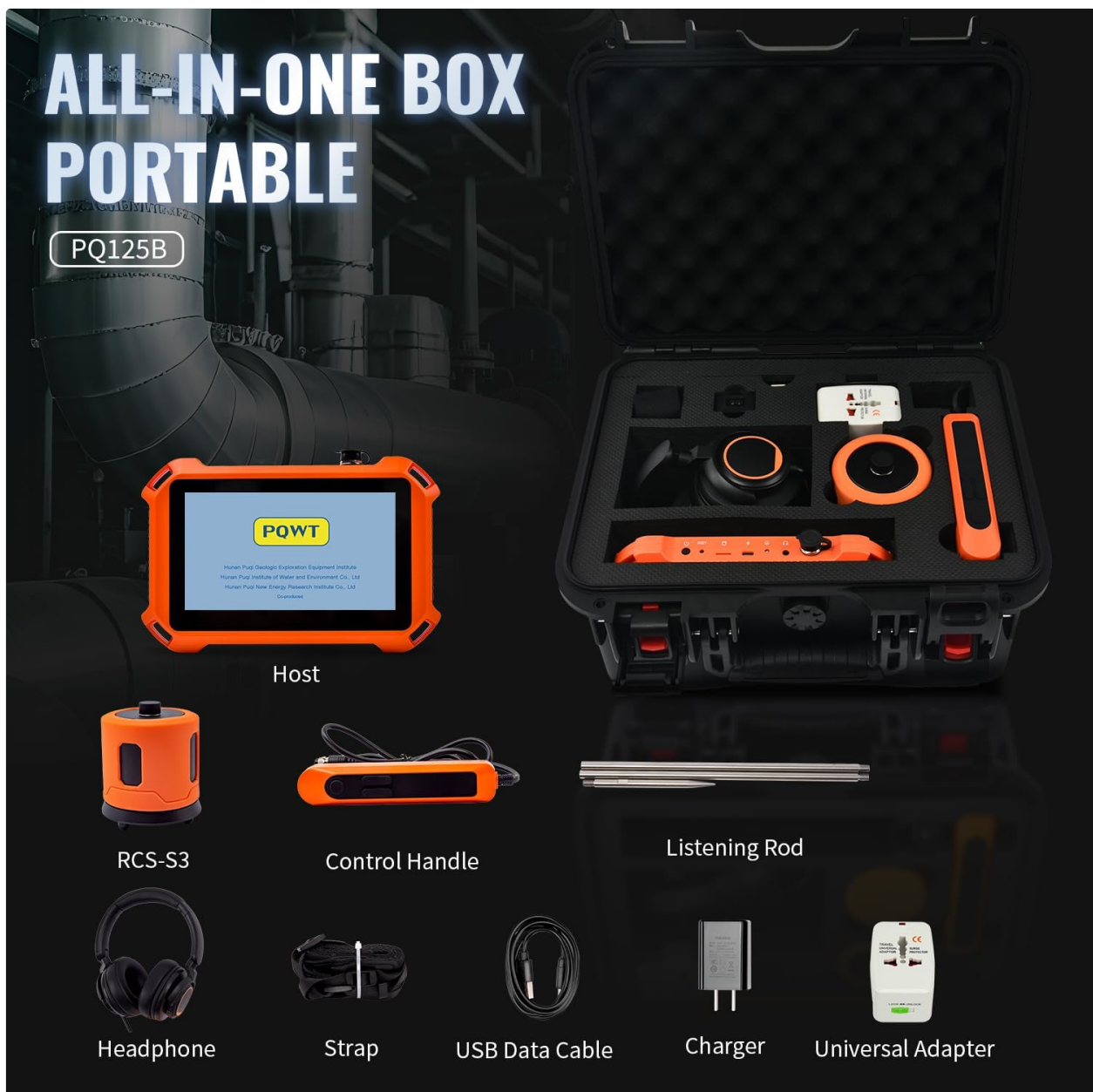


Figure 2: Complete set of PQWT 125B components.

4. SETUP

Follow these steps to assemble and prepare your PQWT 125B Water Leak Detector for operation:

1. **Connect the Host Machine:** Connect the main interface of the connecting wire to the host machine.
2. **Connect the Sensor:** Connect the four-core interface of the connecting wire to the RCS-S3 sensor.
3. **Connect Headphones:** Plug the headphones into the designated port on the host machine.
4. **Activate Noise Control:** Switch on the noise-control feature on the headphones for clearer sound isolation.
5. **Power On:** Long press the power button on the host machine to enter the boot screen. The instrument will display six options: Spectrum Analysis, Filtering Analysis, Live Recording, File Explorer, Settings, and About.

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Video 1: PQWT-CL series operation video demonstrating instrument assembly and initial setup.

5. OPERATING INSTRUCTIONS

The PQWT 125B offers two primary measurement methods: Rough Measurement (Spectrum Analysis) for initial surveys and Accurate Measurement (Filtering Analysis) for precise leak localization.

5.1 Rough Measurement (Spectrum Analysis)

This mode is used for rapid investigation of large areas to identify potential leak zones.

1. From the main menu, double-click "**Spectrum Analysis**" to enter the measurement mode.
2. Long press the handle switch of the connecting wire to activate the sensor.
3. Adjust the "**Volume**" and "**Gain**" on the screen to a suitable level.
4. Place the sensor on the pavement directly above the suspected pipeline.
5. Listen through the headphones for sound effects. The spectrum on the instrument's screen will increase as you approach a leak source, and the sound in the headphones will become clearer.
6. Move the sensor along the pipeline, pressing the switch to inspect every one meter. When the volume and spectrum increase significantly, it indicates a potential leak source.
7. Release the handle switch to finish the measurement at a point.



Figure 3: Visual representation of leak detection.

5.2 Accurate Measurement (Filtering Analysis)

This mode provides more precise localization of the leak once a general area has been identified.

1. From the main menu, double-click "**Filtering Analysis**" to enter this mode.
2. The screen will display eight options, each corresponding to a different frequency band based on pipe material (Metal, Plastic, Unknown) and soil type (Hard Soil, Soft Soil). Select the option that best matches your actual measurement environment. For example, for a metal pipe in hard soil, select "**E. Metal Pipe-Hard Soil**".
3. The measurement method is consistent with Spectrum Analysis. Long press the handle switch and place the sensor on the ground.
4. When you are further from the leak source, the sound in the earphones will be comparatively stable, and the "Signal Level" on the screen will be lower.
5. As you move closer to the leak source, the sound in the earphones will increase obviously, and the "Signal Level" on the display screen will be significantly higher. The point with the highest signal level indicates the precise location of the leak.

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Video 2: PQWT-CL series operation video demonstrating rough and accurate measurement techniques.

6. MAINTENANCE

- Keep the instrument and all accessories clean and dry. Wipe with a soft, damp cloth if necessary.
- Store the device in its protective case when not in use to prevent physical damage.
- If the instrument is not used for an extended period, recharge it once every month to preserve battery life and performance.
- Avoid exposing the device to extreme temperatures, direct sunlight, or corrosive substances.

7. TROUBLESHOOTING

If you encounter issues with your PQWT 125B Water Leak Detector, consider the following common solutions:

- **No Power:** Ensure the battery is charged. Connect the charger and allow sufficient time for charging. Check the power button for proper engagement.
- **No Sound in Headphones:** Verify that the headphones are securely plugged into the host machine. Check the headphone's noise-control switch is on. Ensure the volume and gain settings on the host machine are adjusted appropriately.
- **Weak Signal/Unclear Sound:** Adjust the volume and gain settings. Ensure the sensor is making good contact with the ground. If in soft soil, use the listening rod. Minimize environmental noise by conducting measurements during quieter times, such as midnight.
- **Incorrect Measurement Mode:** Ensure you have selected the correct measurement mode (Spectrum Analysis for rough, Filtering Analysis for accurate) and the appropriate pipe/soil type in Filtering Analysis mode.
- **Sensor Not Responding:** Check all cable connections between the sensor, connecting wire, and host machine. Ensure the handle switch is pressed correctly during measurement.

If problems persist after attempting these troubleshooting steps, please contact customer support.

8. SPECIFICATIONS

Feature	Specification
Model Number	PQ125B
Brand	PQWT
Colour	Orange
Product Dimensions (L x W x H)	35L x 22W x 25H Centimetres
Item Weight	6.5 Kilograms
Number of Batteries	2 AAA batteries required (included)
Control Method	Touch
Audible Noise	100 Decibels
Maximum Range (Detection Depth)	3 Meters
Sensor Technology	Ultrasonic Sensor
Wattage	2 watts
Built-In Media	Host machine, Headphones, 2 detector sensors, Control handle

9. WARRANTY AND SUPPORT

PQWT is committed to providing reliable products and excellent customer service.

- **Warranty:** The PQWT 125B Water Leak Detector comes with a 2-year manufacturer's warranty, ensuring worry-free use.
- **Technical Support:** Benefit from lifetime professional guidance and one-on-one after-sales service. Our team offers round-the-clock rapid response to assist with any inquiries or operational challenges.

AFTER-SALES SERVICE



2 YEARS SUPPORT



**ROUND-THE-CLOCK
RAPID RESPONSE**



**LIFETIME
PROFESSIONAL
GUIDANCE**



**ONE-ON-ONE
AFTER-SALES SERVICE**

Figure 4: PQWT After-Sales Service team.