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- › [PQWT](#) /
- › [PQWT L50 Underground Water Leak Detector Instruction Manual](#)

## PQWT PQWT-L50

# PQWT L50 Underground Water Leak Detector Instruction Manual

Model: PQWT-L50 | Brand: PQWT

## 1. INTRODUCTION

The PQWT L50 is an advanced underground water leak detection system designed for precise localization of pipeline leaks in various environments, including homes, walls, and underground pipes. This device utilizes multi-sensor acoustic technology and a smart touchscreen interface to provide accurate and efficient leak detection. It is equipped with noise-reduction headphones for clear audio feedback and supports both general and precise location detection modes.



Figure 1.1: PQWT L50 Main Unit and Components

The image displays the PQWT L50 main unit, featuring a central touchscreen, connected to noise-reduction headphones on the left and two distinct sensors (vertical and horizontal) on the right. All components are in an orange and black color scheme, indicating a complete leak detection kit.

## 2. PRODUCT COMPONENTS

The PQWT L50 leak detector kit includes all necessary components for immediate operation. Please verify that all

items listed below are present in your package upon unboxing.

# SHIPPING LIST



Host machine



Vertical sensor



Horizontal sensor



Noise Reduction Headphone



Belt



5V 2V Charger and wire

Tools Case



Instruction manual  
warranty card



Figure 2.1: PQWT L50 Shipping List

This image illustrates the complete shipping contents of the PQWT L50 kit, including the host machine, vertical sensor, horizontal sensor, noise reduction headphone, belt, 5V 2V charger and wire, tools case, and instruction manual/warranty card.

## Included Components:

- Host Machine (Main Unit)
- Noise Reduction Headphones
- Vertical Sensor
- Horizontal Sensor
- 5V 2A USB Charger and Cable
- Carry Case
- Instruction Manual / Warranty Card
- Belt

# PRODUCT PARTS

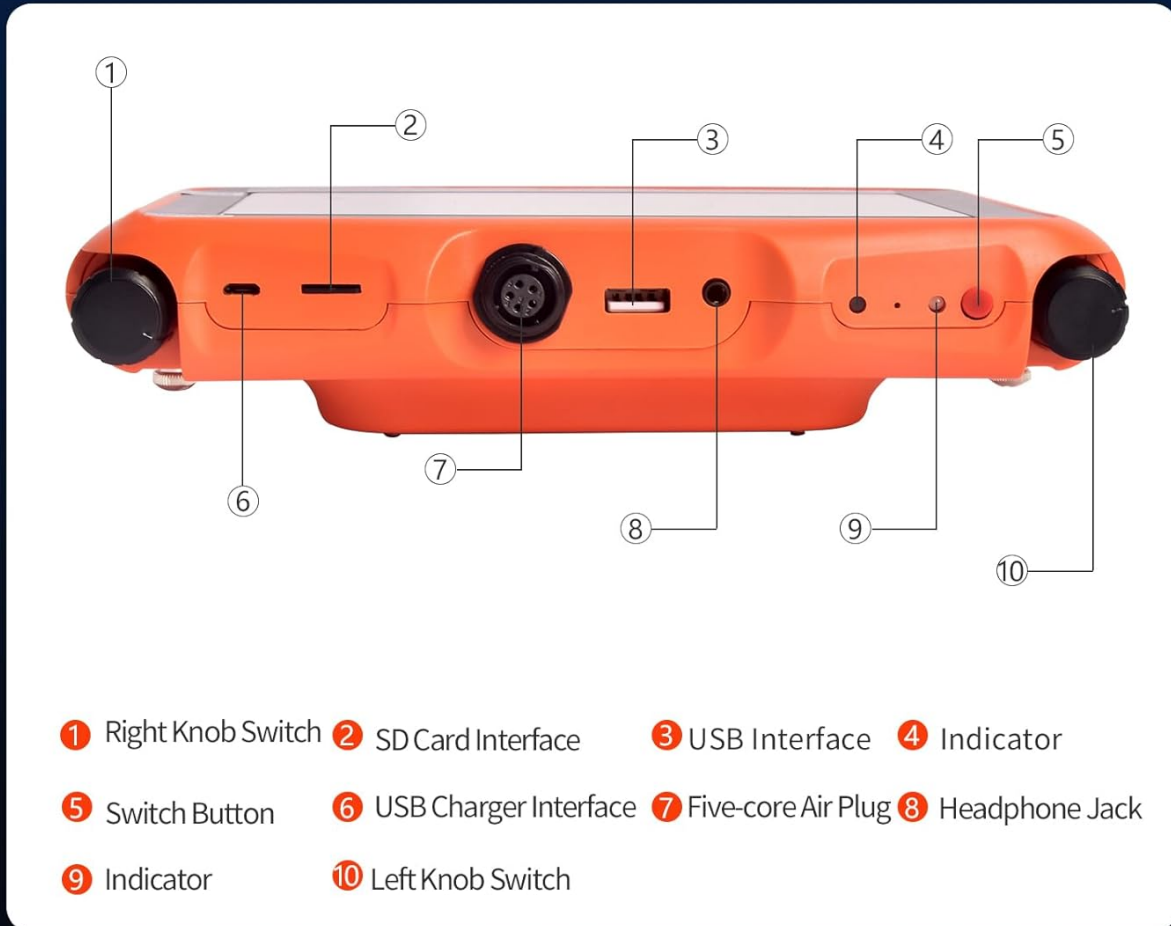


Figure 2.2: PQTW L50 Product Parts

This diagram labels the various ports and controls on the PQTW L50 main unit, including the Right Knob Switch, SD Card Interface, USB Interface, Indicator lights, Switch Button, USB Charger Interface, Five-core Air Plug, Headphone Jack, and Left Knob Switch.

## 3. SETUP GUIDE

Follow these steps to set up your PQTW L50 device for first-time use:

1. **Unpack Components:** Carefully remove all items from the carry case and verify against the shipping list.
2. **Charge the Device:** Connect the 5V 2A USB charger to the USB Charger Interface (6) on the main unit. Plug the charger into a power outlet. The device requires 7-8 hours for a full charge. Ensure the device is fully charged before initial operation for optimal performance.
3. **Connect Headphones:** Plug the noise-reduction headphones into the Headphone Jack (8) on the main unit.
4. **Connect Sensors:** Depending on your detection needs, connect either the Vertical Sensor or the Horizontal Sensor to the Five-core Air Plug (7) interface. Ensure a secure connection.
5. **Power On:** Press the Switch Button (5) to power on the device. The touchscreen will illuminate, and the

system will boot up.

## 4. OPERATING INSTRUCTIONS

The PQWT L50 offers two primary detection modes: General Detection Mode for broad area scanning and Location Mode for precise leak pinpointing.

### 4.1 General Detection Mode

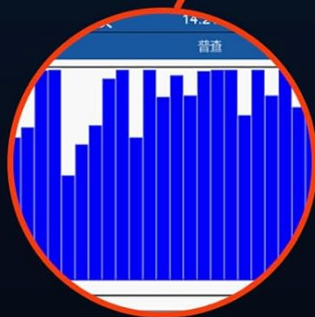
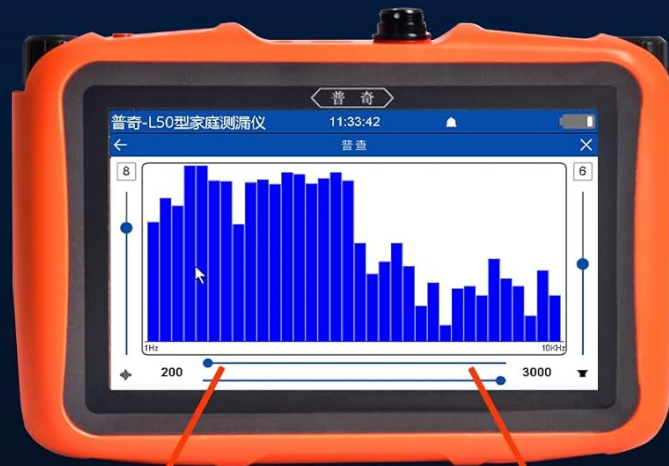
This mode is suitable for quickly scanning large areas to identify potential leak locations. It provides a visual spectrum display to indicate areas of suspected leakage.

- Select "General Detection Mode" from the touchscreen interface.
- Move the connected sensor across the area to be inspected.
- Observe the real-time signal columns and frequency spectra on the LCD touchscreen. Higher signal strength indicates a potential leak.
- Listen for auditory cues through the noise-canceling headphones.

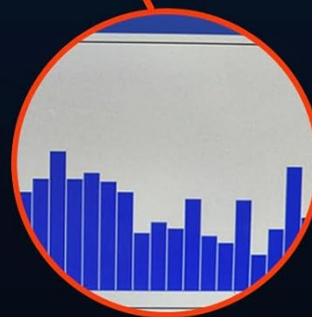
Pinpoint Leaks with Precision

# GENERAL DETECTION

Mainly suitable for checking indoor pipe leakage areas



Suspected leaks spectrum



Non-leakage points spectrum

Figure 4.1: General Detection Mode Interface

This image shows the PQWT L50's touchscreen display in General Detection Mode, illustrating the difference between a suspected leak spectrum (with higher, more erratic bars) and a non-leakage point spectrum (with lower, more consistent bars).

## 4.2 Location Mode

Once a general area of interest is identified, switch to Location Mode for precise pinpointing of the leak source. This mode captures and retains signals from multiple points for comparison.

- Select "Location Mode" from the touchscreen.
- Place the sensor at sixteen different points around the suspected leak area. The device will capture and display the signal strength for each point.
- Compare the signal strengths displayed on the screen. The point with the highest signal strength indicates the precise leak location.
- The device also features a recording function in this mode for data analysis.



Figure 4.2: Locating Mode in Use

This image depicts a user operating the PQWT L50 in Locating Mode, demonstrating how the device's real-time digital spectrum display helps accurately locate and visualize small leaks by showing a clear leakage point on the screen.

## 4.3 Sensor Usage

The PQWT L50 comes with two types of sensors optimized for different detection scenarios:

- **Vertical Sensor:** Ideal for indoor underground detection, such as floors or ground surfaces.
- **Horizontal Sensor:** Designed for detecting leaks in walls, cabinets, and other narrow spaces where a flat contact surface is required.

Pinpoint Leaks with Precision

# MULTI-SENSORS FOR DIFFERENT DETECTION NEEDS



**VERTICAL SENSOR**  
For indoor  
underground detection



**HORIZONTAL SENSOR**  
For walls, cabinet and  
other narrow space

Figure 4.3: Multi-Sensors for Different Detection Needs

This image showcases the two types of sensors included with the PQWT L50: a vertical sensor for indoor underground detection and a horizontal sensor for walls, cabinets, and narrow spaces, demonstrating their distinct shapes and intended uses.

## 5. CARE AND MAINTENANCE

Proper care and maintenance will ensure the longevity and optimal performance of your PQWT L50 leak detector.

- **Cleaning:** Wipe the main unit, sensors, and headphones with a soft, dry cloth after each use. Do not use abrasive cleaners or solvents. Ensure no liquid enters the ports or openings.

- **Storage:** Store the device and all components in the provided carry case when not in use. Keep it in a cool, dry place, away from direct sunlight and extreme temperatures. The operating temperature range is -20°C to +50°C.
- **Battery Care:** The device uses 2 Lithium Ion batteries. For best battery life, avoid fully discharging the batteries frequently. Recharge the device when the battery indicator is low. If storing for extended periods, charge the device to approximately 50% every few months. The average battery life is 2 years.
- **Sensor Handling:** Handle sensors with care. Avoid dropping them or subjecting them to excessive force, as this can damage the internal piezoelectric ceramic membrane.

## 6. TROUBLESHOOTING COMMON ISSUES

If you encounter issues with your PQWT L50, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Device does not power on.	Low battery; Power button not pressed correctly.	Charge the device for 7-8 hours. Ensure the power button is pressed firmly.
No sound from headphones.	Headphones not connected properly; Headphone volume too low; Faulty headphones.	Ensure headphones are fully plugged into the jack. Adjust volume using the knobs. Test with another pair of headphones if available.
Inaccurate leak detection / Too sensitive.	High ambient noise; Incorrect sensor usage; Device settings.	Ensure the environment is as quiet as possible. Use the appropriate sensor (vertical/horizontal) for the surface. Adjust gain settings if available (refer to on-screen UI).
Screen unresponsive / UI issues.	Software glitch; Low battery.	Restart the device. Ensure the device is fully charged. If issues persist, contact customer support.
Device turns off by itself.	Low battery; Automatic shutdown feature.	Charge the device. Check if there's an auto-shutdown setting in the menu and adjust if necessary.

## 7. TECHNICAL SPECIFICATIONS

Detailed technical specifications for the PQWT L50 Underground Water Leak Detector:

# PARAMETERS



Model NO PQWT-L50/L40/L30	Gain 10 levels adjustable
Charging Time 7~8h	Volum 10 levels adjustable
Standby Time 15h	Frequency 1HZ~10000HZ
Charger 5V 2A USB charging	Power About 2W
Weight 0.7KG(Host)	Working Temperature -20°C~50°C

Figure 7.1: PQWT L50 Key Parameters

This image presents a table summarizing key technical parameters for the PQWT L50, L40, and L30 models, including Model No., Gain, Charging Time, Volume, Standby Time, Frequency, Charger type, Power, Weight (Host), and Working Temperature.

Specification	Value
Model Number	PQWT-L50
Product Dimensions	7.87 x 5.91 x 9.84 inches (Host)
Item Weight	17.6 pounds (Total Package)
Host Weight	0.7 KG
Power Source	Battery Powered
Battery Type	2 Lithium Ion batteries (included)
Average Battery Life	2 years

Specification	Value
Charging Time	7-8 hours
Standby Time	15 hours
Charger	5V 2A USB charging
Voltage	12 Volts
Wattage	2 watts
Control Method	Touch
Display Style	LCD touch screen
Noise Level	130 dB
Maximum Range	0.5 Meters
Sensor Technology	Ultrasonic Sensor
Frequency Range	1HZ~10000HZ
Measurement Accuracy	0.001mV
Working Temperature	-20~+50 Degrees Celsius
Usage Environment	Indoor
Special Features	Unlimited number and time of recordings.

## 8. WARRANTY AND CUSTOMER SUPPORT

PQWT is committed to providing high-quality products and excellent customer service.

### 8.1 Warranty Information

The main unit of the PQWT L50 comes with **two-year warranty** from the date of purchase. Additionally, PQWT offers **lifetime maintenance** for the device. This warranty covers manufacturing defects and malfunctions under normal use. Please retain your purchase receipt for warranty claims.

### 8.2 Customer Support

For any questions, technical assistance, or warranty claims, please contact the manufacturer:

- **Manufacturer:** Hunan Puqi Geologic Exploration Equipment Institute
- **Supported Languages:** English, Turkish, Italian, French, Spanish, Arabic, Russian, Korean, German, Portuguese.

Please refer to the contact information provided on the warranty card included in your product package for the most direct support channels.

