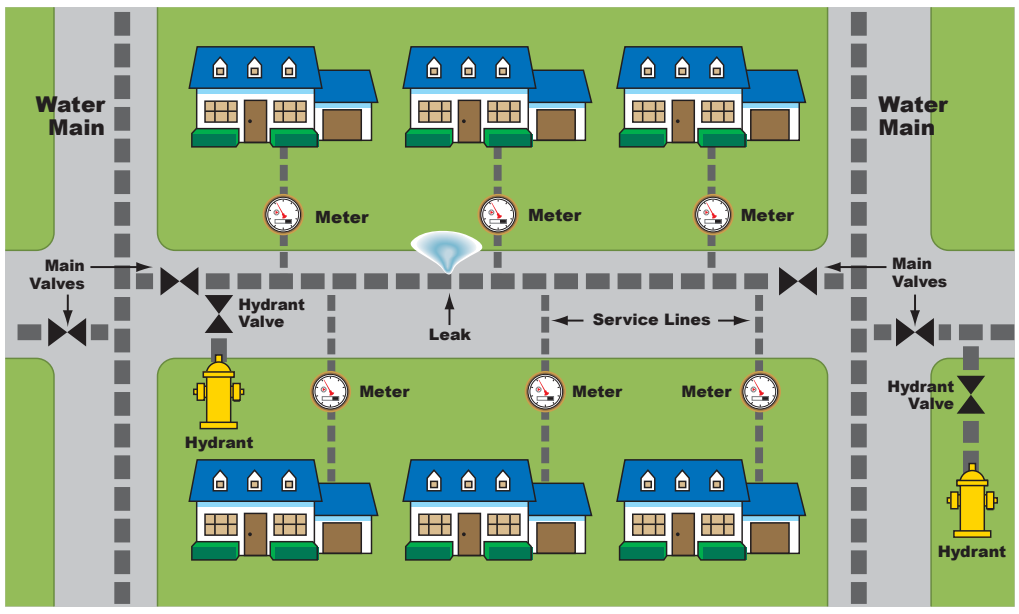
LD-12 Professional's Plus Water Leak Detector

LD-12 Quick Reference Guide

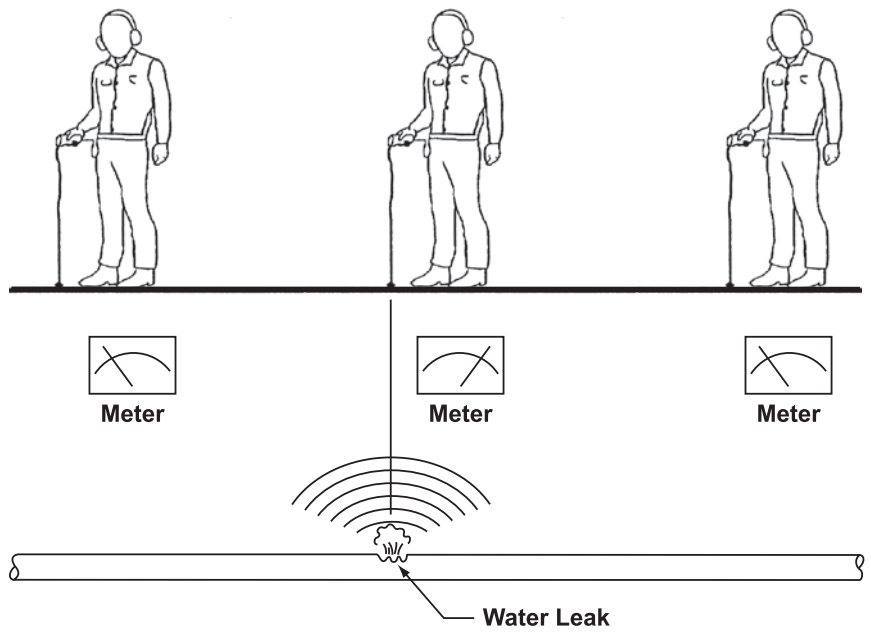
How to Pinpoint Water Leaks

1. The sounds of leaks in pressurized water pipes can travel for hundreds (even thousands) of feet in every direction down the mains and services. If there is no evidence of the leak, then compare the loudness of the leak sounds at the meters, valves, and hydrants:



When you have found the two meters, valves, or hydrants with the loudest leak sounds, you are ready to begin the final "pinpointing". First, mark the exact location of the pipe between the two loudest valves, meters, hydrants, etc. with a pipe locator.
Then listen every 2-3 feet directly over the pipe.

2. Listen directly over the pipe between these two loudest locations. Use your hearing and the meter to determine exactly where the leak sound is loudest:



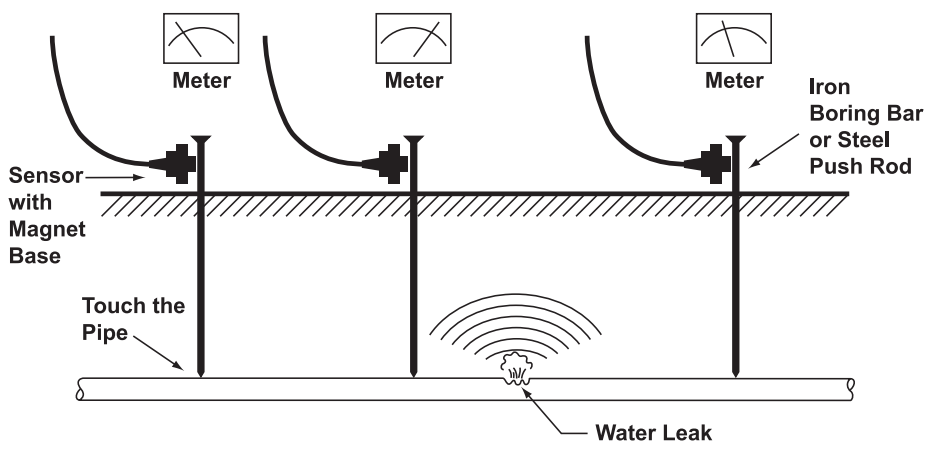
Use the 3-pronged base plate to listen directly over the pipe beneath asphalt streets or concrete slabs.

3. If the pipe is under soft ground or loose fill and if it is not too deep (only 3-5 feet), then using boring bars or push rods may be effective. Touch the pipe if possible, but if the pipe is deep or the soil is rocky, try to get the bars in firmly at least 2-3 ft deep.

Always check for other underground utilities like gas lines or cables before pushing bars or rods into the ground over the pipe.

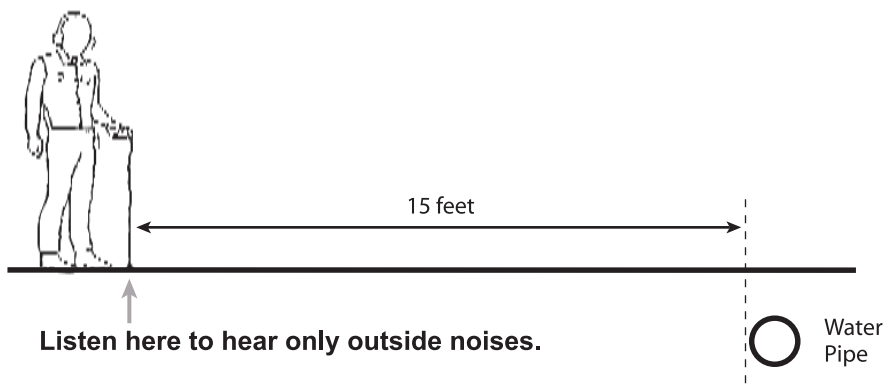
Use the magnet base on the sensor. Listen on the bar close to the ground (less wind). Compare the loudness at all the bars with your hearing and with the Meter Display.

4. With the boring bars (or push rods) touching the pipe at 2 or 3 locations, compare the loudness of the leak:



If one bar is louder, then it is closer to the leak. Move the other bars closer to the loudest bar and listen again. Keep moving the bars until they are only 5-10 ft apart and center bar is loudest. Dig.

5. The Low and High Filters are used to filter out outside noises of wind, traffic, A/C hum, etc. If you encounter these interferences, try the 200 Hz filter or 400 Hz filter while listening on the same surface but 15 feet away from the water lines:



If the filter removes the outside noise, then listen over the pipe again and re-adjust the Volume.

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Operating Instructions

1. LD-12 Professional's Plus Water Leak Detector includes accessories for water leak "pinpointing" and water leak "surveying":

Ground Miking to pinpoint a leak in a hydrant line

Leak Surveying by listening at a hydrant with magnet base

Leak Surveying by listening at a meter with contact rod

2. **WARNING!** The LD-12 is very sensitive and can damage hearing if not used properly. Keep the sensor motionless when the Mute Switch is depressed, and keep the Volume below 25% when attaching to a hydrant, meter, or valve that may be very loud.

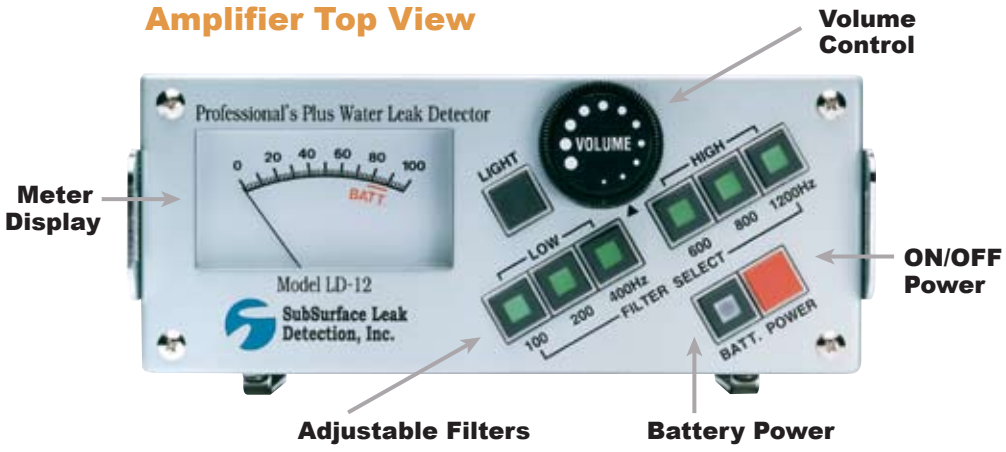
Standard Accessories for LD-12

1. Amplifier with Meter Display and Filter Controls
2. Ground Microphone and Handswitch (Mute)
3. Aviation-Grade Stereo Headphones
4. Heavy-Duty ABS Plastic Carrying Case
5. Magnet Base
6. 3-Section Contact Rod
7. Nut Driver (to remove base)
8. Instruction Manual (not shown)

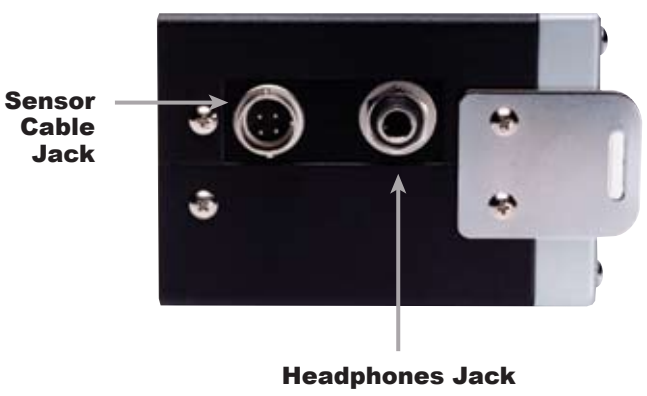
3. **WARNING!** Do not drop the sensor hard on to asphalt, concrete, valves, or other surfaces from 2-3 feet or more. The sensor has a piezo electric ceramic element, and it can be broken by hard drops or harsh treatment.

4. The amplifier has a large Meter Display, Volume Control, Adjustable Filters, ON/OFF Power Switch, Battery Power Switch, and a Light Switch:

Amplifier Top View

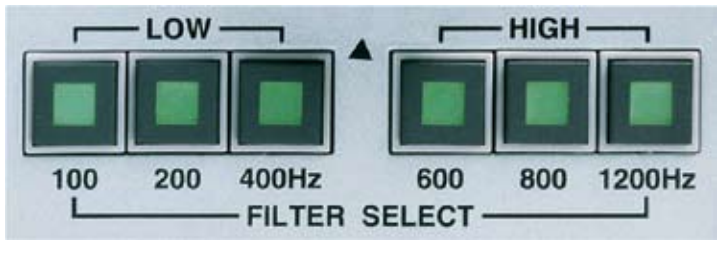


5. The headphones jack is "power switched". If the headphones are not plugged in, the amplifier's power does not go ON:



Amplifier Side View

6. There are 3 Low Filters and 3 High Filters. The LD-12 user hears all of the sounds between the two filters that are ON. All sounds that are in frequencies lower or higher are filtered out.



7. The Limitter Switch cuts off all sounds greater than 110 dB in the ON position. The Filter-Thru Switch bypasses all of the filtering in the ON position.

8. The meter on the amplifier is used for comparing the loudness at different locations when the user's hearing can not tell which location is louder. Adjust the Volume Control to move the meter needle to a midrange position. Then compare meter readings at different locations.