

PERIJA PLUS



Smart Water Leak Detector

PERIJA PLUS Professional Grade is the **latest generation water leak detector**, based on a piezo electric ground microphone coupled with an **advanced controller** for identifying leaks in **buried water pipes** of different materials & depths. **The Perija Plus is an advanced high capability water leak detection equipment that can be used to listen for & pinpoint water leaks in all types of water pipe networks under pressure, such as metallic and non-metallic water pipe networks**, in both the main lines and branches of metro, industrial and irrigation environment, for **water pipes upto 750mm in diameter & which are being used at ≥ 2 bar pressure, allowing the operator to detect leaks in pipes buried upto 5 meter depth below ground.**



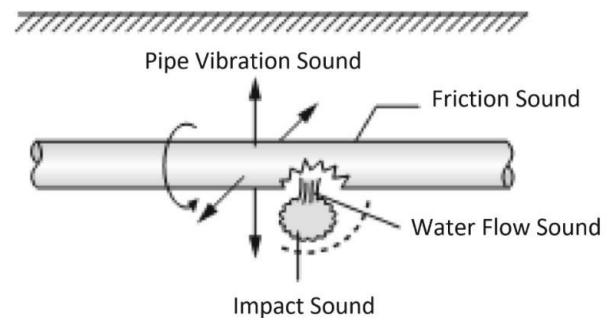
The system advancements include the **filteROT** filter scan mode which assists the operator to help **select the best available sound filter** for the environment where leak is being detected.

The **easy to use GUI interface** on the **5" bright color sunlight viewable screen** with Auto brightness control of the Perija Plus, allows the operator to navigate product menu options and clearly view the

How it works : When a pipe carrying water has a leak, water tends to spurt out of the leak point and generates the following four types of sound:

- **Water flow sound**
- **Friction sound**
- **Impact sound**
- **Pipe vibration sound**

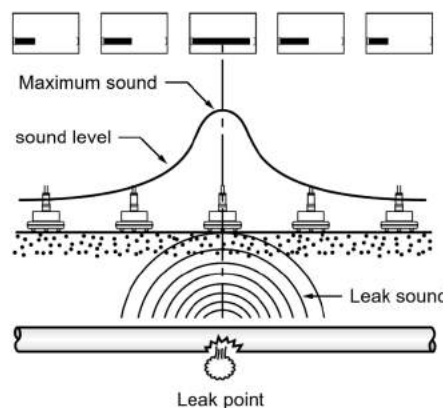
Combined, these sounds constitute the leakage sound. Where there is no leakage, the user can only hear the sound of the water flow.



Water Leak Indication :

When moving along the path of a given water pipe, the closer you get to the leak point, the signals received from the leakage will grow in intensity and/or range.

The **noise** heard becomes **louder** and **larger horizontal signal bar-graphs** are displayed on the screen.



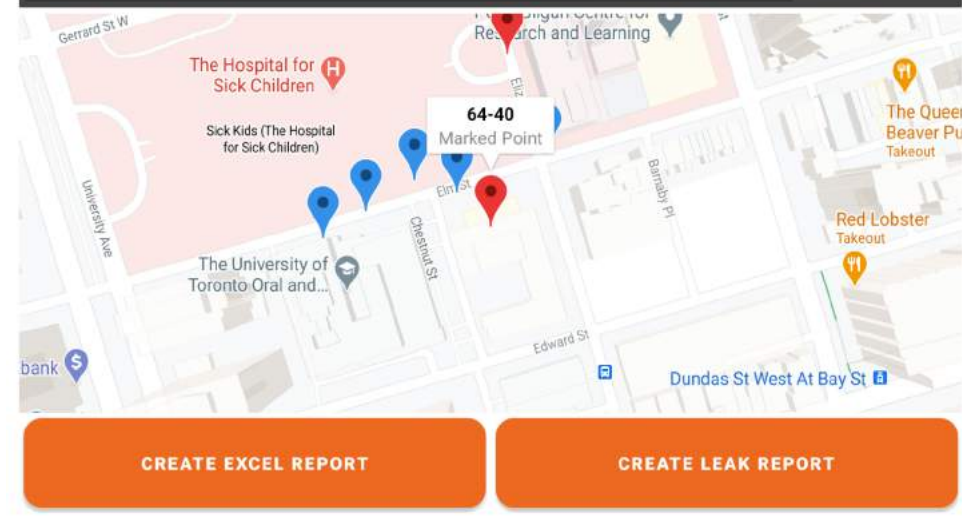
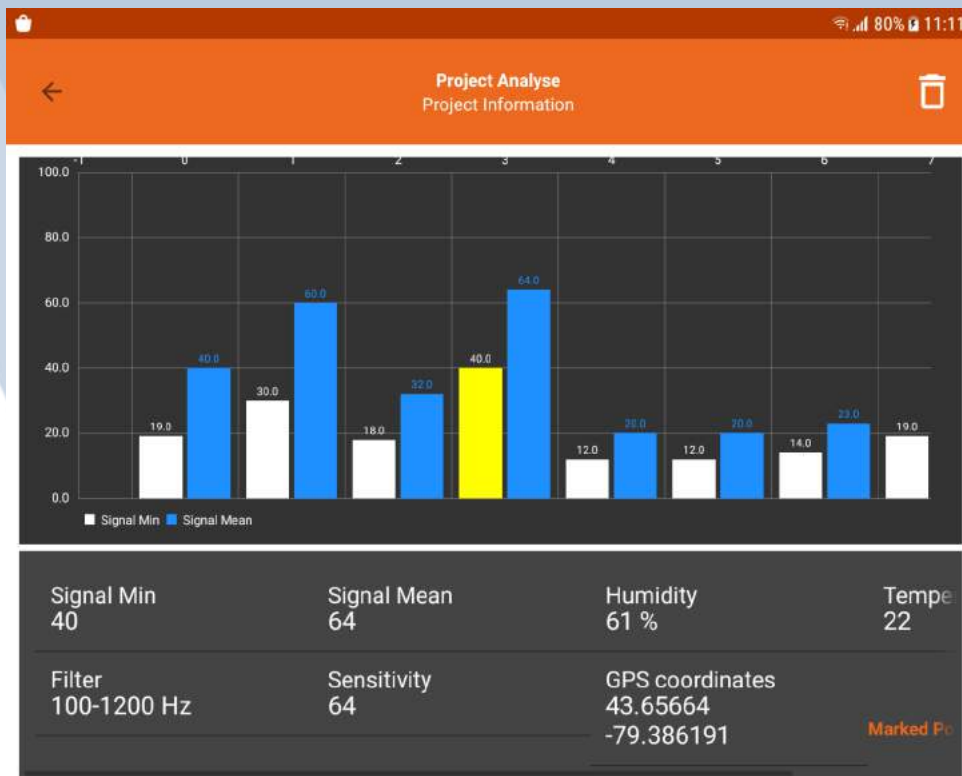
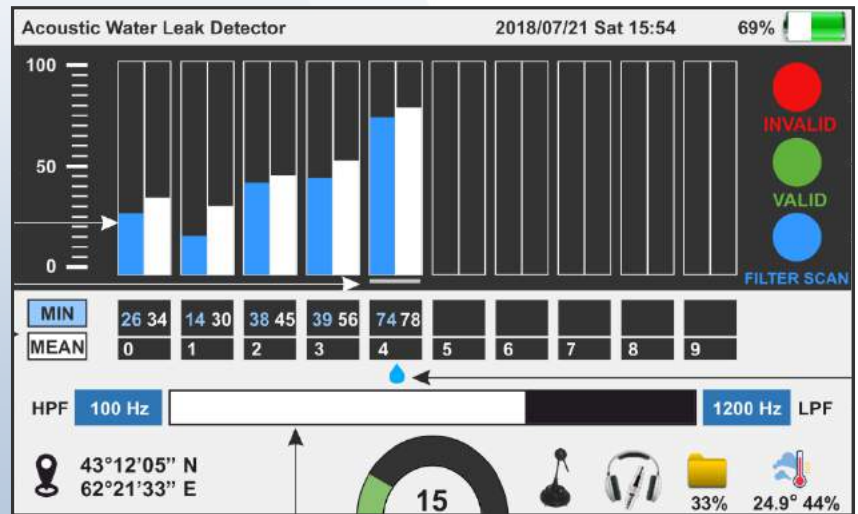
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The PERIJA Plus Water leak detector is smart- the device does guides the user to disregard measurements considered as invalid and proceed with those which are valid, through clear visual indication.

Minimum received signals are examined and compared in different areas in order to eliminate unwanted impact noises as well as those generated by ambient sounds such as human speech, vehicles, etc.



Complete GIS capture of areas surveyed and leaks found



The location of leak identified by the user is marked & saved during the process in the device memory and, transferrable to the HSS-APP Mobile App via Bluetooth function.

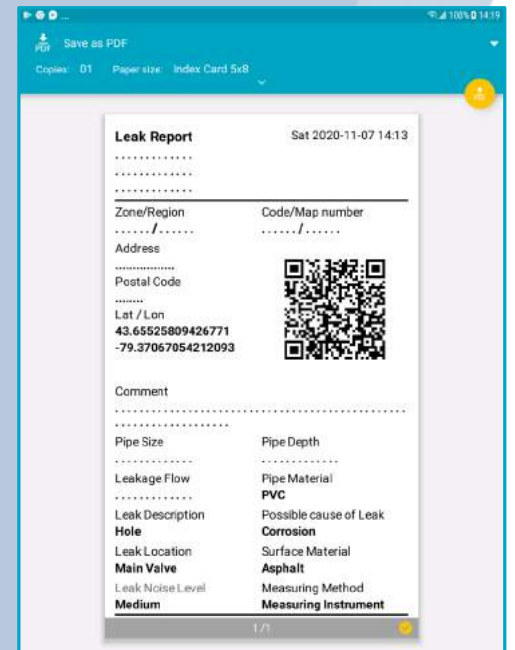
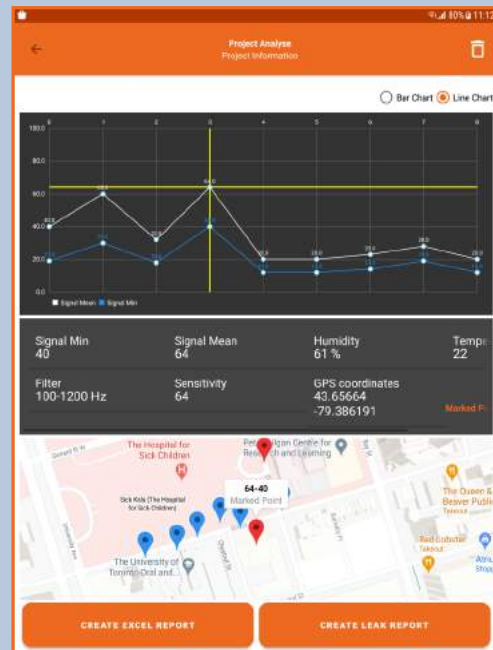
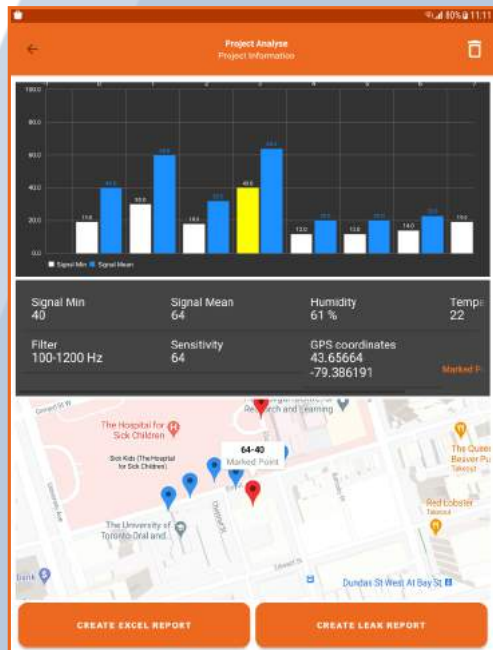
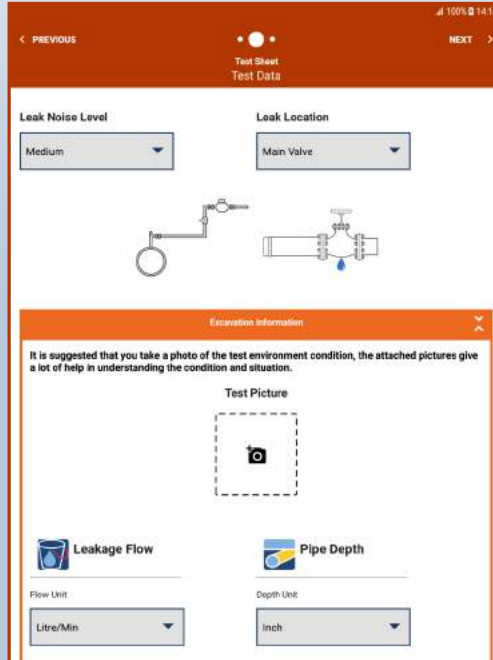
The PERIJA PLUS also contains a built in GPS for logging GPS locations to save leak detection, system performance, geographic data.

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The Utility Mobile or Table App , available on Android devices allows step by step analysis, documentation and reporting of the leaks detected.



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Specification:

Technology	Acoustic
Sensor	Piezoelectric type, Pick-up (equipped with characteristic ball to break wind noise) IP67 equivalent (water depth 1m, 30 minutes) Power Supply Voltage 3.3V
Sensitivity	Total sensitivity 900V/G or higher (400Hz)
Amplification	59dB±3
Frequency Range	100 – 1200 Hz, High Pass: 100, 200, 400 Hz Low Pass: 600, 800, 1200 Hz
Band Pass Filters	9 Selectable band pass filters + filterROT™ function High Pass: 100, 200, 400 Hz Low Pass: 600, 800, 1200 Hz
filterROT™ Mode	Filter Scanning & Rotation Mode
Activation	Manual MUTE key on hand-switch
Display	5" Color sunlight readable TFT (with 1000 NITS backlight) Backlight: ON, OFF, Auto adjustment (Depend on environment light) Multi languages: English / French etc Measuring and displaying values: Signal Strength Minimum / Average Signal Strength Display values in numeric, Bar-graph and Line-graph (Selectable with SWAP Key) The user can mark each signal as a leakage value also, unmark or Delete. Date and Time Continuous GPS Data System Temperature and Humidity Battery Level Memory Capacity Headphone Status Sensor Status Bluetooth Status Sensitivity Level
Audio	System alarm / 8-ohm stereo headphone / Bluetooth headphone support. Module standard Bluetooth 4.0 Class 2 Bluetooth, FCC, and CE certified Backwards compatible with 1.1, 2.0, 2.1 + EDR and 3.0, Operating Range 20 to 30 meters
GPS	Internal GPS / CEP 2.5m, Refresh time 1 sec
Memory	Automatic Data storage upto 1,200,000 data frames 30 folders x 20 projects per folder x 2000 data frames per project
Data Communication	Bluetooth for data transferring to "HSS Water Leak Detection APP"
Smart-phones APP	HSS Water Leak Detection APP (for Android version of smart-phones and tablets)
Standards	IC: 11012A-BC127 / FCC: SSBC127-X This device complies with part 15 of the FCC Rules
Battery	3 x 3.7V / 3500mAh 18650 Li-ion Rechargeable Battery Pack, Unreachable 100 - 240V, 50/60Hz Fast Charger PERIJA PLUS is equipped with Power Management System.
Transport	Impact resistant Hard case with IP68 protection
Operating Temp. Range	Operation Temperature: -10 to +50 °C Storage Temperature: -20 to +60 °C Dust proof and Water-resistant
Dimension	Controller Main Unit - (L x W x H): (136 mm x 60 mm x 30 mm) Standard package - (L x W x H): (188 mm x 130 mm x 65 mm)
Weight	Controller Main Unit: ~ 1.75 Kg Pick-up sensor with hand-switch set: ~ 0.57 Kg Standard package: ~ 6.55 Kg
Warranty	1 Year Limited Warranty
Controller	Made in Canada
Ground Microphone	Made in Japan