

# RD547

## A MODULAR TOOLKIT FOR WATER LEAK SPECIALISTS

### SUMMARY

The RD547 is a single control unit that enables the water leak specialist to use both acoustic and tracer gas methods for the location and pinpointing of leaks. Optional accessories allow the user to customise their tool kit to match their business needs. For example, adding a pulse wave generator enables the operator to conduct pipeline tracing on most pipe types including plastic. This modular approach provides a cost effective way for a water leak specialist to equip themselves to take on a wide scope of work.

### OVERVIEW

Leaks come in all shapes and sizes and their characteristics vary depending on the pipe material and surrounding geology. A water leak specialist requires multiple tools in their armoury to detect, locate and pinpoint leaks accurately. The greater precision of location, the less likelihood of unnecessary damage or destruction to property. With the RD547 only a single control unit is required, on to which a specialist can attach the most appropriate accessory for the task in hand. Three microphone types, (universal, ground and a test rod), along with extension tips, tripods and magnet allow the user to configure the optimum listening device. Additionally, filter settings on the panel can be customized to take environmental considerations such as background noise or pipe characteristics into account.

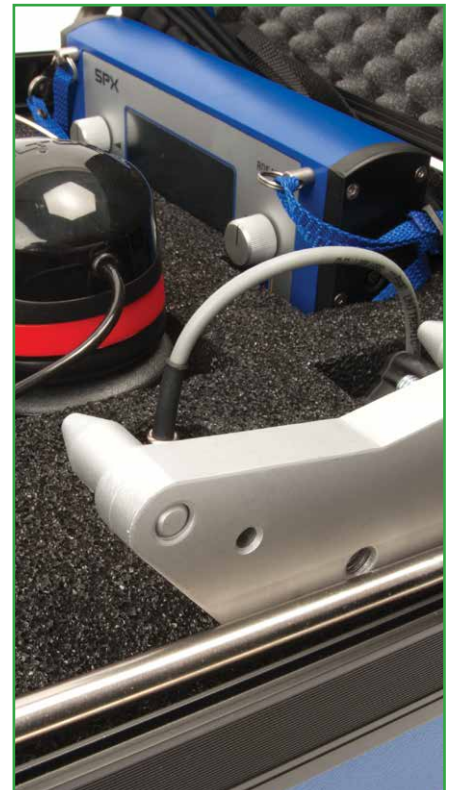
When tracer gas is a more effective option, a ground sensor for the detection of hydrogen can be attached. This combination of accessories and filters equips the water leak specialist with a flexible toolkit to tackle a broad range of leak types in a cost effective manner.



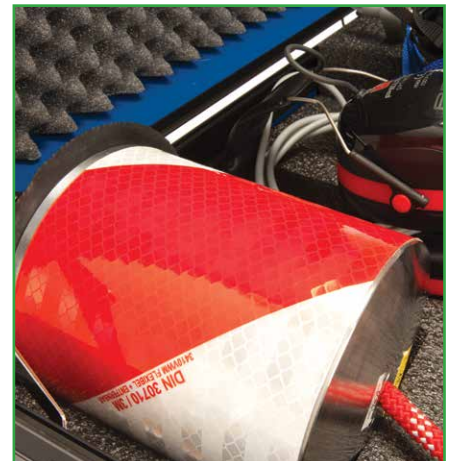
### PRODUCT FEATURES AND BENEFITS

FEATURE	BENEFIT:
Smart Mode	Greater confidence in the leak measurement as advanced signal processing is used to indicate if the sound heard is consistent with a leak.
Preset filters for fittings and ground measurements	Speed and accuracy of results are improved as measurements are focussed on leak specific sound frequencies.
User defined settings	Allows specialist to use site specific knowledge to refine results.
Long-term measurement	Measurements of up to one hour enable user to distinguish leaks from environmental noises such as pump or tap use.
PWG Mode	Allows detection of plastic pipes when used with a pulse wave generator.
LED backlight color display	Display is readable in daylight and colors aid clarity of results.
Results histogram	Clear visual representation of leak location. The higher the bars, the closer the leak.
Customizable hearing-protection headphones	4 safety levels allow the user to choose the appropriate level of protection for them.

RD547 CONTROL UNIT TECHNICAL DATA	
Operation modes	Acoustic leak detection (smart, geophone, long-term measurement), trace gas detection, and acoustic pipe location Measuring modes for minimum levels, average levels, pulse wave measurements
Measurement functions and device functions	Logging function, memory preference for manual filter settings, sound level overmodulation protection, trace gas detection with concentration-dependent signal (optic and acoustic)
Control	Via touch screen, buttons and dials
Amplification	120dB with low noise factor
Filter	Up to 256 freely selectable (for stick and ground microphones)
Display	Color LCD (automatic backlight), 480 x 272 pixels
Battery check	On screen
Warranty	24 months
Power	4 x batteries, type LR14 C, 1.5V
Battery life	Up to 14 hours in non-stop operation Up to 40 hours in normal operation
Connections	Bayonet (microphone / sensor) ¼" / 6.3mm phone jack (headphones)
Protection class	IP54
Housing	Aluminum, powder-coated
Temperature conditions	Operation: 23°F to 130°F / -5°C to +55°C Storage: -10°F to 150°F / -25°C to +65°C
Dimensions (approx.)	L 8¼" x W 6½" x H 2½" / L 210 x W160 x H 60 mm
Weight (approx.)	3lb 1oz / 1,400 g not including batteries



MICROPHONE TECHNICAL DATA	
Sensitivity	900 pC/g
Frequency range	Universal: 100 - 5000Hz Ground: 5 - 3000Hz (optimized for lower frequencies) Test rod: 100 - 5000Hz
Protection Class	Universal: IP68 Ground: IP54 Test rod sensor: IP54 Test rod extensions: IP68
Design	All microphones are piezo-ceramic sensors with the following features: Universal: Versatile microphone with a range of accessories including magnet, tripods and extension tips which can be used for fittings or ground measurements Ground: Optimized for outdoor ground use with wind protected mic and vibration Test rod: Optimized for fittings with extension tips, (up to 3' 7" / 110cm), for access
Temperature conditions	Operation: 14°F to 176°F / -10°C to +80°C Storage: -4°F to 212°F / -20°C to +100°C



HYDROGEN GROUND SENSOR TECHNICAL DATA	
Reaction sensitivity	1ppm H <sub>2</sub>
Measuring range	10ppm H <sub>2</sub> to 20,000ppm H <sub>2</sub>
Resolution	1ppm H <sub>2</sub>
Response time	0.5 seconds
Design	Ground sensor with two-part stick (length approx. 3¼ feet / 100cm) and rubber sleeve, connecting cable (length approx. 6½ feet / 200cm)
Temperature conditions	Operation: 14°F to 140°F / -10°C to +60°C Storage: -4°F to 140°F / -20°C to +60°C



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