



PSX-3000

Ultrasonic Inspection System *Leak Detection & Condition Monitoring*



The **PSX-3000** is a state of the art ultrasonic leak detector and condition monitor designed and manufactured in the USA and covered by three patents.

It is a totally sealed instrument not affected by dust, sand, oil, water or other contaminants.

The principle of operation of the PSX-3000 is based on the detection of ultrasonic sound generated by Friction, Arcing and Turbulence in Flow found in every mechanical and electrical system and its translation into audio that can be heard in the headset.

The **PSX-3000** uses two patented ultrasonic converters to translate the ultrasonic sound air/gas leaks and other industrial problems generate to sound humans can hear. Tracing these sounds with the PSX-3000, leaks, arcing and other mechanical problems can be located in minutes saving thousands of dollars in wasted energy and loss of productivity.

The **PSX-3000** is a necessary tool to locate compressed air leaks, steam trap leaks, arcing in panels, bearing condition and wear, lubrication condition and many other applications.



Why Use (Choose) the PSX-3000?

Instruments such as the PSX-3000 become extensions of your senses. The PSX-3000 allows you to locate from far the location of an air leak that is invisible and inaudible in a plant, the rushing sound in a steam trap that is leaking or the clicking of a gear tooth in a machine member. Locating a leak in an industrial setting requires careful navigation of the user between machine members, pipes, cable trays and many other obstacles. Having an instrument that requires multiple adjustments as the conditions change while searching may be dangerous. Your eye must be where you are going and where you suspect the leak to be. For this reason we developed AFT. In older more traditional ultrasonic leak detectors the user had to tune like in a radio the instrument in order to find a leak like finding a station. Entry level fixed band instruments are limited in loud industrial environments. If you are not tuned at the leak station you will miss the leak. AFT overcomes this limitation by assuring that any signal that qualifies to be inspected will be decomposed cycle-by-cycle and reconstructed in the audio band including its original intensity. This approach frees the user to concentrate on the task and his safety. Additionally the PSX-3000 could fit in your pocket without disconnecting the headset making it easier to climb around machines. The PSX-3000 is completely sealed letting you use it in difficult environments that are dusty like mines, wet like in bottling plants or ships, in deserts with fine dust that penetrates everything or in severe industrial plants with a multitude of challenges. The PSX-3000 is constructed with high quality metal components intended to provide you with years of service. However, when the time comes that it needs service, PlantScan stands behind the PSX-3000 ready to help you get back to work fast. The PSX-3000 will become the most trusted tool in your toolbox.





PSX-3000 Applications

Airborne	Touch Probe
Leak Detection in:	Leak Detection and Condition Monitoring in:
Compressed Air & Gas Systems	Steam systems, Steam Traps
Heat Exchangers	Valves of all types
Vacuum Systems	Pumps and Compressors of all types
Refrigeration Systems FREON, NH ₃ , CO ₂ , H ₂ , N ₂ etc.	Hydraulics (Cylinders, valves)
High Pressure Hydraulics	Bearings (all types) Pulleys
Corona, Arcing	Gearboxes (Broken Gear Teeth)
Tanks, Enclosures, Rooms, Coolers (With the optional Sound Generator)	Lubrication Condition

PSX-3000 Competitive Features

Feature	Benefit
Double Ultrasound Converter, HET. (Heterodyne) & AFT (Automatic Frequency Tuning)	Frees the user from instrument adjustments to concentrate in locating the leak.
Air and Water Resistant to IP64	Performance is not affected by Dust, Dirt, Mists and Sprays
Hard Anodized Aluminum Housing with Sealed Connectors	Durable, Suitable to Hard Industrial & Military Use.
Rechargeable high capacity battery, NiMH	Many Hours of leak detection.
Special Signal Output for Spectrum/Vibration Analyzers or Waveform Recorders.	Tracking of sound signatures and in depth analysis to diagnose and predict bearing problems
Behind the head Headset/Hearing Protector (USA-Mil Spec.)	Can be worn with a hard hat providing hearing protection
Further Technical Specifications:	www.PlantScan.com



The **PSX-3000**:

- Is not affected by other sounds in the test area
- Is not affected by other gasses in the test area
- Is not affected by wind, mists, dust (especially fine desert dust).
- Is not necessary to become part of a system under test or to inject tracers into it.

PSX-3000 Accessories (Included in the kit)

Touch Probe; Transfers solid borne ultrasound to the sensor for detection.



Waveguide; Transfers ultrasound from difficult to reach points to the sensor. User can make custom pieces to fit their needs.

Horn Restrictor; Narrows the field of view of the PSX-3000 and supports the accessories. It helps locate a leak within thousands of an inch.



Optional Accessory:

SoundBurster; Ultrasonic Sound Generator for simulating pressure in tanks, enclosures, etc. Detecting the sound, locates the leak.



Contact:
PlantScan Corporation
9227 East Lincoln Avenue
Suite 200
Lone Tree, CO 80124
Tel: 303-706-1183
Fax: 303-706-1184
info@PlantScan.com

