

Soundscan 101 Fact Sheet



Originally designed for the US Military, the Soundscan 101 Ultrasonic Inspection System is now used in many industries throughout the world for predictive maintenance, quality control, and leak detection.

The Soundscan 101 Receiver converts ultrasound signals produced by industrial machinery and vehicles into easily recognizable audible sounds so the user can evaluate the condition of individual components, even in extremely noisy plant environments. Early warning signs and defects can be detected thus preventing costly repairs, safety related injuries, and downtime.



KEY PRODUCT FEATURES

- Unmatched sensitivity, signal-to-noise ratio, and selectivity
- Provides the capability for diagnosing component and system faults
- Designed for a wide range of applications from bearing analysis to leak detection
- Non-destructive; can be used while equipment is operating
- Convenient, handheld design for ease of use
- User-friendly controls include potentiometer for on/off and sensitivity adjustment; output switch; and gain mode switch
- Dual-sensitivity analog meter for ultrasonic signal and battery level indication
- No calibration or special maintenance required
- Operated on a single 9V alkaline battery
- Extruded aluminum case maximizes life in harsh industrial environments
- Includes a range of attachments for testing in contact and scan mode
- Selectable length probes increase the reach for testing
- Includes industrial grade headset suitable for use with hardhat in high ambient noise areas
- Compatible with SoundCTRL System for signal logging, benchmarking, and trend analysis

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APPLICATIONS

Mechanical Equipment Condition Monitoring/Analysis

- Bearings
- Gearboxes
- Steam traps
- Engines
- Fuel injectors
- Pumps
- Compressors
- Butterfly valves
- Belts/chains/pulleys

Electrical Inspection

- Power transformers
- High voltage insulators
- Ignition systems
- Alternators
- Switches/relays
- Power boxes
- Electric motor brushes/bushings
- Sparkplugs

Pressure & Vacuum

Leak Detection

- Pipelines/hoses/fittings
- Underground pipelines
- Steam traps and lines
- Condensers
- Heat exchanger tubes
- Exhaust/intake manifolds
- Pumps
- Cylinder head gaskets
- Internal cylinder leaks
- Check/control valves
- Valve stems
- Pneumatic control boxes

Non-Pressurized Vessel Integrity Testing

- Storage tanks
- Pipelines and hoses
- Door /window seals
- Bulkhead/hatch seals
- Gaskets & fittings
- Check /control valves
- Exhaust
- Clean rooms
- Railroad cars
- Airplane cabins
- Automobile truck cabs



Soundscan 101 Components

- A) Soundscan 101 Receiver
- B) UT2000 Transmitter
- C) Industrial Grade Headset
- D) One-Inch Acoustic Probe
- E) Large Concentrator
- F) Mini-Concentrator
- G) Acoustic Tip
- H) Set of 4 Solid Probes
- I) Acoustic Extension Probe Set
- J) 9-volt Alkaline Batteries (2)
- K) Carrying Case
- Training CD (not shown)
- Operator's Manual (not shown)

Air Audit System excludes Transmitter
and Solid Probe Set.

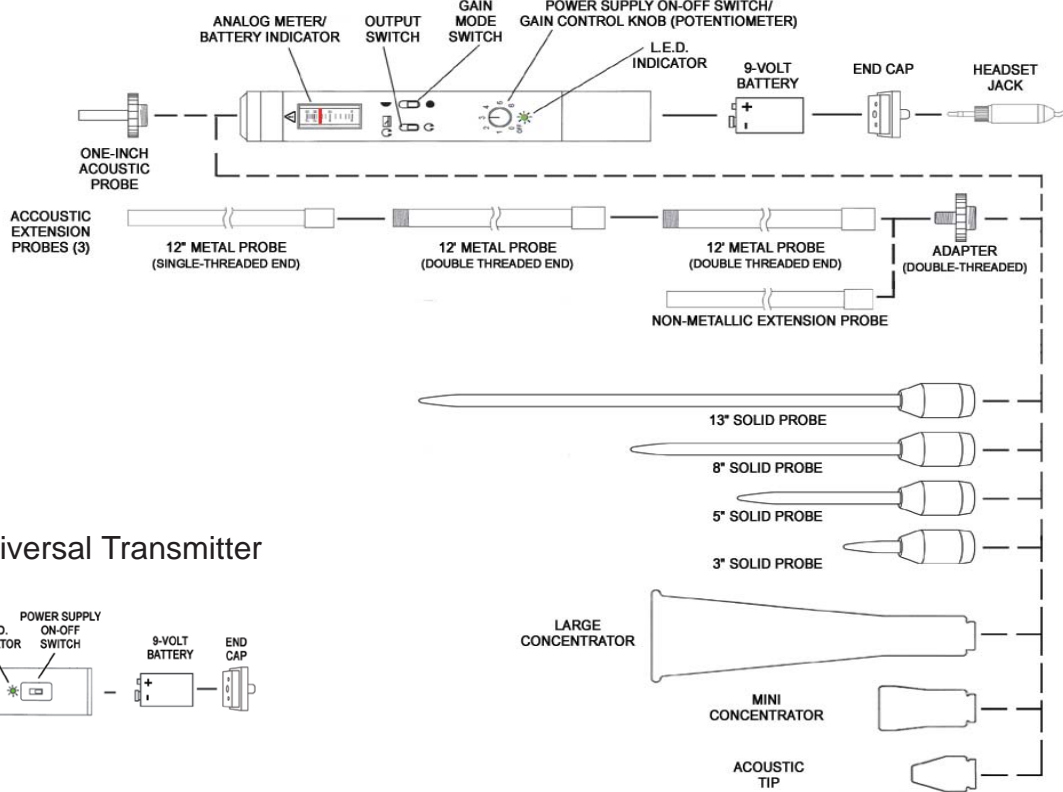
Free place at one of our
regular 1 and a half day
training sessions is also
included with the
purchase of each
Soundscan 101 full
inspection system.

Currently training is
held in Westminster,
MD.

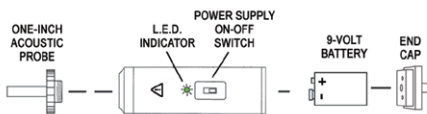
Other locations will be
offered in the future.

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Soundscan 101 Receiver and Attachments



UT2000 Universal Transmitter



Soundscan 101 Specifications

Dimensions	Soundscan 101 Receiver: 222mm x 32mm x 32mm (8.75in x 1.26in x 1.26in) UT2000 Transmitter: 105mm x 32mm x 32mm (4.125in x 1.26in x 1.26in)	Frequency Bandwidth	1.8 - 2.2 kHz at level 0.7 (or -3dB)
Kit Dimensions	462mm x 340mm x 170mm (18in x 14in x 7in) 4.5kg	Working Resonance Frequency	40 kHz +/- 1.5 kHz
Weight (Including battery)	Soundscan 101 Receiver: 330g (11.60oz) UT2000 Transmitter: 175g (6.2oz)	Receiver Output Frequency	300 Hz - 2,000 Hz (to Headset/Analog Meter)
Housing	Extruded Aluminum Wall thickness 2.3mm (.09in)	Receiver Displays Indicator	Analog Meter/Battery level LED Power Indicator
Power Supply	9V Alkaline battery	Operating Temperature Range	-20c (-4°f) to +54c (+130°f)
Battery Life	Soundscan 101 Receiver: > 45 hours UT2000 Transmitter: > 300 hours	Controls	Soundscan 101 Receiver: On/off potentiometer switch Gain switch Meter selector switch UT2000 Transmitter: On/off switch
Distance of receiver reception	Up to 150 feet	Headset	Industrial grade 600 Ohm impedance; 21-24 dB Ext. Noise attenuation
Receiver threshold of sensitivity	Minimum Intensity: 10 ⁻¹² W/m ² Minimum Ultrasonic Pressure:	Warranty	1 year parts and labour extended warranty available

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Companies that have enjoyed the many benefits of the Soundscan UL101:

- Alban Engine Power Systems
- Allegheny Power
- Archer Daniels Midland Co.
- Baltimore Gas & Electric
- BAM Racing Team
- Bates Container
- Bausch & Lomb, Inc.
- Boeing Company
- BorgWarner Automotive
- Busch Gardens Virginia
- Cargill Inc.
- Caterpillar
- Contra Costa Newspapers
- Daikin America
- Delta Airlines
- Detroit Edison
- Dominion Resources
- Dow Chemical
- Exxon Mobil
- Ford Motor Company
- Frito Lay
- General Electric
- Georgia Pacific
- Hershey Chocolate USA
- Ingersoll Rand
- Jackson Memorial Hospital
- John Deere
- Johnson Controls, Inc.
- Lockheed Martin Corporation
- Los Alamos National Lab.
- Michelin Tire Corporation
- NASA
- National Container
- National Institute of Health
- Navy Public Works
- Newport News Shipbuilding
- NIST
- Otis Elevator
- Philip Morris, USA
- Reynolds Metals
- Stanley Bostitch, Inc.
- Toyota Motor Corporation
- Union Pacific Railroad
- United Airlines
- United States Air Force
- United States Army
- United States Navy
- US Airways
- Washington Metro Area Transit Authority

Soundscan 101 System Options:

Full Kit/Standard.....	P/N: 101-000031*
Full Kit/Intrinsically Safe.....	P/N: 101-000033
Air Audit System, Standard.....	P/N: 101-000036
Air Audit System, Intrinsically Safe.....	P/N: 101-000037

* US Govt/Military NSN: 6635 01 183 8948

Headset Style:

Behind-the-Head - Allows use with hardhat...	P/N: 101-025005
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Accessories:

Belt Pouch.....	P/N: 101-005035
Receiver Jacket.....	P/N: 101-005055
Gel Ear Seals.....	P/N: 101-005007
Defect Tags, Red.....	P/N: 101-030085
Defect Tags, Orange.....	P/N: 101-030086
Defect Tags, Yellow.....	P/N: 101-030087
A/C Adaptor & Power Supply.....	P/N: 101-000046
Y-Splitter.....	P/N: 101-005045

Recommended Complimentary Products:

SoundCTRL System.....	P/N: 101-000010
PowerBeam 300.....	P/N: 101-007025

The Soundscan 101 meets and exceeds ASTM E1002-93

The Soundscan 101 Head set meets and exceeds ANSI specifications and OSHA standards.

US Government/Military Part Number: NSN 6635 01 183 8948



A Sonatest NDE Group Company

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