

## SDT-170 Ultrasonic Leak Detector

The SDT 170 is robust, lightweight, user friendly and ergonomically designed. It provides a totally efficient, and simple response to proper and effective equipment maintenance and product quality. The SDT 170 is multifunctional and as user-friendly as a desktop PC. It is a single hardware configuration that transforms to your changing needs, capable of measuring several physical parameters (ultrasound, audible noise, temperature, rpm, flow, and more). All versions are built around our world famous ultrasonic detection capabilities and feature an internal airborne ultrasonic sensor. Upgraded versions can collect, store, and transfer data to and from a PC.



**The SDT 170 Saves Money** - Regular use of the SDT 170 enables the efficient planning of machine downtime which leads to better productivity. The ability to pinpoint leaks in systems can also lead to significant savings of up to 30% in energy costs.

**The SDT 170 Is Ergonomically Designed and User-Friendly** - The SDT 170 is a comfortably designed hand-held instrument controlled by an eight key touch pad. A generous Liquid Crystal Display, 3cm x 6cm is protected by a Borosilicate glass screen and displays all parameters needed for its use in 8 or more different languages. The technical training requires about ten minutes. An extruded aluminium outer shell is protected by "anti-shock" insulation and the NMHD rechargeable battery block uses latest battery technology allowing more than eight hours of use and unrestricted charging practices.

**The SDT 170 Is Intelligent** - The SDT 170 automatically recognizes the sensors upon connection and switches to appropriate parameters and measuring mode accordingly. Some versions are equipped to accept user-defined parameters such as the measurement and collection of data at set intervals. The use of flash EEPROM technology allows us to transmit by Internet constant upgrades, updates, and improvements to our dealers and users worldwide.

**The SDT 170 Is Digital and Versatile** - The advanced, state of the art, digital SMT electronics permits the use of other original accessories. The 170 processes data digitally, displays it digitally, and outputs it in standard digital protocol formats. As our customers develop new applications, we meet their requests by developing sensors to suit those needs. Whether the result of a request or as a perceived need for industry, over time the 170 will expand its functionality and versatility indefinitely.

### Many Useful Applications:



Leak Detection



Predictive  
Maintenance



Tightness Testing



Automatic Quality  
Control

## SDT-170S Ultrasonic Leak Detector

The SDT 170S (Standard) is the entry-level point for the 170 platform and features standard airborne ultrasonic detection with an integral sensor. It is primarily used for compressed air leak and vacuum leak detection, verifying the tightness of seals in a car, plane, truck, train, clean rooms, vessels, ship hatch covers, etc...). It is a low cost solution for the detection of electrical problems (arcing, corona, tracking), inspection of steam traps, hydraulic and pneumatic circuits, cavitating pumps, and general mechanical inspections where trending and measured data is not critical.

All measured signals are displayed on a segmented analogue bar graph. The SDT 170 S version is equipped with an internal airborne ultrasonic sensor and can be used in combination with all external ultrasonic sensors (contact probe, magnetic sensor, threaded sensor, flexible sensor, parabolic wave-form concentrator, and waterproof airborne sensors).

The SDT 170S can be fully upgraded, over the Internet, to the 170M (Multifunctional) and 170MD (Multifunctional/Datalogger) versions.

### The unit contains:

FUSUIT170	Samsonite briefcase SDT 170 + foam
FU170S	SDT 170 S unit with battery, rubber protection and user manual
FSPRECIND	Precis. indicat. 101/150/170 (Threaded tip, rubber tip, 2 plast. tubes)
FUHEADPH	Headphone 130 dB
FUPS170EU (GB)	Battery loader SDT 170 - 240 EU (GB)
FUSTRAP	Shoulder strap for 170, switchbox or Datalogger

### Technical Data:

Function	Multifunction detector
Display	Extended temperature Graphic High contrast LCD with backlighting 100 x 32 pixels
Keyboard	8 function key's
Ultrasonic sensors	<ul style="list-style-type: none"> <li>Internal and External</li> </ul>
External sensors	<ul style="list-style-type: none"> <li>Sound level (noise level) dBA, RPM, Air mass flow(sccm), Temperature.</li> </ul>
Measuring range	-10 dB $\mu$ V to 120 dB $\mu$ V
Accuracy	$\pm$ 0.5 dB $\mu$ V
Measuring resolution	0.1 dB $\mu$ V
Signal to noise ratio	-5 dB $\mu$ V typical
Band width	(-3dB) 2 kHz
Frequency range	0 to 200 kHz depending on the sensor
Battery pack	<ul style="list-style-type: none"> <li>Rechargeable NiMH (Nickel Metal Hydrate).</li> <li>Autonomy of 8 to 10 hours without backlighting.</li> <li>Recharge time: 5 to 6 hours.</li> <li>Nominal Capacity: 1,3 Ah.</li> <li>Life span: 500 to 1000 charge/discharge cycles.</li> <li>Recharge only with appropriate charger.</li> </ul>
Auto power down	Auto power down after pre set time
Operating temperature	-10°C to +60°C / 14°F to 140°F
Housing	Extruded aluminum
Weight	Approx. 700 g / 24.69 oz. (with battery and holster included)
Dimensions	203 x 38 x 88 mm / 8 x 1.5 x 3.4 inches (L x H x W)
Holster	Rubber resistant to hydrocarbons (Fluor silicone)

## SDT-170M Ultrasonic Leak Detector

The SDT 170M (Multifunctional – Memory – Mechanical Applications) is the multifunctional upgrade from the entry level SDT 170 S Standard. It is a robust instrument capable of detecting small or large pressure and vacuum leaks in high noise environments and trending the condition of rotating machinery components such as bearings, gears, couplings, motors, reducers as well as pumps, valves, steam traps, turbines and detecting of corona discharges etc ... It features:

- Digital measurement and readout capabilities
- Contact Probe for contact acoustic vibration measurements
- 1000 point memory storage for recording measured data (up to 4000 measurements can be saved in a rolling FIFO memory)
- Compatibility with Multi-functional sensor inputs (temp, rpm, mass flow, dBA)
- Ultrasonic sensor inputs (flexible probe, magnetic probe, parabolic waveform sensor, threaded sensor)

The M version is easily upgraded to the MD version via the Internet.

### The unit contains:

FUSUIT170	Samsonite briefcase SDT 170 + foam
FU170M	SDT 170 M unit with battery rubber protection and user manual
FSPRECIND	Precis. indicat. 101/150/170 (Threaded tip, rubber tip, 2 plast. tubes)
FUHEADPH	Headphone 130 dB
FUPS170EU (GB)	Battery loader SDT 170 - 240 EU (GB)
FUSTRAP	Shoulder strap for 170, switchbox or Datalogger
FSSON170	Contact probe 170 + needle
FUTOPUNCH	Center punch

### Technical Data:

Function	Multifunction detector.
Display	Extended temperature Graphic High contrast LCD with backlighting 100 x 32 pixels
Keyboard	8 function key's.
Ultrasonic sensor	Internal and External
External sensors	Sound level (noise level) dBA, RPM, Air mass flow(sccm), Temperature,
Data Logger	Capacity of approx. 4 000 measurements (includes time, date measurement unit and type of sensor used).
Measuring range	-10dB $\mu$ V to 120dB $\mu$ V
Accuracy	$\pm$ 0.5dB $\mu$ V
Measuring resolution	0.1dB $\mu$ V
Signal to noise ratio	-5dB $\mu$ V typical
Band width	(-3dB) 2kHz
Frequency range	0 to 200 kHz depending on the sensor
Battery pack	Rechargeable NiMH (Nickel Metal Hydrate). Autonomy of 8 to 10 hours without backlighting.
Auto power down	Auto power down after pre set time.
Operating temperature	-10 °C to +60°C / 14 °F to 140 °F.
Housing	Extruded aluminum.
Weight	Approx. 700 g / 24.69 oz. (with battery and holster included).
Dimensions	203 x 38 x 88 mm / 8 x 1.5 x 3.4 inches (L x H x W).
Holster	Rubber resistant to hydrocarbons (Fluor silicone).

## SDT-170M/D Ultrasonic Leak Detector

The SDT 170MD (Multifunctional/Datalogger) is the complete ultrasonic inspection and predictive maintenance trending machine. With all the features of the SDT 170S Standard and SDT 170M Multifunctional, we've added a 15,000-point customizable data logger that interfaces directly with you PC via DataManager software.

DataManager software is the bridge between your SDT 170 MD Ultrasonic Detector and your PC. Any and all data measured by the SDT 170 MD can be stored temporarily in the onboard data logger. DataManager allows this information to be downloaded via RS232 communications to a PC. Once inside the PC, DataManager organises the measurements into a logical and easily retrievable filing system, which is built and customized by the individual user.

Customized routes can be created within the DataManager software (up to 30 routes in total) and uploaded to the SDT 170MD (up to 15 routes at a time). Warning and alarm levels are set for individual assets and data can be presented in list or graphical form. All results can be exported to an ASCII or DBF format.

It is possible to store up to 15.000 measurements per route. For each memory location the last four measurements are stored in a rolling memory (FIFO) and are retrievable at any time.

The main functions of the DataManager software are:

- Create and customize routes
- Upload routes from PC to SDT 170MD
- Download measured data from SDT 170MD to PC
- Organize data into graphical or report formats
- Alert when an alarm is exceeded
- Trend data and provide historical info on the health of plant machinery

### The unit contains:

FUSUIT170	Samsonite briefcase SDT 170 + foam
FU170M	SDT 170 M unit with battery rubber protection and user manual
FSPRECIND	Precis. indicat. 101/150/170 (Threaded tip, rubber tip, 2 plast. tubes)
FUHEADPH	Headphone 130 dB
FUPS170EU (GB)	Battery loader SDT 170 - 240 EU (GB)
FUSTRAP	Shoulder strap for 170, switchbox or Datalogger
FSSON170	Contact probe 170 + needle
FUTOPUNCH	Center punch
FUSOFTDATAMAN1	CD-ROM DataManager Software with user manual
FUCABRS232/170	Cable RS 232 Stewart - SubD9 femelle L 1,5m
FUCONDB25/DB9	Adaptor DB25 - DB9

## SDT-170M/D Ultrasonic Leak Detector

### Technical Data:

Function	Multifunction detector.
Display	Extended temperature Graphic High contrast LCD with backlighting 100 x 32 pixels
Keyboard	8 function key's
Ultrasonic sensor	Internal and External
External sensors	Sound level (noise level) dBA, RPM, Air mass flow(sccm), Temperature,
Data Logger	<ul style="list-style-type: none"> <li>Capacity of approx. 60 000 measurements (includes time, date unit and type of sensor used).</li> <li>Identification of the measuring points: up to 15 000 points per route (12 characters alphanumeric code/point) with 4 point history, optional expandable upto 32</li> <li>Bi-directional data transfer.</li> </ul>
Communication	<ul style="list-style-type: none"> <li>RS 232 C communication interface (19,2 kBaud).</li> <li>IRDA communication interface (115 kBaud).</li> </ul>
Measuring range	-10dB $\mu$ V to 120dB $\mu$ V
Accuracy	$\pm$ 0.5dB $\mu$ V
Measuring resolution	0.1dB $\mu$ V
Signal to noise ratio	-5dB $\mu$ V typical
Band width	(-3dB) 2kHz
Frequency range	0 to 200 kHz depending on the sensor
Battery pack	<ul style="list-style-type: none"> <li>Rechargeable NiMH (Nickel Metal Hydrate).</li> <li>Autonomy of 8 to 10 hours without backlighting.</li> <li>Recharge time: 5 to 6 hours.</li> <li>Nominal Capacity: 1,3 Ah.</li> <li>Life span: 500 to 1000 charge/discharge cycles.</li> <li>Recharge only with appropriate charger.</li> </ul>
Auto power down	Auto power down after pre set time.
Operating temperature	-10 °C to +60°C / 14 °F to 140 °F.
Housing	Extruded aluminum.
Weight	Approx. 700 g / 24.69 oz. (with battery and holster included).
Dimensions	203 x 38 x 88 mm / 8 x 1.5 x 3.4 inches (L x H x W).
Holster	Rubber resistant to hydrocarbons (Fluor silicone).

## SDT-170 Ultrasonic Leak Detector



SDT 170S



SDT 170M



SDT 170M/D

### Model Comparison

	SDT170S	SDT170M	SDT170M/D
Samsonite briefcase + foam	•	•	•
Unit with battery, rubber protection and user manual	•	•	•
Precision Indicators: threaded tip, rubber tip, 2 plast. Tubes	•	•	•
Headphone, 130 dB	•	•	•
Battery loader	•	•	•
Shoulder strap	•	•	•
Contact probe + needle		•	•
Center punch		•	•
CD-ROM Datamanager software with user manual			•
Cable RS232 Stewart sub D 9 female L 1.5 m			•
Adaptor DB25-DB9			•
Optional External Sensors	•	•	•
Optional Non-ultrasonic sensors		•	•

The SDT 170 S can be fully upgraded, over the Internet, to the 170M (Multifunctional) and 170MD (Multifunctional-Datalogger) versions.

The SDT 170 M is easily upgraded to the MD version via the Internet.