

## LDT-1 Ultrasonic Leak Detector



# LEAK-DETECT

LEAK-DETECT is a specialised development from Hilger u. Kern Industrial electronics.

This device is able to detect even the smallest leaks in compressed air systems.

These types of leaks are a typical source of non-audible ultrasonic sound, but at a defined frequency. LEAK-DETECT is a reliable detector which converts this sound into an audible signal and optically displays the signal level on a LED-bar.

## LEAK-DETECT can be used to locate leaks in

- compressed air ring mains and all kinds of pneumatic systems
- vacuum equipment
- valves and fittings
- steam tubes
- oxygen sockets in hospitals
- air conditioning systems in automotive vehicles

## Features and Benefits

- Easy to handle
- Immediately ready for use
- Offers a systematic detection of leaks
- Reduces running costs and consumption of compressed air\*
- Increases the reliability of pneumatic systems\*
- Checking door and window seals of cars, pressure containers, ships, trucks, buses, trains, aeroplanes etc.\*

## Equipment

### Standard

- LEAK-DETECT
- Ultrasonic probe, length 110 mm
- Detection probe for focusing on small leaks from screw threads and fittings
- Headset with hygienic protectors
- 9 V battery
- Rugged ABS portable case

### Optional

- Telescopic rod, 1.50 m long, extendable to 3.00 m
- Parabolic dish with laserpointer
- 9 V accumulator with charger
- Ultrasonic transmitter for leakage check without compressed air



# Function

## The source is ultrasonic sound

The flow characteristics of leaking gases are a typical source of non-audible ultrasonic sound, but at a defined frequency. LEAK-DETECT converts this sound into an audible signal in the headset and displays the signal level as an LED-bar.

## Checking for airtight seals

The combination of a LEAK-DETECT receiver with an optional transmitter makes it possible to check that seals in vehicle cabins, cockpits, refrigerators, housings, etc. are airtight.

1. Place the transmitter inside the cabin and switch the power on.
2. Close the housing or cabin.
3. Switch on the LEAK-DETECT device.
4. Use the LEAK-DETECT sensor to scan the seals to find any leaks while moving the probe along the seals.



## Trace the leakage

1. Plug in the ultrasonic probe, the telescopic rod or the parabolic dish. Plug into the 9 pole sub-D plug of the electronic device.

2. Plug in and put on the head set.

3. Turn the tuner clockwise to switch on the power.

A green LED will indicate that the battery is full.

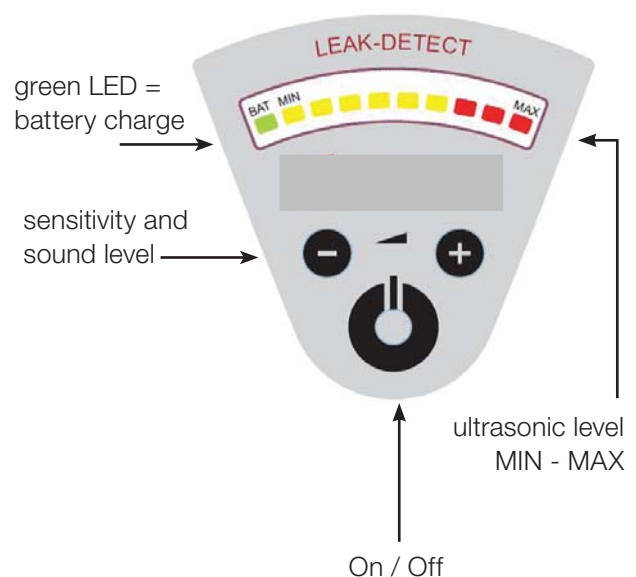
4. Adjust the tuner potentiometer until you hear some hissing in the head set. The first yellow LED will light up.

5. Direct the sensor to the area of equipment that needs to be checked. These areas are normally tubes, fittings and screws. For longer distances, the laserpointer inside the parabolic dish is a helpful direction finder.

6. A leak has been detected if the audio signal increases and the LED signal changes into the red area.

## Technical Data

<b>Power supply</b>	9 V battery or accumulator
<b>Ultrasonic probe</b>	110 mm gooseneck
<b>Telescopic rod length</b>	1.5 to 3.0 m length, 25 mm Ø
<b>Parabolic dish</b>	380 mm Ø
<b>Signal output</b>	LED-bar indicator
<b>Dimensions LEAK-DETECT</b>	180 x 90 x 60 mm
<b>Weight</b>	250 g
<b>Dimensions portable case</b>	360 x 305 x 110 mm
<b>Weight incl. portable case</b>	1500 g
<b>Protection class</b>	IP 67
<b>Housing material</b>	ABS with electromagnetic shield
<b>Operation temperature</b>	0 bis +55 °C
<b>Approval mark</b>	CE (tested against electromagnetic disturbances and emissions)



## Leak detection on distance

### Function

We recommend to use the longer gooseneck probe or even a telescopic rod for difficult or inaccessible locations.

A further feature for longer distances is the parabolic dish with integrated ultrasonic sensor and laserpointer.

The integrated laserpointer makes it easy to trace leaks over distances from 20 m to more than 100 m for bigger leaks.

The parabolic dish is made of transparent plastic, so that the leaks are easily visible. All incoming ultrasonic waves are reflected from the dish and focused at the ultrasonic receiver. Noise is ignored.

