

# CTRL UL101

## Ultrasound Inspection Kit

The **CTRL UL101** 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. The CTRL UL101 is used worldwide for predictive maintenance, quality control and for leak detection.



Simple. Accurate. Versatile.

### Test the integrity of non-pressurized vessels

- weld beads
- seals
- hatches
- windows

### Detect electrical arcing and corona discharge

- electric panels
- transformers
- insulators
- substations

### Detect pressure and vacuum leaks

- pumps
- valves
- gaskets
- solenoids

### Monitor mechanical equipment

- bearings
- gears
- steam traps
- motors
- cylinders

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Innovative Sound Solutions™

# Chosen by NASA for ease of use & sensitivity

## Key Features

- Unmatched sensitivity and signal-to-noise ratio
- Designed for a wide range of applications
- Convenient, hand-held design
- User-friendly controls
- Analog meter
- Battery level indicator
- Extruded aluminum housing
- Industrial grade headset (over or behind the head)
- Standard or intrinsically safe models available



## UL101 Benefits

### Finds more leaks

Most sensitive detector on the market today. Finds all turbulent flow leaks.

### Easier to use

Turn the receiver on, adjust sensitivity, and begin testing.

### Does not require calibration

Begin testing immediately. There is no need to calibrate or routinely send back to the factory.

### Longer battery life

A single, 9-Volt battery powers the receiver for more than 45 continuous hours and the transmitter for more than 300 continuous hours. Recharging not necessary.

### Complements vibration analysis or infrared

Add the UL101 to your predictive maintenance routines for instant feedback.

# Selected for the Joint Strike Fighter

## CTRL's Ultrasound Kits

**Full Kit:** pneumatic, hydraulic, electrical and non-pressurized systems

**Air Audit Kit:** pneumatic and electrical systems

**Corona Kit:** insulators, electrical panels, high voltage transformers

Each kit contains a UL101 receiver, headset, carrying case, operator's manual, and training CD.



Full Kit Shown



## Training

Each kit purchase entitles the end user to 1-1/2 days of training at CTRL headquarters.

## Quick Start Training

CTRL provides onsite training programs for the UL101; training customers in less than two days. Class topics include: introduction to ultrasound, kit components, ultrasound applications.

## Turnkey Ultrasound Implementation & Training

Program components include: consultation, customized training manual, product delivery, training/implementation and support.

## Customized Training

Let CTRL design a training class to meet your organization's needs.



# Proven Ultrasound Condition-Based Monitoring

## Specifications

### Dimensions:

Receiver: 8.75" x 1.26" x 1.26"  
(222 x 32 x 32 mm)

Transmitter: 4.125 x 1.26" x 1.26"  
(105 x 32 x 32 mm)

### Weight (including battery):

Receiver: 11.6 oz (330 g)

Transmitter: 6.2 oz (175 g)

### Housing:

Extruded Aluminum, wall thickness .09" (2.3mm)

### Power Supply:

9-Volt Alkaline

### Battery Life:

Receiver: > 45 hours

Transmitter: > 300 hours

### Distance of Reception:

Up to 150 feet (without PB300)

### Receiver Threshold of Sensitivity:

Minimum Intensity: 10-12 W/m<sup>2</sup>

Minimum Ultrasonic Pressure: 2.0 x 10<sup>-5</sup>

PA @ 40 kHz

### Frequency Bandwidth:

1.8 – 2.2 kHz @ level 0.7 (or -3 dB)

### Working Resonance Frequency:

40 kHz +/- 1.5 kHz

### Receiver Displays:

Analog Meter/Battery Level Indicator

LED Power Indicator

### Operating Temperature Range:

-4° to +130° F (-20° to +54° C)

### Controls:

Receiver: On/Off Potentiometer Knob

Gain Switch

Meter Selector Switch

Transmitter: On/Off Switch

### Headset:

Industrial Grade/600-Ohm Impedance

21-24 dB Ext. Noise Attenuation

### Warranty:

1-year parts & labor

Extended warranty available

## Customer Quote:

"Our facilities have been successful in using the UL101 to diagnose the conditions of solenoids on our service vehicle transmissions, in finding various types of leaks — including small leaks after weld projects, locating washed out valves on manifolds, identifying problems with PTO drives and more. The CTRL UL101 has proven to be a versatile device that can be used for a wide variety of tasks."

Ron Stover  
Operations Support Manager  
Schlumberger



Air Audit Kit Shown

