

# ULTRAPROBE® 2000

## Ultrasonic Inspection System...

### The Ultimate in Ultrasonic Inspection & Predictive Maintenance



#### The Ultraprobe 2000

is a multifaceted instrument that provides testing capability ranging from simplistic forms of leak detection to extremely sophisticated methods of mechanical analysis. It is a testing laboratory that fits in the palm of your hand.

#### Flexible - Adaptable

Recognizing that every test environment is different, UE Engineers designed the Ultraprobe with many user friendly features, so that it can be adapted to approach almost any inspection problem.

**Frequency Tuning** allows the operator to select the specific frequency of a problem sound while reducing interference from competing ultrasonic signals.

#### Bi-Modal Meter Switch

has two meter functions:

Logarithmic Metering which provides instant "real time" response for enhanced leak and fault detection, Linear Mode for bearing and mechanical monitoring, which accommodates an expanded range of sound that is averaged for stabilized readings.

**A Ten-Turn Sensitivity Adjust Dial** covers a wide range of ultrasonic signal reception so that users may detect subtle mechanical and leak problems as well as focus in on gross signals for accurate analysis.



#### Trisonic Scanning Module

This patented transducer consists of a phased array of three transducers which provides a level of sensitivity beyond anything previously obtainable.

#### Acoustic Headphones

Noise isolating type: double headset wired monophonic.

Impedance, 16 ohms. Over 23 dB of noise attenuation.

Meets or exceeds ANSI specifications and OSHA standards.

**Intrinsically Safe, Class I, Division 1, Groups A B C & D, Factory Mutual.**

#### Kit Includes:

Ultrasensitive ultrasonic detector which features: Frequency Selection (20 kHz - 100 kHz) Control with calibrated detent for wideband and ultra-narrow band modes; precision edgewise meter; 3-way meter/auxiliary mode selector; numerically calibrated 10-turn attenuator control; rechargeable batteries with low-level indicator light; anodized aluminum housing; Trisonic Scanner Module (for airborne ultrasound); Stethoscope Module (for internal analysis); 31 inch Stethoscope Extension Kit; Rubber Focusing Probe; high-power frequency modulation Warble Tone Generator with adjustable power output; deluxe noise isolating headset; and Zero-Haliburton aluminum travel case. Intrinsically Safe Class 1, Division 1, Groups A, B, C, & D. Instruction Manual and VHS Video Training Tape.



# Ultrasonic Video Training Series

## Included with every ULTRAPROBE

This professionally produced series was shot in actual plant environments. Viewers will see, hear and experience realistic test examples with practical solutions. The training program is applicable to all levels of ultrasonic testing experience. Arranged in a practical format, viewers are taken step by step through each application.

This VHS videotape is available in NTSC or PAL. Each program includes:

- An Introduction to Airborne Ultrasound
- A Review of Each Ultraprobe Feature
- An Overview of the Specific Application
- A Demonstration of Testing Techniques
- Problem Solving Techniques



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## UE Systems ULTRAPROBE 2000 Series Application Selection Chart

Application	Kit #	UP2000KT	UP2000SC	UP2000STG	UP2000C	UP2000S
Pressure & Vacuum Leak Detection		✓	✓	✓		✓
Hydraulic Valve Bypass		✓	✓		✓	
Exhaust System Leaks		✓	✓	✓		✓
Heat Exchangers, Boilers, Condensers		✓	✓	✓		✓
Valve & Steam Trap Inspection		✓	✓		✓	
Bearing Testing		✓	✓		✓	
Gear/Gear Box Inspection		✓	✓		✓	
Cockpit Window Leaks		✓		✓		
General Mechanical Inspection		✓	✓		✓	
Tanks, Pipes, Leak Testing, etc.		✓	✓	✓		✓
Electrical Inspection		✓	✓	✓		✓

## ULTRAPROBE 2000 Specifications

<b>Construction:</b>	Hand held metered pistol type made with anodized aluminum and ABS plastic
<b>Circuitry:</b>	Solid state heterodyne receiver with temperature compensation.
<b>Frequency Response:</b>	Detect ultrasonic frequencies between 20 kHz and 100 kHz, continuously variable. Frequencies are converted to 50 Hz to 3 kHz audio.
<b>Probes:</b>	<b>Scanning Module</b> patented TRISONIC plug-in type consisting of a phased array of multiple transducers for airborne ultrasound. This probe is shielded against RF interference. <b>Rubber Focusing Probe</b> (flexible) slips over scanning module to concentrate conical directivity and to shield reception of stray ultrasound. Also fits over Stethoscope Module to shield against high ambient ultrasound while unit is at maximum sensitivity. <b>Stethoscope Module:</b> plug-in type, insulated probe with RF shielding; 4 1/2" (11.4 cm) long stainless steel probe tip, conically shaped for uniform surface contact. Probe tip is interchangeable. Stethoscope Extension Kit: 3 piece, segmented metal rods to increase stethoscope contact range 20" (50.8 cm) and 31" (76.2 cm).
<b>Transmitter:</b>	Patented warble tone transmission
<b>Headset:</b>	Noise isolating type: double headset wired monophonic. Impedance, 16 ohms. Over 23 dB of noise attenuation. Meets or exceeds ANSI specifications and OSHA standards.
<b>Indicators:</b>	Ballistic output meter: linear calibration scale of 0 - 100 for logging relative measurements. Meter is accurate 1% throughout entire scale. Low Level Battery LED indicator for main housing internal power supply.
<b>Batteries:</b>	Self contained Ni-MH rechargeable. RECHARGING SYSTEM: Standard 110V. Also available in 220 V.
<b>Features:</b>	<b>Frequency tuning adjustment dial:</b> Scale 20 - 100 kHz with "fixed band" position for ultra-narrow frequency response. <b>Bi-Modal Meter Switch</b> for logarithmic and linear meter scale adjustments. <b>Optional auxiliary mode</b> selection for chart recorder output: 0 - 50 mV <b>Sensitivity Control</b> , Precision 10 turn adjustment dial with numerically calibrated sensitivity increments for finite gain adjustment. <b>Spring loaded trigger switch.</b>
<b>Over-All Size:</b>	Complete kit in Zero Haliburton aluminum carrying case: 15" x 22" x 7" (38.1 x 55.9 x 17.8 cm) Pistol Unit: 2 lbs. (.9 kg) Complete carrying case: 14 lbs. (6.4 kg)
<b>Sensitivity:</b>	Detects .005" (.127 mm) diameter leak @ 5psi (.34 bar) at a distance of 50 ft. (15.24 m)
<b>Threshold*:</b>	1 x 10 <sup>-2</sup> std. cc/sec to 1 x 10 <sup>-3</sup> std. cc/sec. freon
<b>Warranty:</b>	1 year parts/labor standard. (Details available on request) 5 years upon completed registration form

\* depends on configuration

**Ultraprobe 2000 Kit:** Meets and exceeds ASTM E1002-96 requirements for Leak Detection.

**Government Codes** NSN: 6635-01-156-3927, FSCM (CAGE) Code: 59202

Table of Allowance #s: 788, 404, 576, 583, 607

Covered by one or more of the following patents: 4416145, EPO151115, 502674183

UE Systems is committed to continual product improvement therefore specifications are subject to change without notice. Warranty details are available by request.

14 Hayes Street, Elmsford, NY 10523-2536 USA  
Tel: 914-592-1220 • Fax: 914-347-2181 • Toll Free: 1-800-223-1325  
Email: ue@uesystems.com • Internet: <http://www.uesystems.com>