

# Automotive Stethoscope



**Model: MES 111**

## **Manufacturing Statement**

The MarMonix MES 111 Electronic Stethoscope has been conceptualized, designed, and manufactured with a focus on precision, durability, and ease of use. It represents the MarMonix commitment to providing high-quality test and measurement instruments for professionals worldwide.

Every MES 111 unit is produced under a controlled manufacturing process to ensure:

**High Accuracy:**

Sensitive electronic components are calibrated during production for reliable performance.

**Long-Term Reliability:**

Materials are selected to withstand professional use in demanding environments.

Consistent Quality: Each unit undergoes a final inspection and functional testing prior to packaging.

**User-Centric Design:**

Ergonomics and portability are prioritized to meet the needs of technicians and engineers.

The product is engineered for use in automotive diagnostics, industrial machinery inspection, HVAC systems, pumps, compressors, and general preventive maintenance applications.

Our development team ensures that the MES 111 not only meets practical industry requirements but also provides clarity, stability, and repeatability in operation, giving professionals confidence in their daily inspection routines.

This product is manufactured and supplied by:

**MarMonix Instruments**

Email: [support@marmonix.com](mailto:support@marmonix.com)

**For technical inquiries, spare parts, or product support, please contact our support team via the above email.**

## Contents

|   |    |
|---|----|
| 1.Introduction                              | 03 |
| 1.1 Why Choose MarMonix MES 111             | 03 |
| 2. Safety Instructions                      | 03 |
| 3 Device Overview / Technical Specification | 04 |
| 4. Installing Batteries                     | 04 |
| 5. Operating Instructions                   | 05 |
| 5.1 Turning On the Device                   | 05 |
| 5.2 Attaching Probes                        | 05 |
| 5.3 Listening to Mechanical Sounds          | 05 |
| Useful Tips:                                | 05 |
| 6. Maintenance and Care                     | 05 |
| 7. Troubleshooting                          | 06 |
| 8. Practical Usage Examples                 | 06 |
| 9. Warranty and Support Warranty:           | 06 |
|   |    |
|   |    |

## 1 Introduction

Welcome to the MarMonix MES 111 Electronic Stethoscope, a precision diagnostic tool designed for professionals in automotive, industrial, and machinery maintenance.

The MES 111 provides highly sensitive acoustic monitoring, allowing you to detect mechanical anomalies in machinery, engines, pumps, and other industrial equipment. By capturing subtle vibrations, knocks, and grinding sounds, this device enables early detection of potential failures, reducing downtime, maintenance costs, and equipment wear.

### 1.1 Why Choose MarMonix MES 111?

**Precision Diagnostics:**

Detects low-frequency sounds from 30 Hz up to high-frequency vibrations at 15 kHz.

Identifies early-stage faults in bearings, gears, motors, and valves.

**Versatile Applications:**

Automotive engines, transmissions, and mechanical systems.

Industrial machinery, including pumps, compressors, HVAC systems, and conveyors.

Predictive maintenance programs in factories and workshops.

**User-Friendly Design:**

Ergonomic noise-canceling headphones for clear listening in noisy environments.

Two detachable probes (short 70 mm, long 280 mm) for close and hard-to-reach surfaces.

Intuitive volume control with 32 adjustable levels for precise sensitivity tuning.

**Portability & Convenience:**

Lightweight design with a carrying case for easy transport.

Long battery life (up to 30 hours) with standard AAA batteries.

Early detection of mechanical faults prevents equipment breakdowns.

Helps optimize maintenance schedules and reduce unexpected downtime.

## 2. Safety Instructions

Read this manual thoroughly before use.

Use only AAA batteries recommended by MarMonix.

Do not open the device; internal parts are sensitive.

Keep away from moisture, extreme heat, and dust.

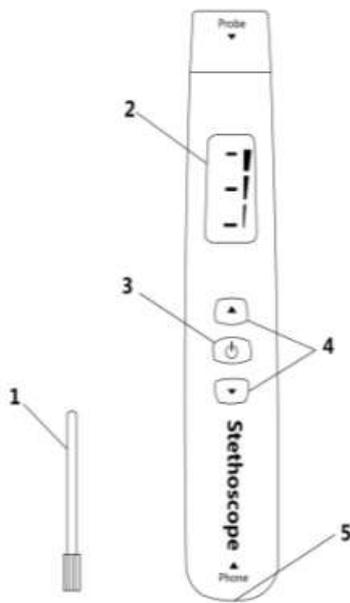
Do not place metal objects inside the probe or microphone.

Disconnect the unit when cleaning.

Keep out of reach of children.

If you have any questions please contact MarMonix Instruments.

### 3 Device Overview



1. Probe Connector – For attaching either short or long probes.
2. Front Panel & Controls
3. Power Button – Turns device ON/OFF.
4. Volume Knob – Adjusts sensitivity from low to high.
5. Headphone Jack – 3.5 mm connection.

**Probes:**

Short Probe (70 mm): For inspection of small or easily accessible components.

Long Probe (280 mm): For deeper or rotating parts.

**Headphones:**

Ergonomic design for long-term use.

Noise suppression ensures clarity even in noisy environments.

### Technical Specifications

| Feature               | Specification                             |
|-----------------------|---|
| Frequency Range       | 30 Hz – 15 kHz                            |
| Volume Levels         | 32 adjustable stages                      |
| Reonant Frequency     | >35KHz                                    |
| Power Supply          | 4 × AAA batteries (approx. 30 hours life) |
| Probe Types           | Short (70 mm) & Long (280 mm)             |
| Headphones            | Noise-canceling, ergonomic                |
| Dimensions            | 220 × 65 × 40 mm                          |
| Weight                | 440 g (with batteries)                    |
| Operating Temperature | 0°C – 50°C                                |
| Storage Temperature   | -10°C – 60°C                              |

### 4. Installing Batteries

- I. Open the battery compartment at the back of the unit.
- II. Insert 4 AAA batteries following the polarity markings (+ / -).
- III. Close the compartment securely.
- IV. Low battery indicator will alert when replacement is needed.

## **5. Operating Instructions**

### **5.1 Turning On the Device**

Rotate the volume knob to the lowest setting.  
Press the Power Button.  
Wait 2-3 seconds for the system to initialize.

### **5.2 Attaching Probes**

Choose a probe based on accessibility:  
Short probe for close contact.  
Long probe for distant or rotating machinery.  
Insert the probe connector firmly into the unit.

### **5.3 Listening to Mechanical Sounds**

Place the probe tip gently on the surface to be tested.  
Adjust volume to a comfortable level.  
Move the probe across the surface to detect abnormal noises.

### **Tips:**

For bearings, listen for smooth vs. rough rotations.  
For motors, compare sounds with normal operating benchmarks.  
For pumps or valves, listen for unusual vibration or clicking sounds.

## **6. Maintenance and Care**

### **Cleaning:**

Use a soft, dry cloth to wipe probes and headphones.  
Do not immerse in water.

### **Storage:**

Always store in the carrying case after use.

**Battery Maintenance:** Remove batteries if device will not be used for extended periods.

### **Inspection:**

Check probes, connectors, and headphone cables regularly.

## 7. Troubleshooting

| Problem              | Possible Cause                   | Solution                  |
|----------------------|----------------------------------|---------------------------|
| No sound             | Dead battery                     | Replace batteries         |
| Distorted sound      | Volume too high                  | Lower the volume          |
| Weak sound           | Loose probe/headphone connection | Check and reconnect       |
| Crackling noise      | Damaged probe                    | Inspect and replace probe |
| Unit not powering on | Faulty battery installation      | Check battery polarity    |

## 8. Practical Usage Examples

Automotive Engines:

Identify knocking in pistons or worn bearings.

HVAC Systems: Detect blower motor or fan irregularities.

Industrial Machinery: Monitor pumps, gearboxes, and compressors.

Preventive Maintenance: Compare baseline sound with current performance to detect early faults.

## 9. Warranty and Support Warranty:

**Warranty**

**02 Years**

### **LIMITED WARRANTY AND LIMITATION OF LIABILITY**

Customers enjoy 02 years warranty from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from accident, neglect, misuse, alternation, contamination, or abnormal conditions of operation or handling.