# Earthquake Detection App for iPhone and Android: Using Pocket Seismograph

Can your smartphone detect earthquakes? Learn how Pocket Seismograph logs seismic events, what magnitudes are detectable, and how to use your phone for earthquake awareness.

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Online version: https://appstoryo.com/en/blog/earthquake-detection-app-iphone-android




## Can Your Smartphone Really Detect Earthquakes?

The question sounds futuristic, but it is genuinely possible today. The **earthquake detection app** you need is already in your pocket. Your smartphone's built-in accelerometer can register the ground shaking of a meaningful earthquake, and Pocket Seismograph is the free iOS app that turns this hardware capability into a practical seismic monitoring tool.

In this guide, we will cover what magnitudes are detectable, how Pocket Seismograph logs seismic events, and how to set up your phone for effective earthquake awareness at home, at work, or in the field.

## What Earthquake Magnitudes Can a Phone Detect?

This is the most important question to answer honestly. Your smartphone is not a professional seismometer. It is a general-purpose device with a consumer-grade MEMS accelerometer. But that does not mean it cannot detect earthquakes. Here is a practical guide:

- **Magnitude 2.0-2.9:** Almost never detectable on a phone unless the epicenter is extremely close (under 5 km). The ground motion is too small for MEMS sensors to

register above background noise.

- **Magnitude 3.0-3.9:** Detectable if the phone is within 20-50 km of the epicenter and placed on a stable hard surface. You may see a clear waveform disturbance in Pocket Seismograph that correlates with what you feel.
- **Magnitude 4.0-4.9:** Reliably detectable within 100 km. Even if the quake is barely felt, Pocket Seismograph will typically show a clear seismic signature with the characteristic P-wave and S-wave arrival pattern.
- **Magnitude 5.0 and above:** Strongly detectable across wide distances. A magnitude 5+ earthquake will produce a distinctive and unmistakable waveform in the app, with amplitude clearly above background noise.

## Setting Up Pocket Seismograph for Earthquake Monitoring

To get the best results from Pocket Seismograph as an earthquake detection tool, follow these setup tips:

### 1. Place the Phone on a Solid Surface

The phone needs to be in direct contact with the ground or a structure rigidly connected to the ground. The best options are a concrete floor, a hardwood floor directly on a slab, a heavy wooden table or desk, or a window sill or wall-mounted shelf. Avoid soft surfaces, carpets, or anything that dampens vibration.

### 2. Minimize Phone Movement

Picking up your phone, walking nearby, or even typing on the screen will produce vibration signals larger than a minor earthquake. For dedicated monitoring, set the phone down and leave it. The best setup is a phone on a charger placed flat on a concrete floor or solid table overnight.

### 3. Watch for the Characteristic Waveform

Real earthquake waveforms have a distinctive pattern different from human-caused vibrations. The P-wave arrives first as a small compressional wave. The larger S-wave follows and produces the main shaking. Even a minor quake produces sustained shaking for 10-60 seconds, unlike a quick impact which registers as a sharp spike and then nothing.

### 4. Cross-Reference with Official Sources

If you see an unusual, sustained waveform in Pocket Seismograph, check the USGS Earthquake Hazards Program or your regional seismic network. This verification step tells you if what you recorded was indeed seismic activity and gives you the official magnitude and location data.

## How Pocket Seismograph Logs Earthquake Events

Every vibration session is recorded with a precise timestamp. This means you can review past sessions to see if a waveform disturbance correlates with an earthquake reported at the same time, compare waveforms over time to identify patterns, and maintain a personal

record of seismic activity at your specific location.

## Real-World Scenarios Where Pocket Seismograph Helps

### Earthquake Early Awareness

While Pocket Seismograph cannot provide early warning, it can help you confirm seismic activity immediately. If you felt something shake and are not sure if it was an earthquake or a passing truck, the app's timestamped log tells you definitively whether there was a sustained ground motion event.

### Aftershock Monitoring

After a significant earthquake, smaller aftershocks can continue for days or weeks. Many are below the threshold of human perception but can be detected by a phone seismograph. Running Pocket Seismograph during an aftershock sequence gives you a personal record of the ongoing seismic activity at your location.

### Living in a Seismically Active Region

If you live in California, Japan, Turkey, New Zealand, Chile, or any other seismically active area, keeping Pocket Seismograph running periodically gives you a local awareness that complements official monitoring networks.

## Download Pocket Seismograph Today

Whether you are in an earthquake-prone region or simply curious about the vibrations in your environment, Pocket Seismograph is the free, no-account-required tool that turns your iPhone into a functional seismograph. Download it free from the App Store and start building your personal seismic awareness.

The app runs completely offline with no internet, no cloud, and no account required. Get Pocket Seismograph on iOS now. Pocket Seismograph is currently available for iPhone only — there is no Android version yet.

**Cite as:** Lubor Šimůnek (2026). *Earthquake Detection App for iPhone and Android: Using Pocket Seismograph*. AppStoryo, lapnito.cz s.r.o..
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