

An Injection Moulded Case for AudioMoth

theteam@openacousticdevices.info

1st August 2024

While lightweight ziplock and freezer bags can be used to deploy AudioMoth for short periods in mild conditions there is a clear need for a more robust solution for long-term deployments. To address this need we have developed a waterproof injection moulded case specifically designed for AudioMoth (see Figures 1).

The case is moulded in robust polycarbonate with an easy-to-use clasp which compresses an o-ring seal. A moulded rain shield protects the acoustic vent which sits immediately in front of the AudioMoth microphone. The case can be opened and closed in seconds and fits a standard AudioMoth with three AA-batteries. The AudioMoth is securely located inside and can be transported to the deployment site inside the case (see Figures 3 and 4).

¹<https://www.porelleacoustic.com>



Figure 1: Deployed AudioMoth case.

Waterproof Rating

The original version of the AudioMoth case used a Porelle AV5ID acoustic vent¹. These are no longer manufactured, and thus, from August 2023 the case has been fitted with a Gore GAW334 acoustic vent with a 9.5 mm outer diameter and 5.0 mm inner diameter². The vents are tested by the manufacturer for waterproofness to the IP68 standard. Similarly, we have tested the case with acoustic vent (and AudioMoth) for waterproofness to 1 m for 30 minutes, in line with the IPX7 standard (see Figure 2).

²https://www.gore.com/system/files/2024-06/PEV-219-TEC-EN-APR24_WEB.pdf



Figure 2: AudioMoth case undergoing waterproofness testing.



Figure 3: Front and back of case showing microphone rain cover, clasp and strap loops.



Figure 4: Open case showing o-ring seal, foam rubber pads and a Porelle acoustic vent.