

Earshot

Library

-in-

Residence



In just under three years, Earshot has built more than sixty investigative cases across the globe in which sound has played a vital role. This library is the accumulated evidence of their practice of Sonic Investigations. The works gathered here are a synthesis of those cases, and the methods they use to listen.

Here, sound is not just background noise; it is an argument in its own right. Recordings are not simply heard but interrogated, through two modes of listening: listening *with* – attentive, collective, immersed – and listening *to* – deliberate, individual, self-directed.

In the main space, *From the Field*, a loop of five soundscapes fills the room continuously. These are recordings from Earshot's field investigations and original research: the drone of turbines amidst land dispossession, underwater noise pollution from a boat drowning the crackle of shrimp, aircraft violating treaty lines, sound reconstructed from what witnesses heard but no camera properly registered. Evidence here is read relationally, listening for what is present and what is absent, and interpreting both against the web of social and political relations that produced them.

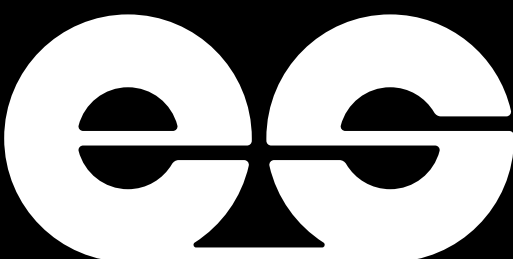
Behind the curtain, listening changes. Three stations shaped around methodologies developed by Earshot – *The Crack & the Boom*, *Authentic Audio*, *The Sonic Identikit* – invite a different kind of attention. The evidence here is granular: the interval between a gunshot's crack and its boom, the tremor in an AI-generated breath, the signature of a hydraulic door breacher, and the absence of any voice before it. Each station isolates a sound and asks it to yield something precise: a distance, a trajectory, a verdict of real or fake, or a sequence of events.

Throughout the Earshot Library-in-Residence, sound is encountered not as a fixed entity to be retrieved but as a relational and emergent phenomenon, with each recording acquiring its meaning through the act of listening itself.

A public programme of workshops, case launches and discursive events will take place at Ibraaz. Each activates the methodologies of listening present in the space, allowing audiences a deeper, expanded experience of Earshot's work.



**LISTENING *WITH...***



# FROM THE FIELD

A village in the Occupied Syrian Golan Heights (al Jawlan)— its weddings, water pumps, flutes, and jackals – about to be covered by the drone of industrial wind turbines. The sound reconstruction of the hum of a surveillance drone over the central Mediterranean using sounds from Gaza and South Lebanon, the same aircraft in each, so constant it has become part of the sky. A coral reef in the Gulf, where shrimp crackle and fish navigate home by sound, under the passing vibration of tanker traffic. A boulevard in Belgrade where some 300,000 people stood in silence for fifteen minutes, and then broke and ran from a sound that barely registered on recording devices. And a hospital in Khan Younis, during nights of the Israeli genocide in Gaza, recorded through a dorm window by a surgeon who left his phone running while he slept after every shift.

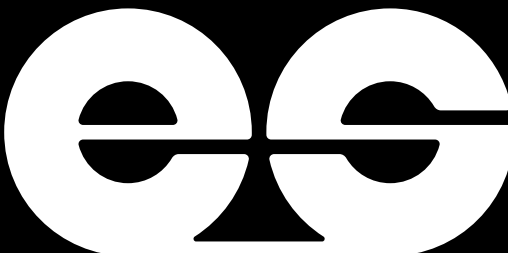
None of this is background. Each soundscape points to something: to land dispossession and a people's right to sonic self-determination; to a pattern of surveillance; to the suppression of a web of communication; to a collective right– to gather and to manifest – in the act of being taken away; to what witnessing becomes when those who remain are the only ones able to record it.

From the Field is where Earshot listens at length: to environments rather than incidents, and to the sounds communities live inside – listening with those communities as much as to their surroundings. Some of these recordings we made ourselves by piecing together earwitness testimonies; others were sent to us by those who were there. Together they form a collection of soundscapes that would otherwise have gone unrecorded or unarchived, because no one else was listening for them. We have used it to ground advocacy campaigns that travel beyond their sites, to trace surveillance patterns across borders, and to restore witnesses as reliable accounts where official narratives deny them.

The work moves across five chapters without announcement, one giving way to the next. Nothing tells you which is playing. What is projected is a spectrograph of the soundtrack: frequency on the vertical axis, time moving across, the brightness of each point marking its intensity. It is the view Earshot works from when we analyse a recording. The rest is listening: hearing a sound, and working out what it points to.



**LISTENING *TO...***



# THE CRACK & THE BOOM

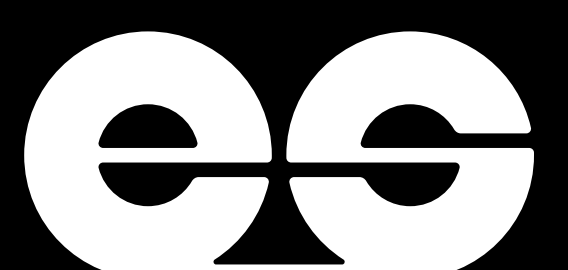
A recording of a ballistic incident, such as a gunshot or tank shelling, contains much more than first meets the ear. Since sound travels at a fixed, known speed, a recording is not just a document; it is also a measuring instrument. Intervals between sounds, measured to the millisecond, can reveal information that images cannot, such as the trajectory of fire in relation to a recording device, the distance and location of a firing position, and the number and movements of shooters. Audio ballistics is the practice of reading that information from a recording.

At Earshot, we have extended this practice into a set of techniques of our own, which are often employed in combination. Each technique reads different sonic parts of the same event: the sounds produced by a weapon itself and the order and interval at which they arrive; how those sounds reflect off the surrounding environment; and the volume, frequency and character that distinguish one weapon from another. Every closely examined layer yields its own kind of information.

We have used these findings to establish evidence in war crimes investigations, contradict official accounts disputed by eyewitnesses, and provide journalists with grounds to report on events when no other record has survived. Listening to these sounds occupies more than half of our work.

The sounds on this station are drawn from that work: an archive of ballistic sound accumulated across more than forty cases, for which no comparable collection exists. A selection has been isolated here for close listening, on a playback system custom-built to train your ear on the small distinctions that make up the sound of a ballistic incident. Controlling the sound forwards and backwards, you hear those distinctions yourself. These sounds are not presented to be heard passively; they are here to be navigated and actively listened to.

[Read more.](#)



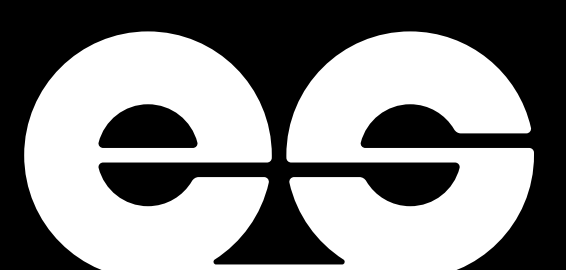
# AUTHENTIC AUDIO

Audio authentication is a set of techniques that verify the authenticity and integrity of audio and video files. At Earshot, we have developed our own approach to this, which we call ‘critical listening’: close, structured attention to everything a recording carries beyond its apparent content. This method has proved crucial in cases where recordings have been used to undermine democratic processes, spread disinformation, or conceal responsibility for attacks and war crimes.

We are often asked to identify the authenticity of voices that are captured in recordings. Audio can be tampered with after the fact – cut, spliced, edited – or can be generated in the first place, for example by an AI model. While these may appear to be two different problems, we treat them as one. In both cases, the obvious content of the recording – the words spoken or the plausibility of a voice – rarely settles the question, but rather what sits around and beneath it: the noise floor of a room; the involuntary catch of a breath; the unintentional physical trace a device leaves on a signal.

This is what critical listening attends to. The sounds on this station are a collection of recordings, genuine and manipulated, human and synthetic, accumulated across investigations in languages that detection software barely covers. It is a collection that could only have been built case by case, and it holds precisely the material the tools have never heard. Visitors can experience our listening approach through a series of paired sounds, switching between different states – starting with a voice and the background noise of the same room, with the same resonant quality; a real and an AI-generated breath; and a real voice and its softened version.

[Read more.](#)



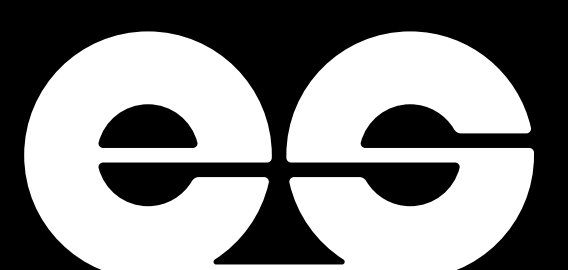
# THE SONIC IDENTIKIT

Every sound-producing object has an acoustic signature: a weapon's detonation pattern, an engine's frequency profile, the specific acoustic fingerprint of a mechanism in motion. No two are quite alike. Yet the sound itself does not persist; it exists only in the moment of its production. Recordings hold the trace: once captured, a signature endures even if everything else about an event goes unseen or is deliberately concealed. While a camera only registers what it faces, a microphone registers everything around it — what happens beyond the frame, in darkness, or out of sight.

The Sonic Identikit is Earshot's technique for building an identification from a sound's acoustic signature alone. It involves comparing an unknown sound against known references to establish what produced it: isolating specific bands of the frequency spectrum, applying algorithms to reduce reverberation, and running comparative analyses across multiple recordings in which the sound in question is audible. Sometimes we even physically reconstruct and record the sound ourselves when no existing reference is available. We have used these identifications to push back against official claims, expose intent, identify patterns of attack that may constitute war crimes, and confirm what a camera never managed to capture.

The sounds on this station are drawn from that work: a reference library of identified signatures, some recorded in the field, some reconstructed by us, assembled one investigation at a time and held nowhere else. Visitors can listen to isolated sounds in their raw and enhanced states, toggling between them: hearing a sound as it was first captured, buried in the background of the recording, and then as it has been unearthed, cleared of as much background noise as technically possible. This collection of enhanced and identified sounds allows the listener to inhabit, and move inside, the bandwidth of a sonic investigation, revealing how much information a single sound can hold.

[Read more.](#)



# ABOUT EARSHOT

Earshot is the world's first non-profit organisation using sound in the defense of human and environmental rights. Building on over a decade of research and advocacy, Earshot transforms sound into a tool of justice and restores the soundtrack as a site of evidentiary power. From the sharp crack of gunfire to the oppressive hum of drones, our investigations treat sound as both an acoustic trace of violence and a means of control.

Using cutting-edge audio forensic analysis techniques, we add a crucial but often overlooked dimension to the field of human rights research. While image and spatial analysis have become widespread in the last decade, until now, the acoustic dimension of events has remained largely unexplored.

We collaborate with international media, human rights organisations, legal teams, grassroots movements, and affected communities to produce investigations that hold power accountable, shift public perception, and amplify voices too often unheard.

We produce expert audio evidence no other organisation is equipped to deliver — strengthening calls for accountability in courtrooms, public forums, and international advocacy campaigns.

Beyond investigative casework, we conduct original research, publish field-building analysis, and develop new techniques with each investigation. We produce forensic reports for courts, 3D acoustic reconstructions for media partners, and explanatory materials that make complex audio analysis accessible.

## TEAM

Founder & Director of Investigations,  
Lawrence Abu Hamdan

Deputy Director,  
Caline Matar

Audio Investigator,  
Fabio Claudio Cervi

Assistant Researcher &  
Programme Coordinator,  
Hyeongji Yang

Assistant Audio Investigator,  
Renate Lurdesa Baumane

