

Residential Low-Frequency Noise & Infrasound

Working glossary for clinicians, attorneys, code-enforcement, and investigators. Acoustic, physiological, and measurement terms cite peer-reviewed sources. Community and tactical terms are documented case-account vocabulary and labeled as such. The final block lists terminology this site deliberately distinguishes itself from.

A · ACOUSTIC PHYSICS

Infrasound

Acoustic energy below 20 Hz. Inaudible to most yet capable of physiological response via mechanosensitive pathways. Wavelengths ~17 m at 20 Hz to hundreds of meters below 5 Hz.

Low-Frequency Noise (LFN)

Audible or perceptible sound ~20–200 Hz. Subwoofers, HVAC, transport. Rumble or vibration.

SPL (Sound Pressure Level)

Logarithmic measure of acoustic pressure in dB. Below 20 Hz, unweighted dB understates the physiological stimulus unless properly weighted.

A-Weighting (dBA)

Used in nearly every municipal ordinance. Rolls off below 200 Hz; essentially zero below 20 Hz.

The wrong tool for residential LFN.

C-Weighting (dBC)

Flatter than A; extends to ~20 Hz. Better than dBA but still underrepresents true infrasound.

G-Weighting

ISO 7196:1995 infrasound weighting. Almost never used in enforcement.

Z-Weighting

Flat, unweighted response. Baseline for credible low-frequency documentation.

Wavelength

~17 m at 20 Hz, ~34 m at 10 Hz. Longer than typical rooms — why LFN is non-directional and passes walls with minimal loss.

Resonance

Amplified response at structure-specific frequencies. Body: chest ~50–80 Hz, abdomen ~40–60 Hz, kidneys/liver ~4–10 Hz, eyeballs ~18–22 Hz.

Standing Wave / Room Mode

Stationary pressure pattern from reflections. Loudest point may be nowhere near the source. Why victims cannot localize by ear.

Structure-Borne vs. Airborne

Energy through solid building elements vs. through air. Low frequencies couple efficiently into structure with almost no attenuation.

Subharmonic

Frequency at an integer fraction of a fundamental. A 40–80 Hz subwoofer can produce measurable sub-20 Hz energy on an infrasound monitor.

1/3 Octave Band Analysis

Spectrum divided into 31 bands from 1 Hz to 20 kHz. Industry standard; required by most professional acoustic engagements.

B · PHYSIOLOGY & MEDICINE

Central Sensitization

Progressive increase in nervous-system reactivity to repeated stimulus. Explains why long-term sufferers detect what visitors cannot.

Habituation vs. Sensitization

Opposite responses. LFN exposure produces sensitization, not habituation.

Reactive Hyperemia / Vibration-Induced Erythema

Persistent skin flushing, warmth, burning after vibroacoustic exposure ends. Mechanism: mast-cell degranulation, histamine release, prolonged vasodilation. No single peer-reviewed term coined specifically for infrasound-related skin recovery; both terms above are the closest anchors.

Tonic Tensor Tympani Syndrome (TTTS)

Sustained middle-ear muscle contraction. Fullness, pressure, fluttering, tinnitus, ear pain. Often missed because audiograms appear normal.

Hyperacusis

Reduced tolerance to ordinary sound, often painful. Documented downstream effect of chronic LFN exposure.

Misophonia

Emotional aversion to specific sounds. Distinct from hyperacusis; listed for contrast.

HPA-Axis Dysregulation

Disruption of the body's central stress system. Elevated cortisol, sleep disruption, cardiovascular effects. The mechanism behind sub-perceptual infrasound effects (Scatterry 2026).

Endolymphatic Hydrops

Abnormal inner-ear fluid accumulation; pressure, vertigo, tinnitus. Under study as an infrasound mechanism (ClinicalTrials NCT03132961).

Threshold Shift (TTS / PTS)

Temporary or permanent audiometric loss. Conventional NIHL; infrasound symptoms often present without classic threshold shift.

Otoacoustic Emissions (OAE / DPOAE)

Cochlear output measured non-invasively. Can detect dysfunction when audiometry is normal. Changes documented after exposure at 6–12 Hz.

Acoustic Annoyance

Technical term of art with measurable physiological correlates (cortisol, sleep, cardiovascular). Not trivial — the primary outcome variable in most environmental noise health studies.

Vibroacoustic Disease (VAD)

Whole-body pathology from chronic high-intensity LFN/infrasound exposure. Structural organ changes; original cohort: aeronautical workers.

Whole-Body Vibration (WBV)

Mechanical vibration through a supporting surface. Governed by ISO 2631 occupationally, unregulated residentially.

C · DETECTION & MEASUREMENT

Microbarometer

High-sensitivity sensor for sub-audible pressure. Residential examples: QuakeLogic AIR, Raspberry Boom.

Type 1 Microphone

Highest precision class (IEC 61672). Required for most court-admissible measurement.

STC (Sound Transmission Class)

Airborne isolation rating (ASTM E413). Calculated 125 Hz–4 kHz; says nothing about transmission below 125 Hz.

IIC (Impact Insulation Class)

Impact-noise rating for floors. Like STC, bounded above the LF range; code-minimum still passes structure-borne LFN.

Mass-Air-Mass / Decoupling

Effective isolation: two masses, air gap, mechanical decoupling. Adding mass to one surface alone is limited at low frequencies.

Location-Dependence Test

3-night absence with symptom log, then return. Resolution-then-return = environmental causation. Highest-value diagnostic at zero cost.

D · COMMUNITY & TACTICAL

Ghost Rig *(community)*

Hidden low-frequency transducer or subwoofer installation, often daisy-chained or mounted to shared structure, producing harm without audible content that reveals direction.

Daisy-Chaining *(community)*

Multiple speakers on a single amplifier. Documented in the convicted Florida Seachrist aggravated-stalking case.

Bass Shaker / Tactile Transducer *(equipment)*

Speaker that outputs mechanical vibration rather than airborne sound. Mounted to structure for direct coupling.

Pressurization *(community)*

Sensation of the room being filled with pressure. Physical correlate: acoustic standing-wave buildup in enclosed space.

"Off the X" *(tactical)*

Security/military term — move out of a known threat location. In residential LFN, leaving the exposure environment for diagnosis or relocation.

Mobbing *(community)*

Coordinated harassment by neighbors to isolate and drive out a target. Borrowed from workplace psychology (Leymann 1990).

Electronic Harassment (Acoustic) *(community)*

Deliberate misuse of consumer audio equipment to cause harm via acoustic pressure. **Distinct from microwave, DEW, or V2K claims.**

E · WHAT THIS SITE DISTINGUISHES ITSELF FROM

Targeted Individual (TI)

Self-identifier in a community claiming distributed-network harassment. Psychiatric literature (Sheridan & James 2015; Lustig 2021) characterizes as a persecutory belief system. **This site does not use TI framing.**

Voice-to-Skull (V2K)

Claim of voices transmitted directly into a target's head. **No consumer-deployable technology exists in open literature.**

Directed Energy Weapon (DEW)

State-military category. **Not consumer-deployable.** A subwoofer through a wall is acoustic harassment, not a DEW.

Gangstalking

Alleged distributed-network harassment. Treated as a persecutory belief system in the psychiatric literature. **Residential LFN is not gangstalking.**

Havana Syndrome / AHIs

Unexplained symptoms in U.S. personnel abroad. 2023 ODNI assessment, reaffirmed 2024: "very unlikely" foreign adversary. **Different alleged mechanism and evidence status.**