The Null Plane

The cosmology behind Archtop: lost sound, its inhabitants and the factions trying to control the breach.

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The altered atmosphere lets sound cross into the Null Plane.

In 2030, the Third Industrial Revolution released catalytic aerosols and density-modifying particles into the atmosphere. They were sold as a way to strengthen the ozone layer, improve wind turbines and filter urban smog. They also changed the way sound travelled through air.

Above roughly 6.2 kHz, coherent sound began to break up and disappear. The particles had activated pockets of inverse resonance, dormant since the universe's first baryon acoustic oscillations. At those frequencies, a sound's wavelength matched the mean free path between the particles. The wave crossed into a parallel plane and inverted.

That plane became known as the Null Plane. Every lost overtone remains there, held in crystalline standing-wave structures called Resonance Lattices.

The entities feed on the sound that crosses the breach.

Glitch-flake larvae gather around fresh tones. As they feed on the same overtone, they assemble a copy of its source. The resulting Cantor can reproduce a person's bone structure, iris markings and fingerprints. Its movements arrive 0.3 seconds late. Citizens call these doubles Null-Twins.

Below them is the Polyphonic Depth, a collective organism as large as a flooded continent. It arranges stolen frequencies into repeating patterns that alter small events in Archtop: a streetlight changes early, or a reflection follows a movement late.

Deeper still is the Fathom-Lord. Its outline resembles an inverted skyline, with towers forming the teeth of an open mouth. Scholars estimate its mass-energy equivalent at six times ten to the nineteenth joules, enough to exchange a city with its Null reflection.

The city surrenders sound through the Decibel Tithe.

The Atmospheric Directorate found the first measurable reciprocal waves in 2032. It suppressed the data, renamed itself the Resonance Sanction Office and introduced the Decibel Tithe Algorithm. Archtop must surrender approximately 2.14 gigajoules of upper harmonics each day to keep the entities fed.

The public explanation is a health regulation needed to stabilise the atmosphere. The tithe rises each quarter. Recent surveys suggest the threshold is falling by roughly seventy hertz a year. If it reaches the range of ordinary speech, Cantors may acquire the frequencies they need to speak across the breach.

The factions trade sound for access and predictions.

Neon-Dream Mire discovered that unusually rich overtone harvests produce useful answers from the Depth. A symphony might buy five minutes of future stock prices or a small change in a political rival's fortunes. Mire's servers run at 432 Hz. Its sensory trips harvest customers' overtones to pay for those forecasts.

The Refrain Breakers formed among luthiers and performers who lost their livelihoods. They salvage tonewoods, modify sub-bass repeaters and steal Chorus Keys from RSO facilities. Each Key contains a thirty-two-bit description of a breach's phase orientation. Snapping one opens a temporary tunnel for negotiation or entry.

Using a tunnel leaves a cost: hallucinated reflections and metaphysical static that appears as hissing anti-sound frost. A successful crossing can leave the user unable to trust what a mirror shows.

The cult and Frequency Forward propose incompatible solutions.

The Polyphonic Depth cult marks its members with Refraction Ink, a graphene colloid held in fullerene shells. It looks like black glass to humans and shines to Cantors. The cult plans the Grand Detuning: an amplified concert that turns Archtop's ducts and sewers into one tuning fork. Its promised Polyphonic Dominion would begin when the Fathom-Lord exchanges the city with its reflection.

Frequency Forward, a network of physicists and Directorate whistle-blowers, proposes a Silence Bomb. Seventeen seconds at absolute zero hertz would, they argue, collapse the Resonance Lattices and seal the breaches. Critics fear it would also disrupt the biological vibrations that hold human proteins together. A citywide coma is their most optimistic forecast.

Researchers disagree about the breach and the entities’ motives.

Researchers disagree about what is lowering the threshold. The particles may still be settling, or the Fathom-Lord may be widening the breaches. An anti-phase anthem might collapse individual Lattices, but a failed attempt could open larger holes.

The entities' motives remain uncertain. Some researchers believe the Cantors are refugees from a civilisation already consumed by silence. Archtop's factions act on competing explanations while the tithe continues to rise.