Out of the Silo

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A Less Soul-Sucking Music Theory Workbook
or, A Comprehensive Explanation Why You Listen to Such Crummy Music
or, The Visitor's Guide to Elitist and Exclusionary Musical Oligarchies
aka, the Fundamentals of Music (with Field Trips Included)

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By Gary Jugert August 18, 2021

Lesson 1: The A Note
Music Theory is the Study of Neatly Arranged Sounds …
Beware: There might be math ahead.

Sound

Let's start with sound. As a human, you typically can hear acoustic waves traveling through a medium (like air) with **audio frequencies** between 20 Hz (hertz) and 20 kHz (kilohertz). You perceive frequencies as **"pitch."** You will perceive sound pitches (high and low) in various volumes (quiet to loud). Volume is measured in **decibels** (dB).

Assignment 1: Head out to your favorite resource (aka, Wikipedia) and find out how to define "audio frequency" and what other types of sound frequencies exist. Electro-magnetic energy is my favorite. If you want to hurt your head, go research decibels while you're at it! As you are in the process of wandering about the knowledge sphere, find out what a Hertz is and how it came to be named … and how an epic combover won't necessarily stand in the way of immortality.

The Most Important Sound in Modern Music

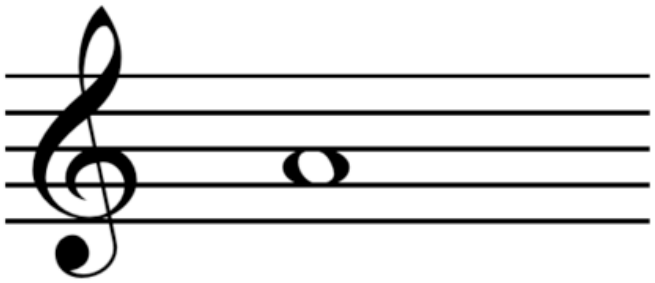
One note. Bing.

This is a **tuning fork tuned to A**. If you're old like me, you may already own one. Back in the day, these were useful for tuning guitars before electricity. They're an historical artifact you can still use today for conversations. You whack it on your knee and press the ball end against your instrument, or hold it up to your ear, and voilà, the beautiful sound of a perfectly tuned **A note** at 440 Hz comes humming out of your instrument.

Assignment 2: Research Ludwig van Beethoven's tuning fork. It's still around (we think) and it's at a little higher frequency than a modern tuning fork. Interestingly, tuning forks used to test your hearing are at an even higher frequency. By the way, if your audiologist is using a tuning fork to test your hearing, you may want to get a second opinion. If you're loaded with cash, go buy a tuning fork. They're cheap-ish and will last a lifetime. Get one in your hands, whack it, and then try to mimic the tone using your voice. It's a magical note.

Pitch

When I say "tuned to A," I mean it's vibrating at a frequency of 440 Hz. On a piano, that's the A note above middle C. Let's use one common graphic way to show it on paper.



We'll talk about all the parts of this graphic in the next lesson. It includes a clef, lines, spaces, a note of a certain length, and it represents the **"A note."** Almost everybody on Earth in modern music uses this note to tune almost all instruments. When you go to the symphony, and they prepare to tune up the orchestra, they tune all the instruments to {pause for effect} the **A note**.

Assignment 3: Find your A note on your instrument and use whatever method you like best to check its tuning. You can buy digital tuners and download them onto your phone for free. It's not tuning-fork cool, but it'll work in a pinch.

Here's a few other places you can find the same note:

- Piano: The A above middle C
- Guitar: First string 5th fret.
- Ukulele: First string open.
- Harmonica in C: Hole #1 blow