

Tuning a Piano

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Chapter 1. Tuning a Piano Introduction

You can tune a piano with just a few pieces of equipment.

You'll need to listen to overtones and understand octaves and chords.

We live in an imperfect world. If you tune to match perfect overtones, the octaves will be out of sync. There are various schemes for tuning. We'll show you how to tune to a perfect fifth, then lower it very slightly so that it matches all the way up and down the keyboard. Bach's "Well-Tempered Clavier" showcases how the keyboard can sound when tuned to sound good in every key.

At its simplest, you can tune a piano using only:

- your ear
- a tuning hammer
- four dampening wedges
- a tuning fork for C unless you have perfect pitch

Chapter 2. Tuning Each Octave

Tune the piano an octave at a time, starting with Middle C, working toward the right, then working down to the left.

Some notes on the piano are sounded by three strings, some by two strings, and some by only one string. You'll need to dampen enough strings for the note you are working on so that you hear only the middle string to start with.

Also be careful not to damage anything. This document does not cover repairs.

1. Remove anything that is in the way of getting to the tuning pegs and strings.
2. Check that you can insert the tuning hammer onto the pegs.
3. Check that you can insert the dampening wedges in the strings.
4. Dampen the outer strings for Middle C.
5. Insert the tuning hammer onto the middle string peg for Middle C.
6. Strike the tuning fork and rest it on a wooden part of the piano to make it resonate more.
7. Press the Middle C key repeatedly as necessary and turn the tuning hammer until the piano sound matches the tuning fork sound. Try to start with the piano pitch being slightly too low, then tighten it. Listen for overtones to converge.
8. Similarly tune one string for the octave above Middle C to match Middle C in overtones exactly.
9. Remove one dampening wedge for Middle C.
10. Place the tuning hammer on the corresponding string that was undampened.
11. Press the piano key repeatedly and match the pitch of the second string to the first one.
12. Remove the other dampening wedge for Middle C.
13. Place the tuning hammer on the corresponding string that was undampened.
14. Press the piano key repeatedly and match the pitch of the third string to the first one.
15. Repeat for the octave above Middle C.
16. Similarly, tune G (a fifth above Middle C) while sounding both C and G to match the overtones. Then lower it very slightly and do this for any fifth that you tune.
17. Then tune D above Middle C while sounding G. You will tune this as a fourth rather than a fifth. Raise the D pitch very slightly and do this for any fourth that you tune.
18. Similarly, tune in sequence all within the same octave: A with D, E with A, B with E, F# with B, C# with F#, A \flat with D \flat , E \flat with A \flat , B \flat with E \flat , F with B \flat .
19. Play a scale progression that uses major, minor, and other chord combinations for each note of the octave. Make sure everything sounds okay, making adjustments where needed.
20. Tune the next octave up by matching in sequence to overtones exactly: Cs, C#s, Ds, and so on.
21. Tune all the octaves going to the right, matching overtones for octaves exactly, until you reach the end of the keyboard.
22. Start back at Middle C and work downward in sequence: Cs, Bs, B \flat s, and so on.
23. Tune all the octaves going to the left until you reach the end of the keyboard.
24. Play a favorite piece, preferably one that uses many parts of the keyboard. Adjust anything that sounds funny. When you are done, enjoy the well-tuned piano!!

25. Replace anything in the piano that you had taken apart.

Related concepts

- [Tuning a Piano Introduction \(page 1\)](#)

Related reference

- [References for Piano Tuning \(page 4\)](#)

Chapter 3. References for Piano Tuning

You may find these references useful for chord progressions and tuning schemes.

Chord Progressions to Check Tuning

Major triad such as C-E-G

Minor triad such as C-E \flat -G

C-E \flat -A \flat

Move up the chromatic scale and repeat the chord progression. Listen to make sure everything is about equally well-tuned.

Tuning Schemes

Tune all fifths just slightly less than a perfect interval, and tune all fourths just slightly more than a perfect interval.

Other tuning schemes maximize the sound for a particular key. You can research this further.