Howard

PIANO INDUSTRIES

HOW TO TUNE A PIANO

Study Guide

Howard

PIANO INDUSTRIES

HOW TO TUNE A PIANO

This study guide is intended for use with our "How to Tune A Piano" YouTube series (also available on DVD). You can watch on our website at: https://www.howardpianoindustries.com/how-to-tune-a-piano/

HowardPianoIndustries.com

Contents

Introduction

Although this series is not a complete course on piano tuning, it will be a good introduction for those wanting to begin the process learning how to tune pianos. We will cover here some of the basics of tuning for whether you would like to tune your own piano or are starting a piano tuning business.

We will mostly be going over how to tune a piano using an electronic tuning device rather than going over all the piano tuning theory. If you would like to go deeper into piano tuning theory, we also have a video series for that on our YouTube channel. Here is an overview of some of the things we will be learning in the coming chapters and videos:

- What tools you need to tune a piano
- How to use an electronic tuning device
- Tuning hammer technique
- Tuning the midrange
- Tuning the unisons
- Tuning the bass and high treble sections

This series will not train you to be an expert at piano tuning and it will certainly take much practice to become good at it, but you will at least be able to tune up an out of tune piano so that it sounds better than when you started.

Throughout this study guide, you will find pages for notes, quizzes to help you remember the material, deeper explanations, and links to products or extra material.

Introduction

Notes

Tools Needed for Tuning

Tuning Hammer
This is the most basic and perhaps most obvious tool that you will need for piano tuning. You will want to ensure you get a good enough quality hammer so that it fits most tuning pins correctly. Our most popular hammer is the Professional Piano Tuning Hammer with Nylon Handle.

Rubber Mutes
Rubber mutes for piano tuning are 2 and 9/16" x 1/4". They are easier to use when attached to wire handles.

Temperament Strips
A temperament strip is a strip of red wool to be inserted between certain strings on the piano, acting a a mute for many unisons all at once. This makes the job much faster.

All of the above tools can be found in our store at HowardPianoIndustries.com. We have them available as a set here (or scan the QR code below):
https://www.howardpianoindustries.com/professional-piano-tuning-kit/

You can see more on the different types of tuning mutes available here:
https://youtu.be/bx222GGSOY8

Electronic Tuning Device
This is an important tool for this particular course. You will want to find a good electronic tuning device. We recommend TuneLab, which we will be using in our coming videos. You can get TuneLab here: https://tunelab-world.com

Professional Piano Tuning Kit:

Tuning Mutes Video

TuneLab Website

Introduction

Notes

Electronic Tuning Device

Your electronic tuning device will listen to the note being played and show you where the note lands on a spectrum. Where it lands depends on how well it is tuned.

In the beginning of this video, there was a reference to a "peak" when a note is played. Though you can't see very well on the computer, it is visible on the iPad later on in the video. There is a white area underneath the note you have chosen (in this instance, A4). Inside this area is a line graph that appears when the note is played, with a vertical line down the center of the area. The peak displays where your note is on the spectrum as far as pitch. To be in tune, you want the peak to land on the center vertical line. If it is to the left of the line, your note is flat, and if it is to the right of the line, your note is sharp.

There is also a reference to a minor third. For those who are unfamiliar, a minor third is three keys (or half-steps) up or down from your starting note. For example, a minor third from a C would be Eb (going up) or A (going down).

When doing a "pitchraise", you want to tune the notes slightly higher in pitch than they should be to be in tune. This is called an "overpull". This should be done because as you continue to tune other notes on the piano, it pulls the pitch of your previously tuned notes down. "Over tuning" them will ensure that they end up on pitch.

Optional Quiz

1. *A4 is:*
   A. The A below middle C
   B. The highest A on the piano
   C. The lowest A on the piano
   D. The A above middle C

2. *The pitch of a note is flat if the bars on the spectrum are:*
   A. Moving to the right
   B. Moving to the left
   C. Moving back and forth
   D. Aren't moving

Electronic Tuning Device

3. *If a note is 20 cents flat, you will want to raise the note:*

A. 25 cents
B. 100 cents
C. 20 cents
D. None of the above

4. *Raising the pitch above the note's intended pitch, is known as an _____*

5. *When customizing TuneLab for your piano by measuring each C, place a mute in the strings for the note so that only _____ of the strings vibrate. You want to customize TuneLab for each individual piano you tune.*

6. *A note is correctly tuned when:*

A. The bars stop moving and the peak is on the red line
B. The bars move to the right and the peak is slightly to the right of the red line
C. The bars move to the left and the peak is slightly to the left of the red line
D. None of the above

Electronic Tuning Device

Notes

Electronic Tuning Device

Answer Key

1. *D*
2. *B*
3. *A (You want to pull your note slightly above pitch so that when you tune the rest of the notes, there is room for the pitch to lower)*
4. *overpull*
5. *one*
6. *A*

Learning More

Want to learn more about cents? You can find a video on that in our piano tuning theory series here (or scan the QR code):
https://youtube.com/playlist?list=PLyhFrvLWlRkAlBcAaO5hsniXzZ86h83NA

Learn More About Cents

Tuning Hammer Technique

Hammer technique is very important when tuning. It can greatly affect the quality of the finished product. You will want to hold the hammer with your pinky finger on the end of the hammer, your other three fingers around the top of the handle, and your thumb resting underneath the handle. This enables you to have good control no matter which direction you must tune the pin. The direction of your handle on the tuning pin can be anywhere from 11 to 1 o'clock or 12 to 2 o'clock depending on your preference.

It doesn't take much turning of the pin to create a great pitch difference, so short, gentle jerking motions are the best way to turn the pin. You will be able to feel the pin turn in the block when it does turn.

Because tip of the tuning pin can twist without turning in the pinblock, while tuning the unisons (the strings being tuned in this video) you will want to pull the pitch slightly higher than it should be to give room for the pin to settle.

Optional Quiz

1. *Your hammer should have how much play on the tuning pins?*
   A. No play
   B. A lot of play
   C. A little play

2. *True or false: It is possible that the tip of the tuning pin can twist without turning the entire pin.* _____

3. *True or false: When turning the pins, your hammer technique should be smooth, with no jerking.* _____

Tuning Hammer Technique

Notes

Tuning Hammer Technique

Answer Key

1. *C (A little bit of play can be an advantage to your hammer technique)*
2. *True*
3. *False (A jerking motion ensures that the tip of your pin will not twist without the whole pin turning in the pinblock)*

Learning More

Want to learn more about the different types of tuning hammers? You can find a video on that in our "Piano Tuning Hammers" video here (or scan the QR code): https://youtu.be/JZVVJGniCRc

Learn More About the Different Types of Tuning Hammers

Tuning the Midrange

When inserting the temperament strip as demonstrated in this video, you can use a regular, long flat-head screwdriver. You can also use a grand piano action screwdriver if you have that in your tool case.

Optional Quiz

1. *When inserting the temperament strip, you should depress the:*

   A. Damper (far right) pedal
   B. Soft (far left) pedal
   C. Sostenuto (middle) pedal

2. *The purpose of a temperament strip is to mute all but _____ string(s) per note for a large section at once.*

3. *When tuning a flat note, you want to pull the note _____ the pitch and then bring it back _____ to pitch.*

4. *True or false: as you tune, hit the string softly so that you don't disturb the tuning job. _____*

Tuning the Midrange

Notes

Tuning the Midrange

Answer Key

1. *A*
2. *one*
3. *above, down*
4. *False (you want to hit the string hard so that the note settles as you tune. Otherwise, this will cause the string to settle later, putting it out of tune a while after you have finished tuning)*

Learning More

You may have noticed a lid prop block in the background of this video. This is an especially important tool if you plan on tuning upright pianos. You can find one of these lid prop blocks here (or scan the QR code):
https://www.howardpianoindustries.com/piano-lid-prop-block/

Piano Lid
Prop Block

Tuning the Unisons

As we start tuning the unisons, we will have to slowing start pull our mute out from between the strings. Always remember to lift the damper pedal as you pull out the mute so you don't damage the dampers. Also remember that the same hammer technique applies to the unisons as for the other strings you have tuned. Pull the note slightly above pitch and then "jerk" it back down to the correct pitch so you don't twist the tuning pin. Make sure as you tune the unisons that you are tuning the correct string and not the one that is already tuned.

Optional Quiz

1. *If you are working on a note that has just two strings and your felt was muting the left string, make sure to tune the _____ string and vice versa.*

2. *When removing a mute, always press the pedal to the:*
   A. Far left
   B. Far right
   C. Middle

3. *True or false: When tuning a note that has three strings, first remove the mute on the left string and tune it, and then unmute right string to tune.* _____

Tuning the Unisons

Notes

Tuning the Unisons

Answer Key

1. *left*
2. *B*
3. *above, down*
4. *True*

Tuning the High Treble & Bass Section

You will be using your rubber mutes much more in the treble section as the strings are shorter and there is not enough room for the temperament strips to go.

For the bass section, you can pull out your temperament strip all at once since there are only two strings per note in that range.

Optional Quiz

1. *On the treble range, you can only use your temperament strip on strings that:*
   A. Have dampers
   B. Don't have dampers

2. *True or false: it is easier to tune the unisons as you go when using rubber mutes in the treble range.* _____

Tuning the High Treble & Bass Section

Notes

Tuning the High Treble & Bass Section

Answer Key

1. *left*
2. *True* (you will use rubber mutes in the section where there are dampers. It is easier because you will not have to move the mutes as much.)