

All Tuners Are NOT Created “Equally”: A guide for selecting the right tuner for teaching intonation

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Overview

Fundamentals, such as intonation, are critical to successful music making. However, intonation has long been a subject of great confusion and debate amongst musicians. Recently electronic tuners have been able to provide some assistance, but pedagogical experience does not come inside every package. We, as teachers, must know what the most effective tuners are and how they can be used most effectively towards this end.

“Aural” and “Visual” approaches

The greatest technology ever conceived for improving intonation is the human ear! Great intonation is ultimately the result of critical listening and your ability to match what you hear. The tuner can be an invaluable resource in the development of intonation skills when it is used to sound notes (as another musician would) for you to “aurally” match. Too often, teachers only use the display window of a tuner to “visually” show how sharp or flat a student might be. From my experience, the best approach has been to focus primarily on the “aural” aspects of intonation, using the “visual” approach secondarily to address any “aural” difficulty of the student. Ultimately, we need an “aural” answer, not a “visual” one.

Practical and Acoustical “Justifications”

Acoustical temperaments also justify the “aural” approach. There are two temperaments that we must be concerned with as musicians: “just” intonation and “equal temperament”. Though each system has its own unique advantages and disadvantages, BOTH are used daily whether it be by intuition or design. This means that your students should be able to successfully use both temperaments. “Equal temperament” represents the modern keyboard, while “just” intonation represents our human hearing system. “Just” intonation requires that notes be adjusted according to their relationship to the tonic (i.e. a G natural would be played differently in the key of F major than it would in the key of C major with regards to intonation), while “equal temperament” requires no adjustment from key to key (i.e. a G natural would be played the same in all keys). My students refer to “just” intonation as being “adjustable” and “equal temperament” as being “non-adjustable.”

The “aural” approach works for both temperaments, but the “visual” approach does not! Display windows for most brands are set to “equal temperament” only, meaning that the “visual” approach will actually make the student more “out-of-tune” when they play in “just” intonation! (i.e. a student playing the third scale degree in a major key will play quite sharp if they practice while reading a tuner’s “equal temperament” display window) Hence, you should only buy a tuner whose window can display “just” intonation and “equal temperament” values.

Tuner Features

You will want a tuner that can produce all 12 chromatic pitches in various octaves, allowing you to set any pitch as the tonic. Adjustable Calibration is also a “must” for this chromatic tuner since you may have to play with an out-of-tune piano from time to time! Finally, your tuner should also have an audio output and input. This feature allows your

tuner to produce pitches into your headphones and/or another sound system so that you can practice at a wide dynamic range without covering up the tonic “droning” behind you.

Recommendation

To this author’s knowledge, the Korg MT-1200 is the only tuner on the market that has all of these features. The Korg MT-1200 manual even has information on the necessary pitch adjustments for “equal temperament” and “just” intonation and many temperaments as well to serve as a resource. At the University of Wisconsin-Stevens Point, we use the MT-1200 tuners as part of a larger unit of our own design called a Portable Practice Unit. This unit contains a Korg MT-1200 tuner, a drum machine (for rhythmic development), a microphone, a microphone stand, headphones and a multitrack recorder/mixer. Using this unit a student can record the tuner “droning” the tonic on track one of the multitrack recorder/mixer, while recording other parts of a piece around it on the other tracks. Since all of their work is recorded, students can monitor and evaluate their progress on an ongoing basis as they add each track.

In only one year of implementation, we have found the results to be remarkable. By using responsible pedagogy and high quality equipment, you too will be able to create the teaching and learning environment for intonation that you have always hoped for. GOOD LUCK!