

# I N T R O D U C T I O N

## Why This Book?

Intonation is a primary factor in quality music performance that influences the level of playing for both amateurs and professionals.<sup>1</sup> In the last few years, technological tools for teaching and improving intonation have taken great strides in effectiveness and common use. As with any new technology (and other forms of intonation training), these tools have a learning curve, and developing practical skills can be a challenge for teachers. Many ensemble directors reach out to their peers or go to clinics designed to help improve ensemble intonation, but eventually they have to put into practice in their classrooms the things they have seen demonstrated. This is where the learning curve rears its ugly head. *What was it they did exactly? Which buttons did they push? What did they say to the students to get them to improve so quickly?*

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<sup>1</sup> Bergee, 2015; Karrick, 1998



# FACTORS THAT AFFECT TUNING

As we discussed earlier, a wide variety of factors shape how humans perceive pitch and intonation. For the ensemble director, knowing the basics of these differing factors is essential to improving group intonation. Elements such as the instrument, tone, temperature, instrument-specific tuning tendencies, balance, and seating can all shape overall intonation during a performance. Teaching tuning, therefore, requires a certain familiarity with these factors.

## **Instrument Factors**

The physical instrument can have a powerful effect on intonation. Working reeds that are an appropriate strength, mouthpieces that fit the instrument and the player, vocal length and material, and instrument construction material (instrument-shaped objects anyone?) can all greatly influence students' ability to perform in tune. Reeds that are too soft encourage overblowing and tend to play flat, while reeds that are too hard provide too much resistance and lead to unsupported, pinched, and sharp sounds.<sup>1</sup>

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<sup>1</sup> Ely & Van Deuren, 2009b; Jagow, 2012



# TEACHING TUNING

Making intonation judgments and performing more *in tune* are learnable skills.<sup>1</sup> While years of performing experience<sup>2</sup> or pitch discrimination<sup>3</sup> alone do not improve intonation performance, training helps performers improve their pitch-matching skills.<sup>4</sup> Students may need to develop both aural skills and knowledge of their instruments (procedural and theoretical) in order to play in tune. Accordingly, ensemble directors need to present students with specific strategies and approaches to improving intonation,<sup>5</sup> and using a variety of approaches in a mixed setting may lead to overall intonation improvement.<sup>6</sup>

## Identifying Mistuning

While identifying poor intonation does not automatically guarantee improved intonation during performances, it is a common first step to learning to play in tune.

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<sup>1</sup> Ballard, 2011; Latten, 2005; Morrison, 2000; Van Hedger et al., 2017

<sup>2</sup> Bennett, 1994; Yarbrough, Morrison, & Karrick, 1997

<sup>3</sup> Ballard, 2011; Powell, 2010

<sup>4</sup> Ballard, 2011; Latten, 2005

<sup>5</sup> Powell, 2010

<sup>6</sup> Silvey, Napoles, & Springer, 2019



# TETRACHORDS / MAJOR SCALES

Tetrachords are the building blocks of major scales and provide students a manageable space to begin improving intonation. Directors should initially work these exercises without pulse, allowing students time to develop both their pitch listening skills and flexibility on instruments to adjust pitches and find the center of the note. As the students improve, the time they take to center notes should decrease.

Goals:

1. Students make characteristic, resonate tones on all notes
2. Students eliminate beats against a drone/static reference pitch



Score Tuning with Technology: 52 Ensemble Exercises

Score

1 Bb Tetrachord/  
Bb Drone

2 F Tetrachord/  
Bb Drone

3 Bb Major Scale/  
Bb Drone

Flute

Oboe/Mallets

Clarinet in B $\flat$  1

Clarinet in B $\flat$  2

Alto Sax 1

Alto Sax 2

HD or TE

Trumpet in B $\flat$  1

Trumpet in B $\flat$  2

Horn in F 1

Horn in F 2

Trombone 1

Trombone 2

Euphonium

Tuba

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Flute

Tuning with Technology: 52 Ensemble Exercises

The image displays 15 numbered musical exercises for flute, arranged in five rows of three. Each exercise consists of a title box above a staff of music. The exercises are as follows:

- Exercise 1:** Bb Tetrachord/Bb Drone, F Tetrachord/Bb Drone, Bb Major Scale/Bb Drone
- Exercise 4:** F Tetrachord/F Drone, C Tetrachord/F Drone, F Major Scale/F Drone
- Exercise 5:** *sim.*
- Exercise 7:** Eb Tetrachord/Eb Drone, Bb Tetrachord/Eb Drone, Eb Major Scale/Eb Drone
- Exercise 10:** Ab Tetrachord/Ab Drone, Eb Tetrachord/Ab Drone, Ab Major Scale/Ab Drone
- Exercise 13:** Db Tetrachord/Db Drone, Ab Tetrachord/Db Drone, Db Major Scale/Db Drone

Each exercise staff includes notes, stems, and various drone markers (circles and arrows) indicating where to play or listen for tuning.

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