

Brad Edwards

***Tuning Drone
Melodies***

Treble Clef

About This Book

Tuning Drone Melodies is a collection of music intended for use with a tuning drone (not included). Part One is for a single instrument playing with the drone while Part Two is for multiple instruments playing with the drone. My thanks to Dr. Benjamin Coy, whose waveform graphic (front cover) first appeared in his intonation article on Jay Friedman's website (jayfriedman.net/articles/an_introduction_to_temperament). Ben has also written a very nice book with detailed intonation exercises: *Intonation Studies for Three Trombones*.

How to Use This Book

- *Listen carefully:* This may seem obvious but the skill of making small adjustments to match your pitch with another takes time and patience.
- *De-tune on purpose:* The fear of being wrong closes the mind. Feel free to bend the pitch while listening nonjudgmentally as your note clashes or blends with the drone.
- *Pause as needed:* In the pursuit of musical interest, these melodies do move along. Some out-of-tune notes might slip past your attention until your ear and reflexes improve. Insert fermatas to pause and check critical notes. Be patient!
- *Play musically:* Playing in tune is wonderful but not if it leads to a dull musical performance. You must simultaneously make compelling phrases and adjust to lock in pure intervals.

A Bit About Tuners

Electronic tuners are wonderful devices but it's easy to use them the wrong way:

Problem #1

Playing in tune is about your **ears**, not your **eyes**. If you simply stare at the display without listening, you're doing it wrong.

Problem #2

Some tuners are **too sensitive**; you sustain a reasonably steady note and the display jumps all over the place. Maybe that sensitivity is useful for tuning electronic instruments but for most wind instruments, an overly sensitive display can lead to confusion and tension.

Problem #3

Tuners report that you are sharp or flat compared to an **isolated** electronic standard. If you are sitting in an ensemble but relying on the tuner instead of listening to those around you, you're putting blinders on. That's like driving your car into a lake because the GPS told you to (yes, this has happened!). Use common sense. Listen to the people around you. Be a good musician!

Problem #4

Tuners use a **compromise** system of equal temperament. Harmonies sound more beautiful using the pure ratios of 'just' intonation. More about this later...

A Bit About Tuning Drones

Tuning drones are simply sustained notes (preferably in tune!). At the time of printing (2014), there are a number of ways to generate tuning drones. One is an excellent recording, *Cello Drones*, available from Navarro River Music. This recording can be found in most online music stores or directly from the company itself (navarrorivermusic.com). Unlike electronic drones, these use a pleasing cello sound with a rich set of overtones inherent in the timbre.

A number of drone apps are available for iPhones and iPads. The best I have found is *Tonal Energy* (tonalenergy.com). The app easily generates drones not only with unisons and octaves but also other intervals, such as perfect fifths and even chords. Tonal Energy allows you to easily toggle between equal temperament and just intonation (more about that later). Another good app is the *Practice Center*, available from Cal30 iPhone solutions (cal30.biz). In addition to tuning drones, this app includes modules for video and audio recording, a metronome with drum loops and a timer. A fairly good tuner/drone app for the Android operating system is *Tunable*. As time goes on, I'm sure the app world will develop quickly. If using electronic drones, I suggest an open perfect fifth when playing along with this book. That's what I used in creating these melodies.

I have created my own tuning drones and distribute them freely through my website (bonezone.org). These are .wav files using just intonation. They are somewhat limited in length but can be looped using the right software. Another useful set of free drones can be found at Ben Coy's website (tenorposaune.com). Basically, Ben took the cello drone concept and rebuilt it with brass sounds instead of strings.

If you are practicing with a patient partner, it may also be possible to take turns providing the drone note.

Another challenge in working with drones is speaker technology. While it is possible to use headphones, quality speakers are far better. Here are some important considerations:

- *Tone Quality*: generating drones through small, tinny speakers is an inferior experience. If possible, make sure the speakers generate a good clean bass sound.
- *Volume*: many portable speakers don't generate enough sound to be useful for play-alongs. Other speakers break up at louder volumes.
- *Size and portability*: most college music students must use practice rooms and carry everything around. If you purchase portable speakers, make sure the quality is high enough. As of now, the built-in speakers of most phones and tablets aren't up to the task.

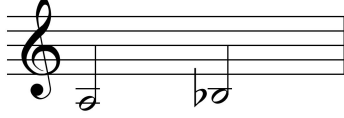

If you have a permanent practice space, invest in a good audio system. If you need to use portable speakers, a number of good-quality, portable speakers are becoming available at reasonable prices. Do some research before spending your money.

Hertz, Cents and Beats

Hertz: *Hertz (Hz) = vibrations per second.* You may have heard the term ‘A 440.’ An object vibrating 440 times each second is vibrating at 440Hz and will sound the note ‘A’ above ‘middle C’ (C4).

Cents: Each 1/100 of a half step is a cent. If you are 20 cents sharp, you are 20/100 (or 1/5) of a half step sharp.

A change of one *100 cents* does not equal a change of one *100 Hertz*.
Look at this table:

Notation	Change (Hz)	Change (%)	Change (Cents)
	13.08 (220-233.08)	5.95%	100
	26.16 (440-466.16)	5.95%	100

Beats: When two notes are out of tune, you hear *beats* - that waving/pulsing quality of the two sound waves moving in and out of sync. The *closer* the notes get to a unison, the *slower* the beats sound. The “Grinders” exercises of Part One use slow glisses to help you listen for, and resolve, beats.

Pure intervals have beats of their own which are less obvious to the ear. Pick the right two notes, play them in tune and the beats can actually form a third note!

Perfect vs. Color Intervals

Perfect Intervals: Fourths, fifths and octaves. These intervals don’t change from major to minor keys. The table on the next page gives some examples.

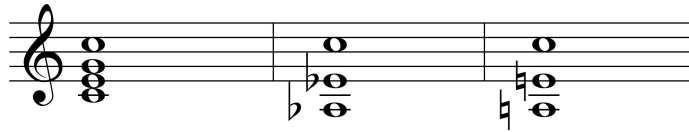
Color Intervals (Color Notes): Mostly thirds and sixths. These change from major to minor keys. The table on the next page gives some examples.

One should use the term “major third” but not “perfect third.” Conversely, one should refer to a “perfect fifth” but never a “major fifth.”

Equal vs. Just

Equal temperament: A compromise system in which all keys are the same but none are ideal. Most electronic tuners and midi devices use this system.

Just intonation: A system built on pure frequency ratios. For example, a just-tuned major third is built on a 5:4 ratio. Look at the three chords below...



Each of these chords has a C as the top note. In equal temperament, each C would be the same. In just intonation, each of these C's will be in a slightly different place to lock in those pure ratios. This table should help:

Interval	Ratio	Example	Top Note Adjustment
Octave	2:1		No change
Perfect 5 th	3:2		Up 2 cents (almost nothing)
Perfect 4 th	4:3		Down 2 cents (almost nothing)
Major 3 rd	5:4		Down 14 cents
Minor 3 rd	6:5		Up 16 cents
Major 6 th	5:3		Down 16 cents
Minor 6 th	8:5		Up 14 cents

Here's the same musical example with the adjustments needed for that C:

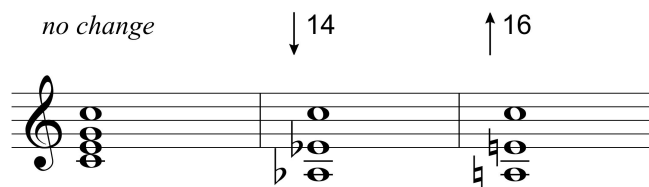


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Part One:

One Voice with Drone

About this section:

Each section focuses on one tonal center (drone note). Transposing instruments must give some thought to choosing the correct drone note. All the material is meant to be played over that drone. All sections have the same basic layout:

- ***Grinders:*** These have lots of half steps moving from ‘grinding’ dissonances to consonances. Glissandi are indicated but don’t worry if your instrument can’t gliss. Just play the half step legato. If you can gliss, move slowly and listen to the beats.
- ***Perfect Intervals:*** This is a simple exercise using perfect fourths, fifths and octaves. Notice the variations below each exercise. Feel free to make your own variations.
- ***Perfect Interval Piece:*** With titles like *Promenade* and *Rustic Waltz*, these half-page etudes emphasize the perfect intervals. Each piece usually appears twice in the book (in different keys).
- ***Finding the Thirds:*** Lots of practice with major and minor thirds over the drone. You will find that major thirds ‘settle in’ more easily than minor thirds.
- ***Two Short Pieces:*** With titles like *Lament* and *Tower Waltz*, these pieces are in contrasting styles and modes. Each piece usually appears twice in the book (in different keys).
- ***High Range / Low Range:*** Pretty self-explanatory. Don’t worry if you can’t hit the highest notes.
- ***Folk Song Settings:*** Two or three settings of folk songs that happen to work well over a tuning drone. Each folk song appears three or four times in the book (in different keys and usually with slight variations).
- ***Concert Piece:*** A more challenging one-page etude. Each drone has a unique etude.

F Drone

Transpositions: in F = B-flat drone || in B-flat = E-flat drone || in E-flat = A-flat drone

Grinders

The Grinders section consists of three staves of music in 4/4 time, key of B-flat. The first staff has a melodic line starting on G4, moving down to F4, E4, D4, C4, with a glissando line above it labeled "pitch bend?". The second staff continues the melody with a glissando line above it labeled "simile". The third staff shows the melody moving down to B3, A3, G3, with a glissando line below it.

Use the glisses for pitch-bending only if they are idiomatic for your instrument.

Perfect Intervals

Basic Version

The Perfect Intervals section consists of three staves of music in 4/4 time, key of B-flat. The first staff shows a harmonic pattern of quarter notes: G4, F4, E4, D4, C4, B3, A3, G3. The second staff shows a similar pattern with a glissando line above it labeled "optional". The third staff shows the harmonic pattern moving down to F4, E4, D4, C4, B3, A3, G3, F3, E3, D3, C3.

Variation 1

Variation 1 of the Perfect Intervals section consists of a single staff of music in 4/4 time, key of B-flat. It features a rhythmic pattern of eighth notes: G4, F4, E4, D4, C4, B3, A3, G3, F3, E3, D3, C3.

Variation 2

Variation 2 of the Perfect Intervals section consists of a single staff of music in 4/4 time, key of B-flat. It features a rhythmic pattern of eighth notes: G4, F4, E4, D4, C4, B3, A3, G3, F3, E3, D3, C3. A glissando line below the notes is labeled "(when descending)".

Be creative and apply your own variations to the basic harmonic skeleton above.

Heroic Fanfare

mf *f*
mp *mf* *f*

Finding the Thirds (Major third, down 14 cents; Minor third, up 16 cents)

↓ 14 ↑ 16

Lament (lower)

mp p

cresc. mf

p

mp

Lament (higher)

mp

p cresc. mf

p

mp

Tower Waltz

Musical score for 'Tower Waltz' in 3/4 time, D-flat major. The score consists of four staves of music. The first staff begins with a treble clef, a key signature of two flats (B-flat and E-flat), and a 3/4 time signature. The melody starts with a half note G4, followed by quarter notes A4, B-flat4, and C5. The second staff continues the melody with quarter notes D5, E-flat5, and F5, then a half note G5. The third staff features a half note A5, followed by quarter notes B-flat5 and C6. The fourth staff concludes with a half note D6, followed by quarter notes C6, B-flat5, and A5. Dynamics include *mf*, *mp*, *f*, and *sfp*. The piece ends with a double bar line.

BooLavogue (lower)

Irish folk song

Musical score for 'BooLavogue (lower)' in 3/4 time, D-flat major. The score consists of five staves of music. The first staff begins with a treble clef, a key signature of two flats (B-flat and E-flat), and a 3/4 time signature. The melody starts with a half note G4, followed by quarter notes A4, B-flat4, and C5. The second staff continues with quarter notes D5, E-flat5, and F5, then a half note G5. The third staff features a half note A5, followed by quarter notes B-flat5 and C6. The fourth staff concludes with a half note D6, followed by quarter notes C6, B-flat5, and A5. The fifth staff continues the melody with quarter notes G4, F4, E4, and D4. Dynamics include *f* and *mp*. The piece ends with a double bar line.

Skye Boat Song

Scottish Folk Song

Musical notation for the Skye Boat Song, consisting of three staves. The first staff begins with a treble clef, a key signature of three sharps (F#, C#, G#), and a 6/8 time signature. The melody is written in a single line with various note values and rests. The second staff includes the word "Fine" above the staff. The third staff concludes with the instruction "D.C. al Fine".

He's Gone Away (lower)

American Folk Song

Musical notation for the lower version of He's Gone Away, consisting of three staves. The first staff starts with a treble clef, a key signature of three sharps, and a 4/4 time signature. The melody features several triplet markings (indicated by a '3' below the notes) and various note values. The notation includes slurs and ties across the staves.

He's Gone Away (higher)

American Folk Song

Musical notation for the higher version of He's Gone Away, consisting of three staves. The first staff begins with a treble clef, a key signature of three sharps, and a 4/4 time signature. The melody is written in a higher register than the lower version and includes triplet markings and various note values. The notation uses slurs and ties throughout.

Concert Piece (lower)

Waltz (in three)

mp

p

2x To Coda ⊕ *piu mosso*

mp *mf*

mp *mf*

mp *rit.*

cadenza

(start slowly) *p* *cresc.*

accel *slower*

accel *rit.* *D.C. al Coda*

⊕

Concert Piece (higher)

Waltz (in three)

mp

p

mp

2x To Coda \oplus

piu mosso

mf

mp

mf

rit.

mp

cadenza
(start slowly)

p

cresc.

accel

slower

accel

rit.

D.C. al Coda

The musical score is written in treble clef with a key signature of three sharps (F#, C#, G#) and a 3/4 time signature. It consists of ten staves of music. The first staff begins with a mezzo-piano (*mp*) dynamic and features a melodic line with a slur. The second staff introduces a piano (*p*) dynamic and includes a triplet. The third staff contains a '2x To Coda' instruction with a Coda symbol, followed by a 'piu mosso' tempo change and a mezzo-forte (*mf*) dynamic. The fourth and fifth staves continue the melodic development with dynamics of *mp* and *mf*. The sixth staff includes a 'rit.' (ritardando) instruction. The seventh staff is marked 'cadenza (start slowly)' and begins with a piano (*p*) dynamic, followed by a 'cresc.' (crescendo) and an 'accel' (accelerando) instruction. The eighth staff features a 'slower' tempo change. The ninth staff includes 'accel' and 'rit.' instructions. The piece concludes with a 'D.C. al Coda' instruction, leading to the final staff.

Part Two: Multiple Voices with Drone

About this section:

Each section centers on one tonal center (drone note). All the material is meant to be played over that drone. All sections have the same basic layout:

- ***Perfect Intervals:*** No thirds are used here; just octaves, fourths and fifths.
- ***Color Notes:*** These little plagal cadences (I-IV-I) in both major and minor get right to the heart of the matter of tuning thirds and sixths. They should be done over a unison or octave drone (as opposed to a drone using perfect fifths).
- ***Major and Minor Thirds:*** Lots of practice with these. You will probably find the major thirds easier to “lock in” than the minor thirds.
- ***Duets in Major and Minor:*** Two short pieces, one mode each. For the most part, each piece appears twice throughout the book.
- ***Drone Rounds:*** These rounds can be played with two or more players. The asterisk (*) indicates the starting point for the next voice. The fermata in parentheses indicates the stopping point for the second voice. A question mark over the final repeat indicates an optional repeat.
- ***Concert Duet:*** A longer, more challenging piece with contrasting styles. Each piece appears in two different keys throughout the book.

C Drone

F-Horn = F drone || B-flat Trumpet/Clarinet = B-flat drone

Perfect Intervals (4ths, 5ths, 8ves)

Musical score for Perfect Intervals (4ths, 5ths, 8ves) in 4/4 time. The score consists of three systems of two staves each. The first system starts with a *mf* dynamic. The second system features dynamics of *f*, *mp*, and *cresc.* with crescendo hairpins. The third system starts with a *mf* dynamic. The piece concludes with a final chord in the second staff.

Color Notes (3rds, 6ths) (Drone unison/octaves only, no perfect fifths)

Musical score for Color Notes (3rds, 6ths) in 4/4 time. The score consists of two systems of two staves each. The first system has a first ending marked with a downward arrow and the number 14, and a second ending marked with an upward arrow and the number 16. The second system has a first ending marked with a downward arrow and the number 16, and a second ending marked with an upward arrow and the number 14. The instruction "swap parts on repeat" is written between the staves in both systems.

Major and Minor Thirds

Musical score for "Major and Minor Thirds" in F major, 4/4 time. The score consists of two systems of two staves each. The first system begins with a half note F4 and a half note A4, moving through various intervals. The second system continues the melodic lines. Dynamics include *mp* and *mf*.

Duet in F Major

Musical score for "Duet in F Major" in F major, 3/4 time. The score consists of two systems of two staves each. The first system begins with a half note F4 and a half note A4, moving through various intervals. The second system continues the melodic lines. Dynamics include *mp*, *mf*, and *f*.

Duet in F minor

The musical score for 'Duet in F minor' consists of two staves of music. The key signature has three flats (B-flat, E-flat, A-flat) and the time signature is 4/4. The first staff begins with a rest, followed by a melodic line starting on G4, marked *mp*. The second staff starts with a piano (*p*) accompaniment of eighth notes, marked with triplets. The piece features various dynamics including *mf* and *cresc.* (crescendo). The score concludes with a fermata over the final notes of both staves.

Drone Rounds

The second part should enter when the leading part reaches the asterisk (*). The fermata in parentheses is the stopping point for the second voice (if only two voices are playing).

Simple Arpeggios - major (two or more voices)

The musical score for 'Simple Arpeggios - major' is written in 3/4 time. The first staff shows a melodic line starting on G4, with an asterisk (*) above the second measure. The second staff shows a piano accompaniment of eighth notes, with a fermata in parentheses above the final note. The piece ends with a double bar line and a question mark (?) at the end of the second staff.

[B-flat Drone]

Simple Arpeggios - minor (two or more voices)

Musical notation for 'Simple Arpeggios - minor' in 4/4 time, B-flat major (two flats). The melody consists of eighth and quarter notes. A star (*) is placed above the first measure, and a question mark (?) is placed above the final measure. A circled smiley face (:) is placed above the penultimate measure.

Flutes: you can just take parts of this up an octave as needed

Plagal Cadence Round (two or more voices; drone unison/octaves only, no perfect fifth)

Musical notation for 'Plagal Cadence Round' in 4/4 time, B-flat major. It features four staves of music. The first staff has a star (*) above the final measure. The second staff has a star (*) above the final measure. The third staff has a star (*) above the final measure. The fourth staff has a question mark (?) above the final measure.

Round Dance (two voices)

Musical notation for 'Round Dance' in 3/4 time, B-flat major. It features four staves of music. The first staff has a star (*) above the final measure. The second staff has a circled smiley face (:) above the final measure. The third staff has a circled smiley face (:) above the final measure. The fourth staff has a circled smiley face (:) above the final measure.

Flutes: you can just take parts of this up an octave as needed

[F-sharp Drone]
Concert Duet

Tuning Drone Melodies, Treble Clef - free samples - BoneZone.org

Moderato

mp

mp

Fine

Fine

With a driving pulse

mp *mf*

mp *2x cresc.* *mf*

D.C. al Fine

D.C. al Fine

mp

mp

Books by Brad Edwards

- **Lip Slurs** (84 pages) [Ensemble Publications]
 - *“This is the bible of Lip Slurs. If you ever get bored of your routine, simply get a copy of Brad Edwards' Lip Slur Book and these exercises will last you a lifetime ~ Joseph Alessi*
- **Introductory Studies in Tenor and Alto Clef: Before Blazhevich** (56 pages) [Ensemble Publications]
 - *“Great book, well organized. A very interesting and useful step by step method to learning clefs. Particularly useful is Brad's idea of guidepost notes. Highly recommended!” ~ Don Lucas, Boston University*
- **Simply Singing for Winds** (114 pages)

You can never have too many good tunes to play!

 - Four ranges: Medium Bass (trombone), Low Bass (tuba), Medium Treble (trumpet), Low Treble (horn)
 - *“This book is a MUST HAVE for any player wanting to build a better sound and for all those advanced and professional players that want to KEEP theirs!” ~ David Fedderly, Baltimore Symphony*
- **Trombone Craft Complete** (170 pages)

We all need to build tone and technique. Why not do it in a more musical way?

 - *“A regular visit to this book will undoubtedly help you to play more evenly and consistently and, when used in the precise way that Edwards suggests, will result in your overall improvement. I highly recommend this book to all students and professionals. Bravo Professor Edwards!” ~ Joseph Alessi, New York Philharmonic*
- **Bass Trombone Craft** (186 pages)

Related to Trombone Craft Complete but not just a transposition.

 - *“It is a welcome and needed addition to bass trombone pedagogical material that should be a staple of every teacher's curriculum.” ~ Denson Paul Pollard, Metropolitan Opera Orchestra*
- **Lip Slur Melodies** (132 pages)

This new collection offers up over 130 pages of etudes and duets, all using natural slurs on the trombone!

 - *“I love playing these because they are beautifully melodic and every note is coming from or going to a natural slur. I think you have really hit the essence of Arnold Jacobs' teaching. This makes it easy: just blow air and move your lips and slide with the rhythm. Thank you, Brad Edwards !!” ~ Charlie Vernon, Chicago Symphony Orchestra*
- **Tuning Drone Melodies** (134 pages)

A collection of music intended for use with a tuning drone (not included). Part One is for a single instrument playing with the drone while Part Two is for multiple instruments playing with the drone.

 - *“Dr. Edwards's new book, Tuning Drone Melodies, is a great way to train your ears to hear just intonation in the context of melodic playing. Your intonation will improve and that will make your music making much more convincing. I really enjoy playing these tuning drone melodies!” ~ Sam Schlosser, San Francisco Opera*

**Can be ordered at: www.bonezone.org
(Free samples online)**