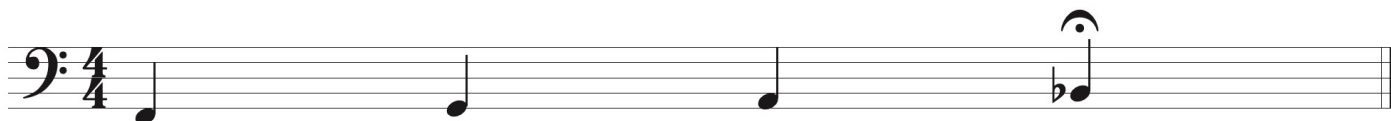


# Tuba

## ***Basic Tuning Rules***

1. *Make sure you have warmed up for at least 5 minutes before tuning.*
2. *Use your best embouchure and make sure you play with your best tone quality.*
3. *Play your tuning note at a mezzo forte dynamic level.*
4. *Do not try to fix the tuning note by adjusting with your air or embouchure. Adjust the tuning slide listed below until it is in tune.*

## **Best Tuning Notes**



Approach the Bb by walking up the scale to help center the pitch. Adjust the main tuning slide to Bb.

## **How to Tune the Tuba**

The tuba is tuned by adjusting the length of the main tuning slide - this is the one that is at the bottom of the tuba with the water key attached to it (you may have water keys on other slides too - the main tuning slide will be the lowest and thickest slide on the instrument). If you are sharp, pull it out more; if you are flat, push it in more. The first, second, third, and fourth valve slides should be pushed most of the way in and can be adjusted farther in or out if specific valve combinations are out of tune on your particular tuba.

## **How to Adjust for Other Notes**

Unfortunately, after tuning your instrument, there will still be some notes that will need to be adjusted to be in tune. Use these guidelines to help you if you come across an out of tune note:

1. If you are sharp - relax the embouchure.
2. If you are flat - firm up the embouchure.
3. If you are playing loud - crescendos have a tendency to play sharp.
4. If you are playing soft - decrescendos have a tendency to play flat.
5. 1-2 valve combination is moderately sharp.
6. 2-3 valve combination is moderately flat.
7. 1-3 valve combination is very sharp - use the 4th valve if available.
8. 1-2-3 valve combination is extremely sharp - use 2-4 valve combination if available.

# Tuba Pitch Tendencies

## Abbreviations

VF - Very Flat    F - Flat    S - Sharp    VS - Very Sharp

The following table summarizes the pitch tendencies shown in the musical staves:

Staff	Notes (from left to right)	Pitch Tendency
1	B $\sharp$ , B $\flat$ , C $\flat$ , C $\flat$ , B $\sharp$ , B $\flat$ , C $\flat$	VS, VS, VS, VS, S
2	B $\sharp$ , B $\flat$ , C $\flat$ , B $\sharp$ , B $\flat$ , C $\flat$ , C $\flat$	VS, VS
3	B $\sharp$ , B $\flat$ , C $\flat$ , B $\sharp$ , B $\flat$ , C $\flat$ , C $\flat$	S, S, S, S
4	B $\sharp$ , B $\flat$ , C $\flat$ , B $\sharp$ , B $\flat$ , C $\flat$ , B $\sharp$ , B $\flat$	S
5	C $\flat$ , C $\flat$ , B $\sharp$ , B $\flat$ , C $\flat$ , B $\sharp$ , B $\flat$	VF, VF, VF, VF, VF, S, S
6	C $\flat$ , C $\flat$ , B $\sharp$ , B $\flat$ , C $\flat$ , B $\sharp$ , B $\flat$	S, S, S, S, VS
7	C $\flat$ , B $\sharp$ , B $\flat$ , C $\flat$ , C $\flat$ , B $\sharp$ , B $\flat$	F



While these pitch tendencies are common for most tubas, each individual instrument can vary. It is important to spend time with a tuner on your own instrument to learn its unique characteristics.

# Tuba Warmups

<i>Abbreviations</i>			
<i>VF - Very Flat</i>	<i>F - Flat</i>	<i>S - Sharp</i>	<i>VS - Very Sharp</i>

<i>Abbreviations</i>			
<i>VF - Very Flat</i>	<i>F - Flat</i>	<i>S - Sharp</i>	<i>VS - Very Sharp</i>

## Long Tone 1a

The musical notation for Example 6-10 is as follows:

- Clef:** Bass Clef
- Key Signature:** One Flat (B-flat)
- Time Signature:** 4/4
- Melody:**
  - Measure 1: Eighth note G<sub>2</sub>, quarter rest.
  - Measure 2: Quarter note F<sub>2</sub>, quarter rest.
  - Measure 3: Eighth note E<sub>2</sub>, quarter rest.
  - Measure 4: Quarter note D<sub>2</sub>, quarter rest.
  - Measure 5: Eighth note C<sub>2</sub>, quarter rest.
  - Measure 6: Quarter note B<sub>1</sub>, quarter rest.
  - Measure 7: Eighth note A<sub>1</sub>, quarter rest.
  - Measure 8: Quarter note G<sub>1</sub>, quarter rest.
- Phrasing:** Slurs are placed over measures 1-2, 3-4, 5-6, and 7-8.

Musical notation for the bass line of "The Sound of Silence". The notation is in bass clef with a key signature of one flat (B-flat). The melody consists of eighth and quarter notes, with rests. The lyrics "The Sound of Silence" are written below the notes.

### Long Tone 1b

Musical notation for the bass line of 'The Rose Tree'. The key signature is one flat (B-flat). The melody consists of eighth notes and rests. The notes are: G2, F2, E2, D2, C2, B1, A1, G1, F1, E1, D1, C1, B0, A0, G0, F0, E0, D0, C0, B-1, A-1, G-1, F-1, E-1, D-1, C-1, B-2, A-2, G-2, F-2, E-2, D-2, C-2, B-3, A-3, G-3, F-3, E-3, D-3, C-3, B-4, A-4, G-4, F-4, E-4, D-4, C-4, B-5, A-5, G-5, F-5, E-5, D-5, C-5, B-6, A-6, G-6, F-6, E-6, D-6, C-6, B-7, A-7, G-7, F-7, E-7, D-7, C-7, B-8, A-8, G-8, F-8, E-8, D-8, C-8, B-9, A-9, G-9, F-9, E-9, D-9, C-9, B-10, A-10, G-10, F-10, E-10, D-10, C-10, B-11, A-11, G-11, F-11, E-11, D-11, C-11, B-12, A-12, G-12, F-12, E-12, D-12, C-12, B-13, A-13, G-13, F-13, E-13, D-13, C-13, B-14, A-14, G-14, F-14, E-14, D-14, C-14, B-15, A-15, G-15, F-15, E-15, D-15, C-15, B-16, A-16, G-16, F-16, E-16, D-16, C-16, B-17, A-17, G-17, F-17, E-17, D-17, C-17, B-18, A-18, G-18, F-18, E-18, D-18, C-18, B-19, A-19, G-19, F-19, E-19, D-19, C-19, B-20, A-20, G-20, F-20, E-20, D-20, C-20, B-21, A-21, G-21, F-21, E-21, D-21, C-21, B-22, A-22, G-22, F-22, E-22, D-22, C-22, B-23, A-23, G-23, F-23, E-23, D-23, C-23, B-24, A-24, G-24, F-24, E-24, D-24, C-24, B-25, A-25, G-25, F-25, E-25, D-25, C-25, B-26, A-26, G-26, F-26, E-26, D-26, C-26, B-27, A-27, G-27, F-27, E-27, D-27, C-27, B-28, A-28, G-28, F-28, E-28, D-28, C-28, B-29, A-29, G-29, F-29, E-29, D-29, C-29, B-30, A-30, G-30, F-30, E-30, D-30, C-30, B-31, A-31, G-31, F-31, E-31, D-31, C-31, B-32, A-32, G-32, F-32, E-32, D-32, C-32, B-33, A-33, G-33, F-33, E-33, D-33, C-33, B-34, A-34, G-34, F-34, E-34, D-34, C-34, B-35, A-35, G-35, F-35, E-35, D-35, C-35, B-36, A-36, G-36, F-36, E-36, D-36, C-36, B-37, A-37, G-37, F-37, E-37, D-37, C-37, B-38, A-38, G-38, F-38, E-38, D-38, C-38, B-39, A-39, G-39, F-39, E-39, D-39, C-39, B-40, A-40, G-40, F-40, E-40, D-40, C-40, B-41, A-41, G-41, F-41, E-41, D-41, C-41, B-42, A-42, G-42, F-42, E-42, D-42, C-42, B-43, A-43, G-43, F-43, E-43, D-43, C-43, B-44, A-44, G-44, F-44, E-44, D-44, C-44, B-45, A-45, G-45, F-45, E-45, D-45, C-45, B-46, A-46, G-46, F-46, E-46, D-46, C-46, B-47, A-47, G-47, F-47, E-47, D-47, C-47, B-48, A-48, G-48, F-48, E-48, D-48, C-48, B-49, A-49, G-49, F-49, E-49, D-49, C-49, B-50, A-50, G-50, F-50, E-50, D-50, C-50, B-51, A-51, G-51, F-51, E-51, D-51, C-51, B-52, A-52, G-52, F-52, E-52, D-52, C-52, B-53, A-53, G-53, F-53, E-53, D-53, C-53, B-54, A-54, G-54, F-54, E-54, D-54, C-54, B-55, A-55, G-55, F-55, E-55, D-55, C-55, B-56, A-56, G-56, F-56, E-56, D-56, C-56, B-57, A-57, G-57, F-57, E-57, D-57, C-57, B-58, A-58, G-58, F-58, E-58, D-58, C-58, B-59, A-59, G-59, F-59, E-59, D-59, C-59, B-60, A-60, G-60, F-60, E-60, D-60, C-60, B-61, A-61, G-61, F-61, E-61, D-61, C-61, B-62, A-62, G-62, F-62, E-62, D-62, C-62, B-63, A-63, G-63, F-63, E-63, D-63, C-63, B-64, A-64, G-64, F-64, E-64, D-64, C-64, B-65, A-65, G-65, F-65, E-65, D-65, C-65, B-66, A-66, G-66, F-66, E-66, D-66, C-66, B-67, A-67, G-67, F-67, E-67, D-67, C-67, B-68, A-68, G-68, F-68, E-68, D-68, C-68, B-69, A-69, G-69, F-69, E-69, D-69, C-69, B-70, A-70, G-70, F-70, E-70, D-70, C-70, B-71, A-71, G-71, F-71, E-71, D-71, C-71, B-72, A-72, G-72, F-72, E-72, D-72, C-72, B-73, A-73, G-73, F-73, E-73, D-73, C-73, B-74, A-74, G-74, F-74, E-74, D-74, C-74, B-75, A-75, G-75, F-75, E-75, D-75, C-75, B-76, A-76, G-76, F-76, E-76, D-76, C-76, B-77, A-77, G-77, F-77, E-77, D-77, C-77, B-78, A-78, G-78, F-78, E-78, D-78, C-78, B-79, A-79, G-79, F-79, E-79, D-79, C-79, B-80, A-80, G-80, F-80, E-80, D-80, C-80, B-81, A-81, G-81, F-81, E-81, D-81, C-81, B-82, A-82, G-82, F-82, E-82, D-82, C-82, B-83, A-83, G-83, F-83, E-83, D-83, C-83, B-84, A-84, G-84, F-84, E-84, D-84, C-84, B-85, A-85, G-85, F-85, E-85, D-85, C-85, B-86, A-86, G-86, F-86, E-86, D-86, C-86, B-87, A-87, G-87, F-87, E-87, D-87, C-87, B-88, A-88, G-88, F-88, E-88, D-88, C-88, B-89, A-89, G-89, F-89, E-89, D-89, C-89, B-90, A-90, G-90, F-90, E-90, D-90, C-90, B-91, A-91, G-91, F-91, E-91, D-91, C-91, B-92, A-92, G-92, F-92, E-92, D-92, C-92, B-93, A-93, G-93, F-93, E-93, D-93, C-93, B-94, A-94, G-94, F-94, E-94, D-94, C-94, B-95, A-95, G-95, F-95, E-95, D-95, C-95, B-96, A-96, G-96, F-96, E-96, D-96, C-96, B-97, A-97, G-97, F-97, E-97, D-97, C-97, B-98, A-98, G-98, F-98, E-98, D-98, C-98, B-99, A-99, G-99, F-99, E-99, D-99, C-99, B-100, A-100, G-100, F-100, E-100, D-100, C-100, B-101, A-101, G-101, F-101, E-101, D-101, C-101, B-102, A-102, G-102, F-102, E-102, D-102, C-102, B-103, A-103, G-103, F-103, E-103, D-103, C-103, B-104, A-104, G-104, F-104, E-104, D-104, C-104, B-105, A-105, G-105, F-105, E-105, D-105, C-105, B-106, A-106, G-106, F-106, E-106, D-106, C-106, B-107, A-107, G-107, F-107, E-107, D-107, C-107, B-108, A-108, G-108, F-108, E-108, D-108, C-108, B-109, A-109, G-109, F-109, E-109, D-109, C-109, B-110, A-110, G-110, F-110, E-110, D-110, C-110, B-111, A-111, G-111, F-111, E-111, D-111, C-111, B-112, A-112, G-112, F-112, E-112, D-112, C-112, B-113, A-113, G-113, F-113, E-113, D-11

### Long Tone 1c

The musical notation for the bass staff shows a sequence of notes and rests across six measures. The first measure contains two eighth notes, G2 and F2. The second measure contains one eighth note, E2. The third measure contains one eighth note, D2, followed by a quarter rest. The fourth measure contains two eighth notes, C2 and B1. The fifth measure contains one eighth note, A1. The sixth measure contains one eighth note, G1, followed by a quarter rest.

### Long Tone 1d

[illegible]

The musical notation for the bass staff shows a sequence of notes and rests across eight measures. The notes are G2, F2, E2, D2, C2, B1, A1, and G1. There are whole rests in measures 3, 5, and 7. The final measure contains two eighth notes, G1 and F1, beamed together.

# Tuba Warmups

## Abbreviations

VF - Very Flat    F - Flat    S - Sharp    VS - Very Sharp

### Long Tone 3a

The musical notation for Long Tone 3a consists of five staves, each containing a long tone exercise in bass clef with a key signature of two flats (B-flat and E-flat). The exercises are as follows:

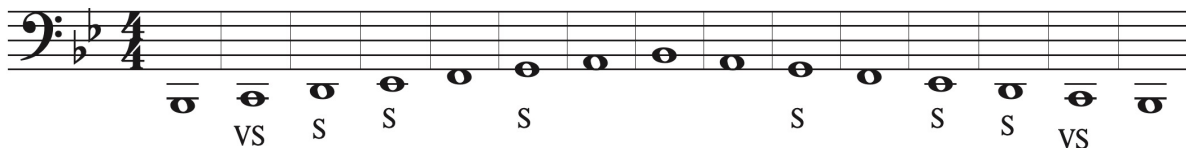
- Staff 1:** Notes are G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter), C2 (quarter), B1 (quarter), A1 (quarter), and G1 (quarter). Accidents: sharp on F2, sharp on E2, sharp on D2, sharp on C2, sharp on B1, sharp on A1, and sharp on G1. Markings: 'S' below the D2 and C2 notes.
- Staff 2:** Notes are G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter), C2 (quarter), B1 (quarter), A1 (quarter), and G1 (quarter). Accidents: sharp on F2, sharp on E2, sharp on D2, sharp on C2, sharp on B1, sharp on A1, and sharp on G1. Markings: 'S' below the D2 and C2 notes.
- Staff 3:** Notes are G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter), C2 (quarter), B1 (quarter), A1 (quarter), and G1 (quarter). Accidents: sharp on F2, sharp on E2, sharp on D2, sharp on C2, sharp on B1, sharp on A1, and sharp on G1. Markings: 'S' below the D2 and C2 notes.
- Staff 4:** Notes are G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter), C2 (quarter), B1 (quarter), A1 (quarter), and G1 (quarter). Accidents: sharp on F2, sharp on E2, sharp on D2, sharp on C2, sharp on B1, sharp on A1, and sharp on G1. Markings: 'VS' below the D2 note, 'VF' below the C2 note, and 'VS' below the B1 note.
- Staff 5:** Notes are G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter), C2 (quarter), B1 (quarter), A1 (quarter), and G1 (quarter). Accidents: sharp on F2, sharp on E2, sharp on D2, sharp on C2, sharp on B1, sharp on A1, and sharp on G1. Markings: 'VF' below the D2 note.

# Tuba Major Scales

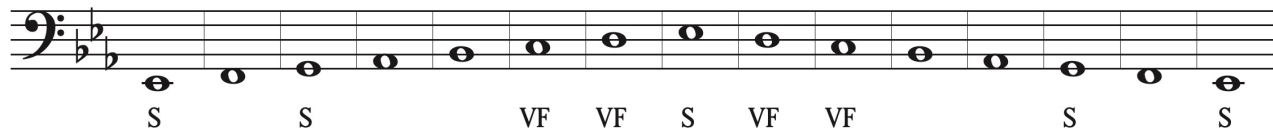
## Abbreviations

VF - Very Flat    F - Flat    S - Sharp    VS - Very Sharp

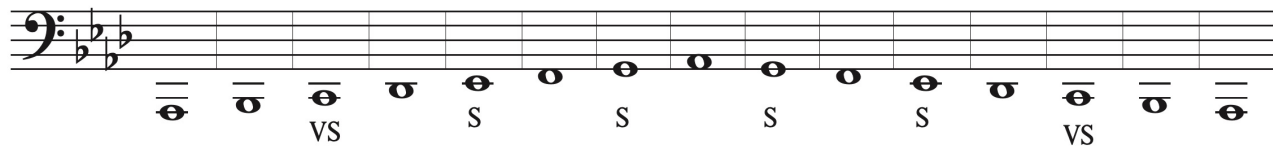
### Concert Bb Major Scale



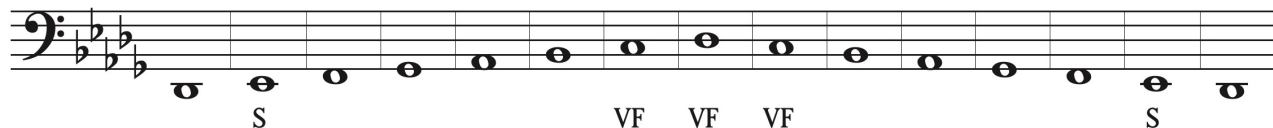
### Concert Eb Major Scale



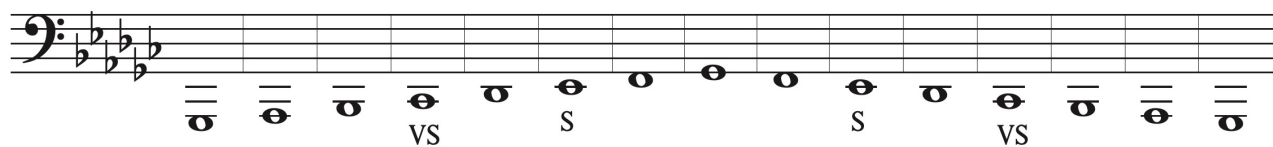
### Concert Ab Major Scale



### Concert Db Major Scale



### Concert Gb Major Scale



### Concert B Major Scale

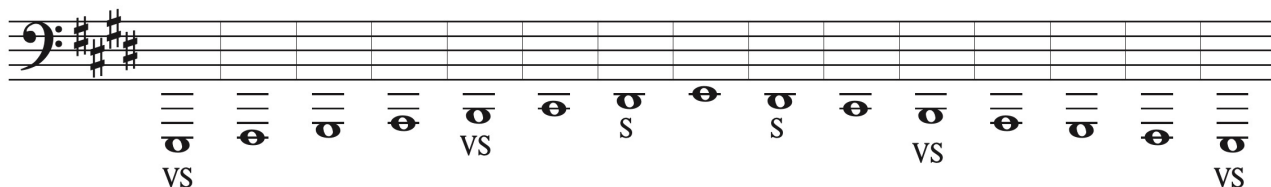


# Tuba Major Scales

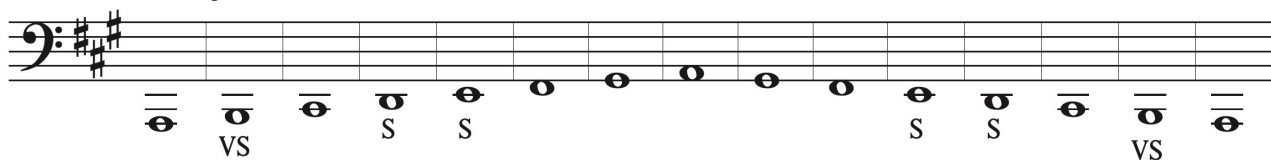
## Abbreviations

VF - Very Flat    F - Flat    S - Sharp    VS - Very Sharp

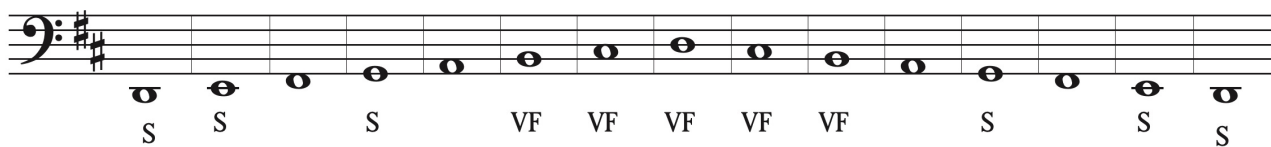
### Concert E Major Scale



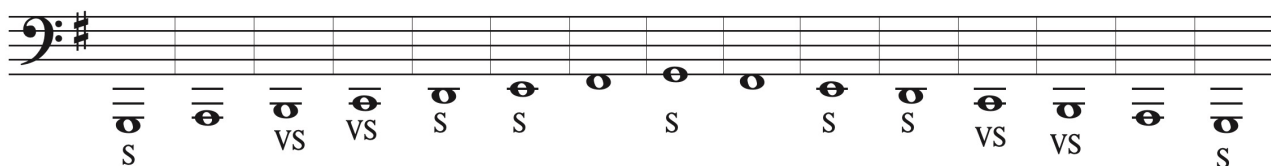
### Concert A Major Scale



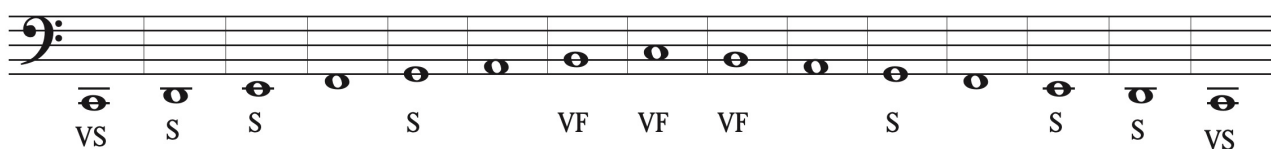
### Concert D Major Scale



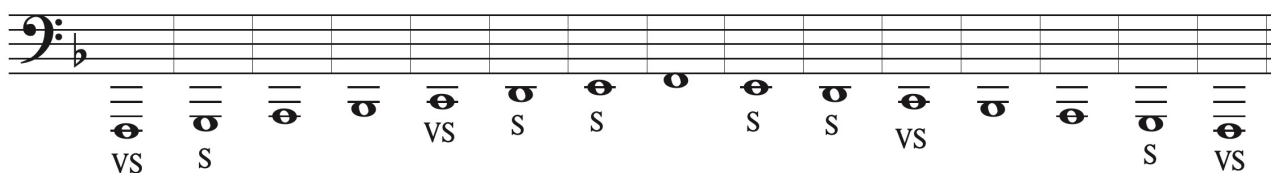
### Concert G Major Scale



### Concert C Major Scale



### Concert F Major Scale



# Interval Tuning

## *Interval Tuning Explained*

*When multiple notes are played at a time, each note produces a unique sound wave based off the pitch being played. When the frequencies align, the beats or waves in the sound disappear and it sounds “in tune” to our ears. When more than one pitch is played, the notes above the fundamental pitch must be adjusted to make the frequencies align and create that “in tune” sound. We call this “just intonation.”*

## Adjustments Needed

The adjustments listed below are the number of cents that must be raised or lowered in order to produce an “in tune” sound when playing an interval above the tonic (first note) of a key. It is important to note that your tuner will say that you are not in tune when playing this way - this is why it is important to listen first before you look at your tuner!

### Major Scale

Unison	Major 2nd	Major 3rd	Perfect 4th	Perfect 5th	Major 6th	Major 7th	Perfect 8th
0	+4	-14	-2	+2	-16	-12	0

### Minor Scale

Unison	Major 2nd	minor 3rd	Perfect 4th	Perfect 5th	minor 6th	minor 7th	Perfect 8th
0	+4	+16	-2	+2	+14	+18	0

## Listen Before You Look

When an interval is adjusted properly the beats or waves in the sound disappear. Because of this, it is important to train yourself to listen for the in tune sound as your primary tuning mechanism. The tuner should be used as a reference point after you have used your ears to adjust the pitch. Always listen before you look!

## When Should You Use This?

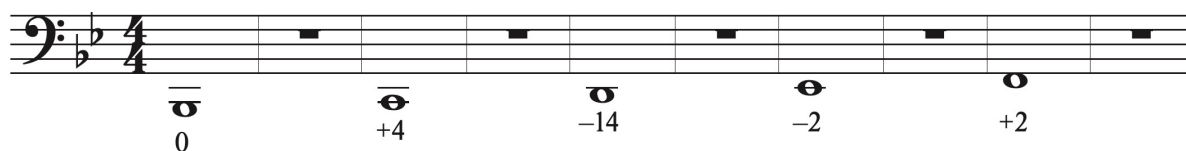
Just intonation or interval tuning is only necessary when playing chords or long and sustained sounds. When playing fast sections or melodic material, interval adjustments are not required.

# Tuba Interval Tuning

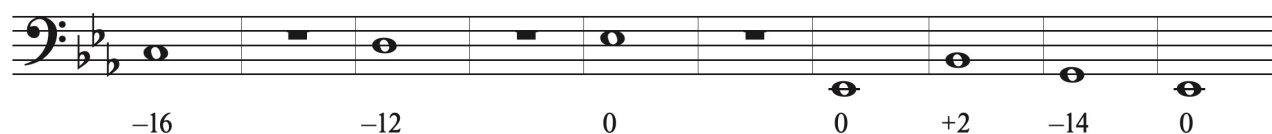
*Make sure to listen to the drone during the rests and try to hear your next pitch before playing it!*

*- lower pitch by number of cents    + raise pitch by number of cents*

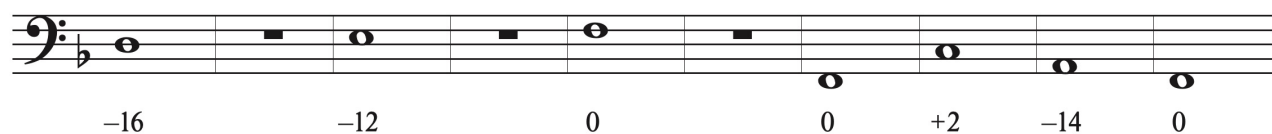
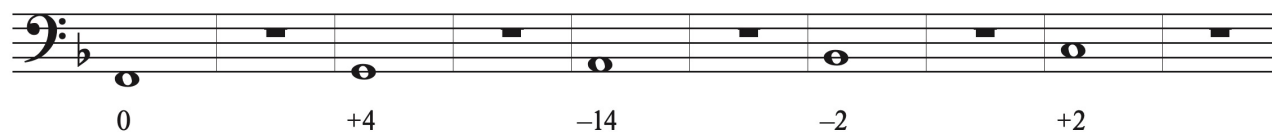
## Concert Bb Major



## Concert Eb Major



## Concert F Major



# Tuba Interval Tuning

*Make sure to listen to the drone during the rests and try to hear your next pitch before playing it!*

*- lower pitch by number of cents    + raise pitch by number of cents*

## Concert G minor

0    +4    +16    -2    +2

+14    +18    0    0    +2    +16    0

## Concert C minor

0    +4    +16    -2    +2

+14    +18    0    0    +2    +16    0

## Concert D minor

0    +4    +16    -2    +2

+14    +18    0    0    +2    +16    0