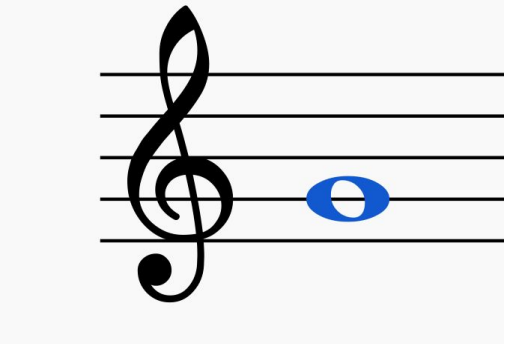
HORNS

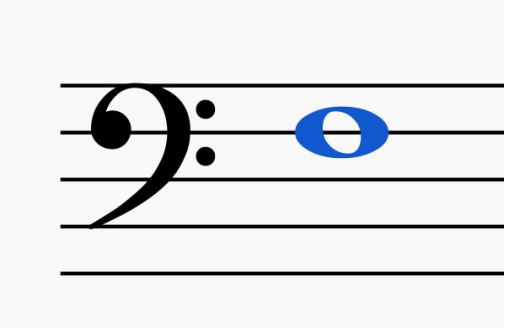
HORN FUNDAMENTALS PACKET

BY BEN CARROLL

Clefs



Treble Clef
The **treble clef**, or G Clef can be identified by the curve wrapping around the second line G.

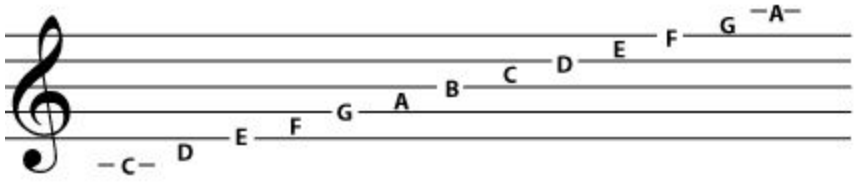


Bass Clef
The **bass clef**, or F Clef, can be identified by the two dots that outline the fourth line F.

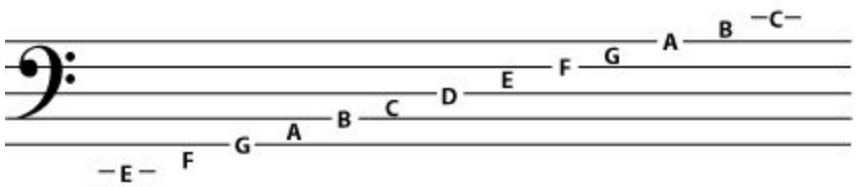
Old Notation: refers to a style of notation where hornist plays a pitch an octave higher than what is written on the page.

Notes of the Staff:
The musical alphabet contains 7 letters that represent notes. These notes occur on all staves in repeating order: A, B, C, D, E, F and G

Treble Clef
Space: F A C E
Lines: E G B D F (**E**very, **G**ood, **B**oy, **D**oes, **F**ine)



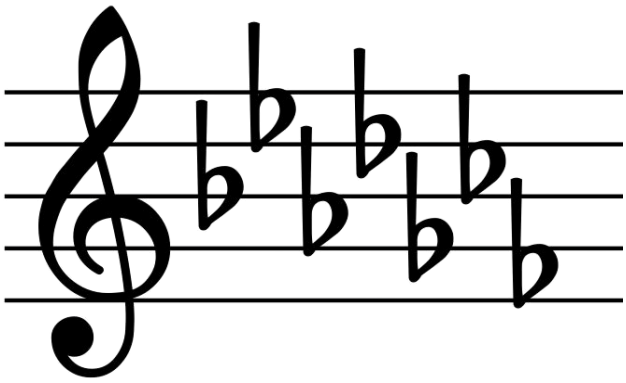
Bass Clef
Space: A C E G (**A**ll, **C**ows, **E**at, **G**rass)
Lines: G B D F A (**G**ood, **B**oys, **D**o, **F**ine, **A**lways)



Key signature

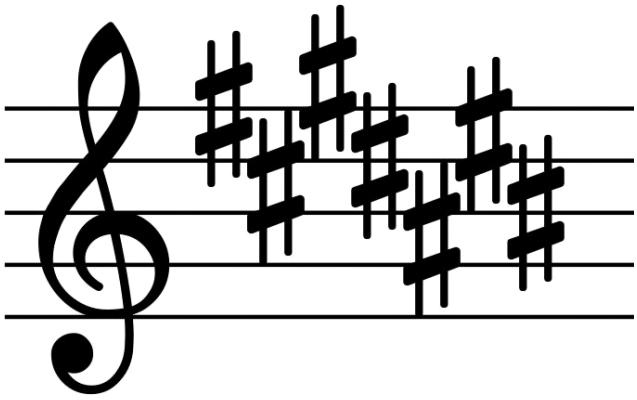
Flats

Bb Eb Ab Db Gb Cb Fb
You can identify a flat key signature by reading the name of the second to last flat.

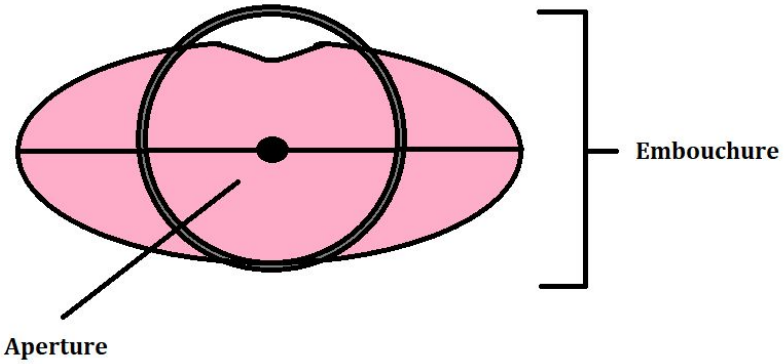


Sharps

F# C#G# D# A# E# B#
You can identify a sharp key signature by finding the last sharp and reading the name of the note a half step higher.



The Set Up



Embouchure- is the use of the lips, facial muscles, tongue, and teeth in playing a wind instrument. This includes shaping the lips to the mouthpiece of a brass instrument.
Aperture- an opening, hole, or gap.

Basic Rules:

Flat Chin- Most often players have the most success with endurance while maintaining a flat chin. A flat chin ensures you are not using muscles that do not need to be engaged in the embouchure.
Firm Corners- There is an inevitable amount of muscle engagement needed to create a tone. In order to ensure that you have the minimum amount of tension where the aperture is formed, focus your attention to the corners of your embouchure. Keep the corners firm and do not pull them towards your ears, or pucker them too far forward. The most efficient players keep their corners in the same sport through a majority of their practical range.
Soft Center- Try to not have tension in the center of the mouthpiece. The more relaxed you are the more resonant your tone will be. Players who have excess tension in the middle of their aperture tend to produce a tight sound and have limited endurance.

Embouchure Types

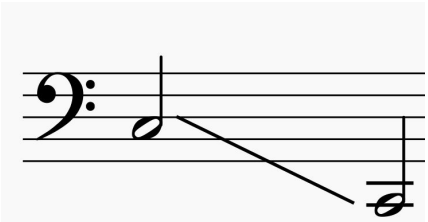
Einsetzen- (Setting in) This is an embouchure where the player sets the rim into the bottom lip. Generally, einsetzen players have a robust sound and an ease of play in the middle and low register. Einsetzen players may find it difficult to get into the higher registers, but is achievable through careful practice.
Ansetzen- (setting against) This is an embouchure where the player places both lips into the mouthpiece, more similarly to other brass instrumentalists. Here the player usually has a compact tone, with an ease of playing in the high register. Lower tones can be more difficult but is achievable through careful practice.
Embouchure Outliers- Don't worry!! If your embouchure is not described that does not always mean you are wrong. There are many ways to play the horn and it is possible to do it with your set up as long as the vibration is happening naturally, and in a location that is centered in the mouthpiece. Take a visualizer(or the 2nd valve pull ring on the F side) and buzz while looking into a mirror to make sure your aperture is centered in the mouthpiece.

Vowels

Vowel shapes helps up produce the proper air speed and tone for each register of the horn. Place your hand in front of you face blow air against your palm starting with an “ee” vowel and ending with an “Oh” vowel. You will notice that when you open your mouth the air column becomes wider, slower, and warmer. If you do the opposite, you will notice that when the mouth become more compressed the air column becomes smaller, faster, and cooler. This basic concept is how we control our air speed on the horn in order to smoothly move from partial to partial on the horn. The following are examples of possible vowel shapes you can employ on the horn. Note that vowels are personal and that experimentation is necessary in order to find the ones that work for your own playing.

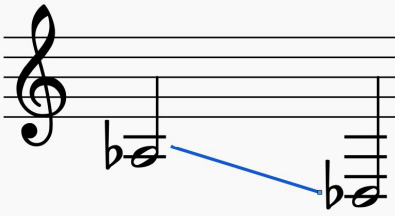
Low Range

“Oh” or “OO”



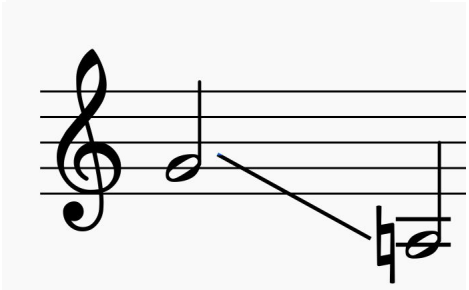
Mid-Low Range

“uh”



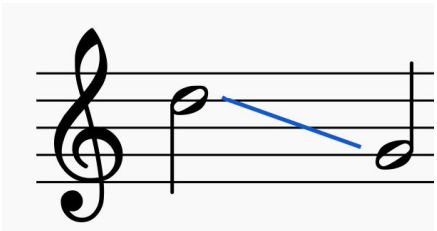
Mid Range

“Ah”



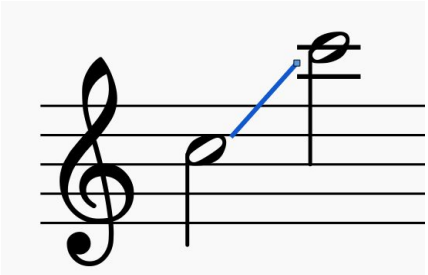
Upper-Mid Range

“Eh”



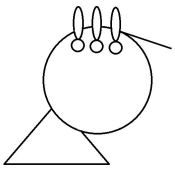
High Range

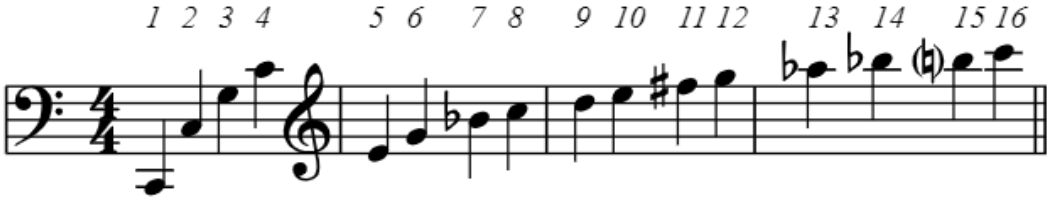
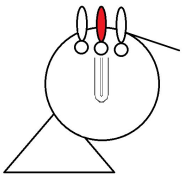
“Eee” or “Yee”

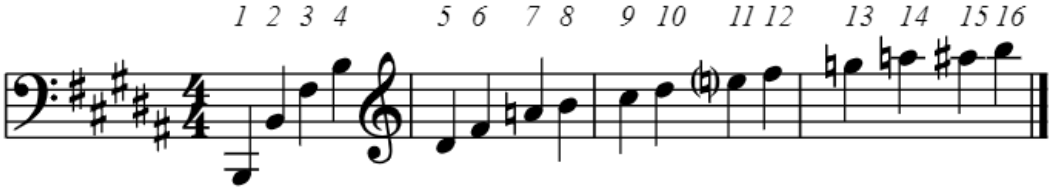
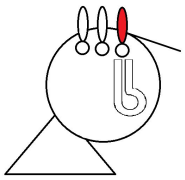


Natural Harmonic Series

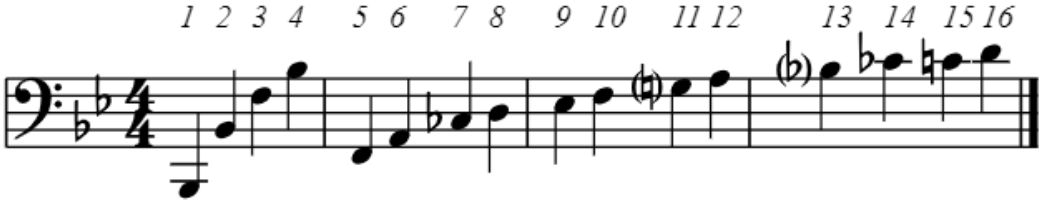
F Horn Harmonic Series

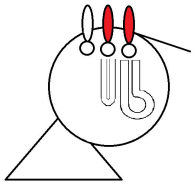


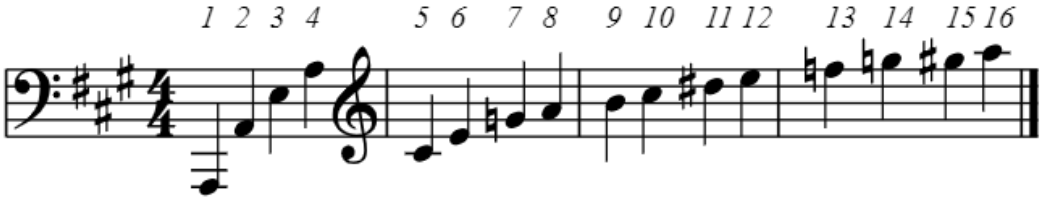
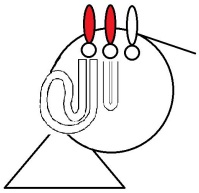
C Harmonics
(F Harmonics)



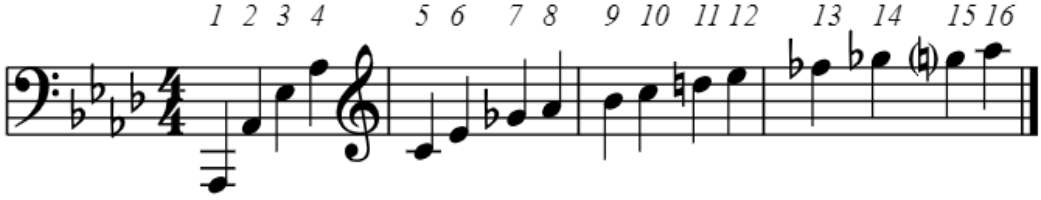
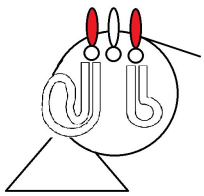
B Harmonics
(E Harmonics)



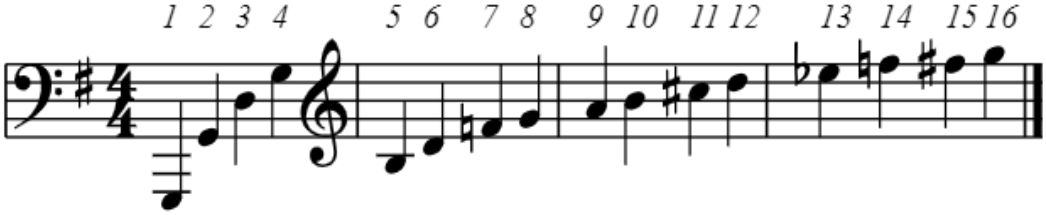
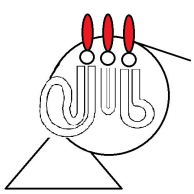
Bb Harmonics
(Eb Harmonics)

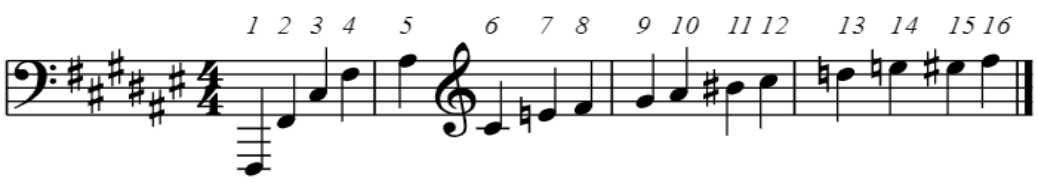




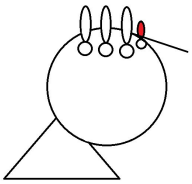
A Harmonics
(D Harmonic)



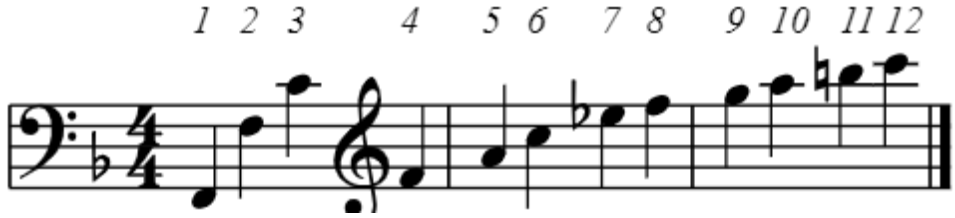
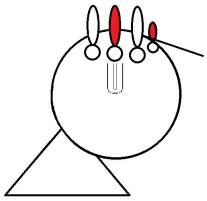
Ab Harmonics
(Db Harmonics



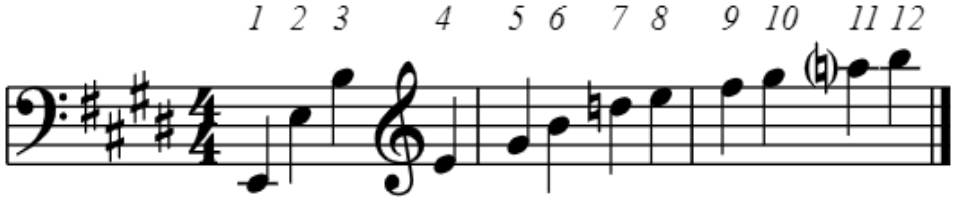
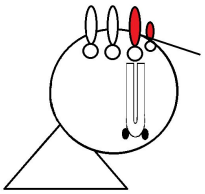
G Harmonics
(C Harmonics)



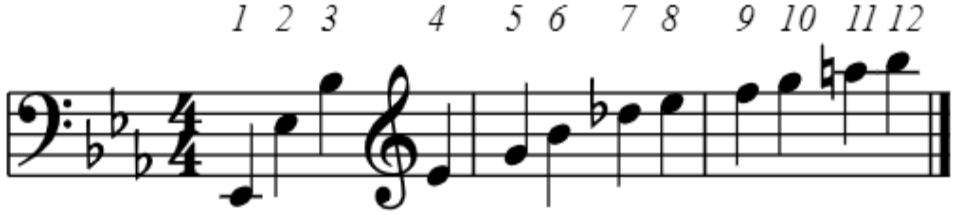
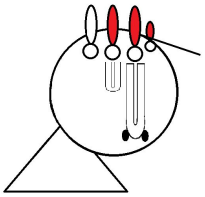
F# Harmonics
(B Harmonics)

Natural Harmonic Series

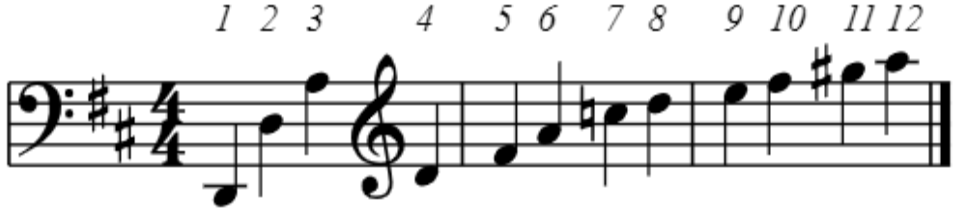
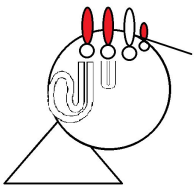
Bb Horn Harmonic Series

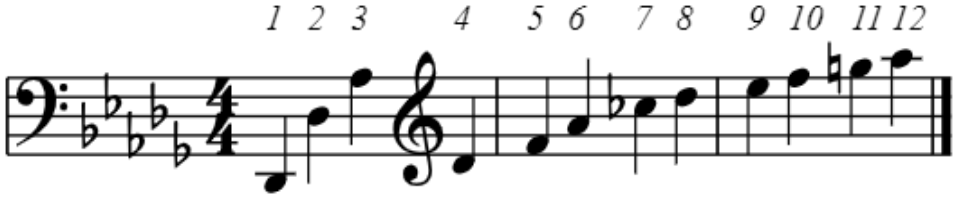
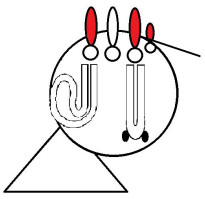


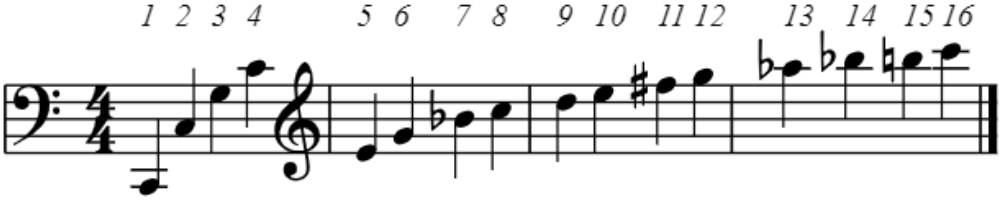
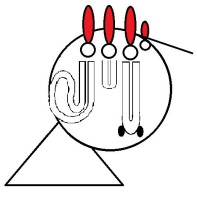
F harmonics
(Bb Harmonics)



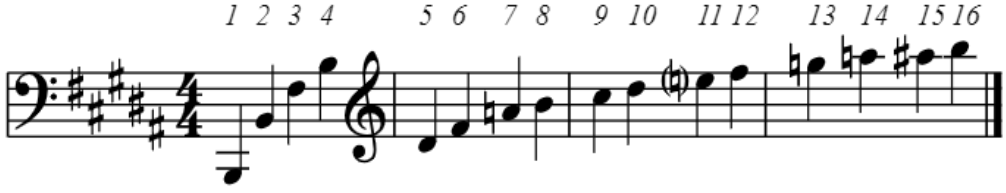
E Harmonics
(A Harmonics)



Eb Harmonics
(Ab Harmonics)



D Harmonics
(G Harmonics)



Db Harmonics
(Gb Harmonics)



C Harmonics
(F Harmonics)



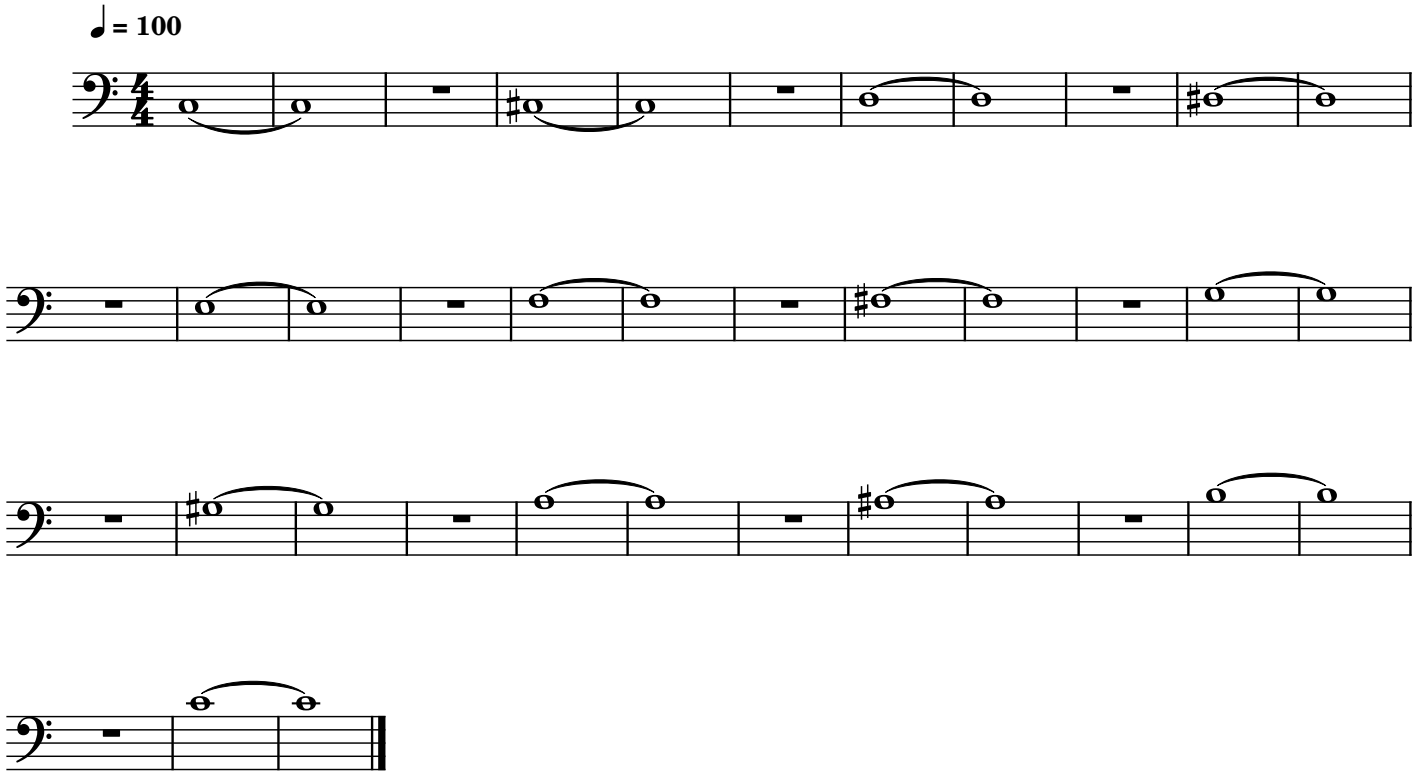
B Harmonics
(E Harmonics)

Routine & Selected Exercises

The daily routine has 3 basic sections: Low Register, Middle Register, and High Register. In each of these sections there are subcategories that include exercises for: Long tones, Patterns, Flexibility, and Articulation. If there is more than one exercise presented in a subcategory, I encourage you to perform only 1 exercise a day and pick the other exercises another day. Once you complete the first 3 sections I recommend taking a break. The last section includes scales, arpeggios, and lip trill exercises that must be attended to frequently.

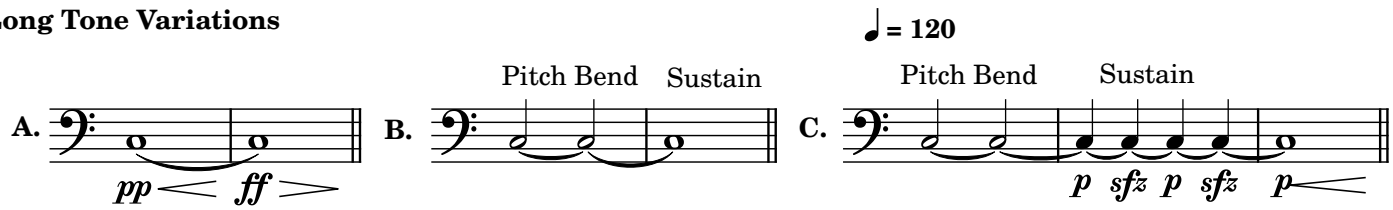
It is wise to start each day with long tones. I prefer to use only breath starts during long tones to create a strong mind-body connection between my air and my sound. You can choose to use an articulation if you wish. The long tones are presented in a traditional "straight tone" format. There are 3 variations provided at the bottom of the long tone section. Variation A introduces dynamic flexibility and edge control. Variation B introduces a pitch bend that you can perform up or down from the starting note with the goal being to play a centered whole note for the last 4 beats. Variation C is my personal favorite as it combines A and B together in a complex format that keeps long tones interesting for myself so my mind stays engaged. A tuner and metronome should be default tools in your practice. It is also nice to put them away and listen to your tone without distraction from time to time.

Low Register

Long Tones 1.1

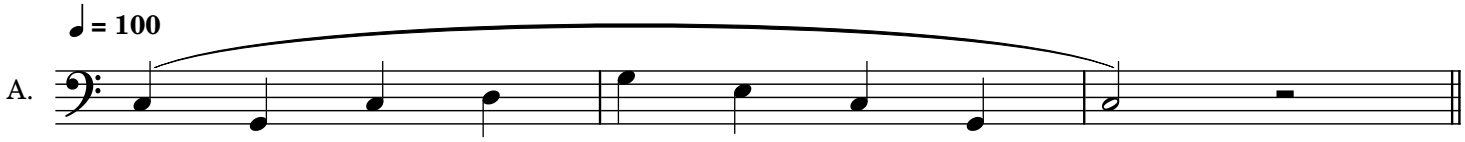


Long Tone Variations

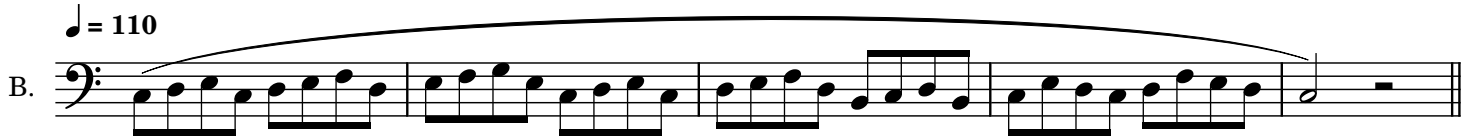


Patterns 1.2

Pattern A is “Smooth Air Movement” from the Brass Gym. Play the exercise in all keys between low C and middle C. Think about the notes associated with the scale degrees for each key center. (1, 5, 1, 2, 5, 3, 1, 5, 1)

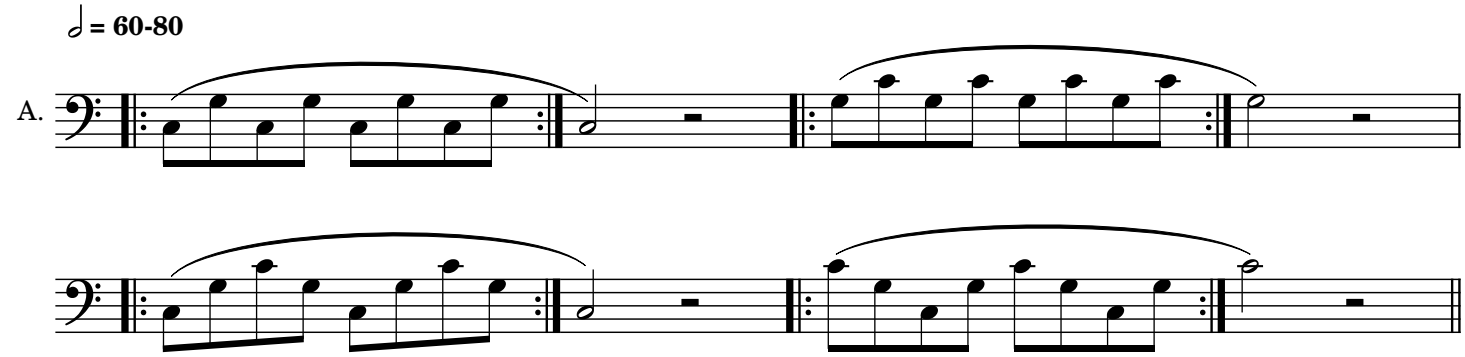


Pattern B is the second study from Clarke’s Technical Study for the Cornet. Perform this pattern in all keys between low C and middle C.



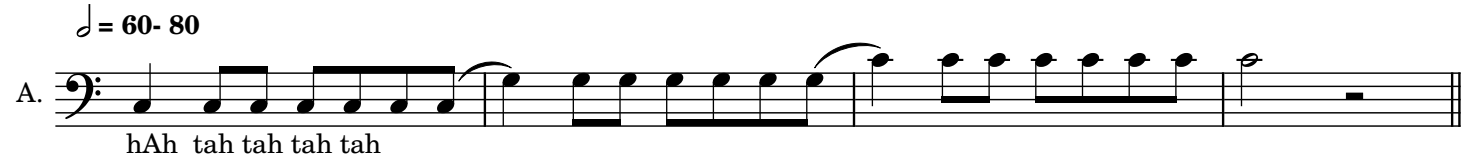
Flexibility 1.3

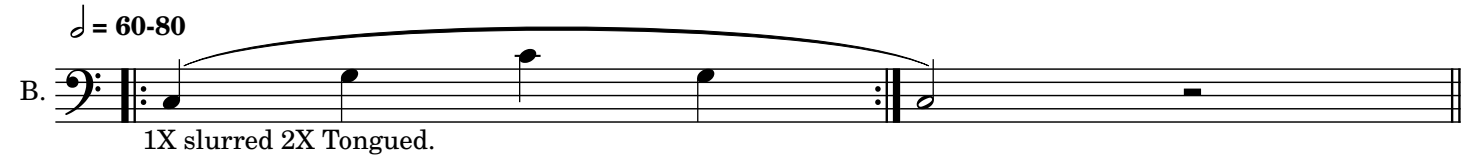
Perform on the F horn using 0,1,2,12, and 23. Then continue on the Bb horn and ascend using T23, T12, T1, T2, and finally T0.



Articulation 1.4

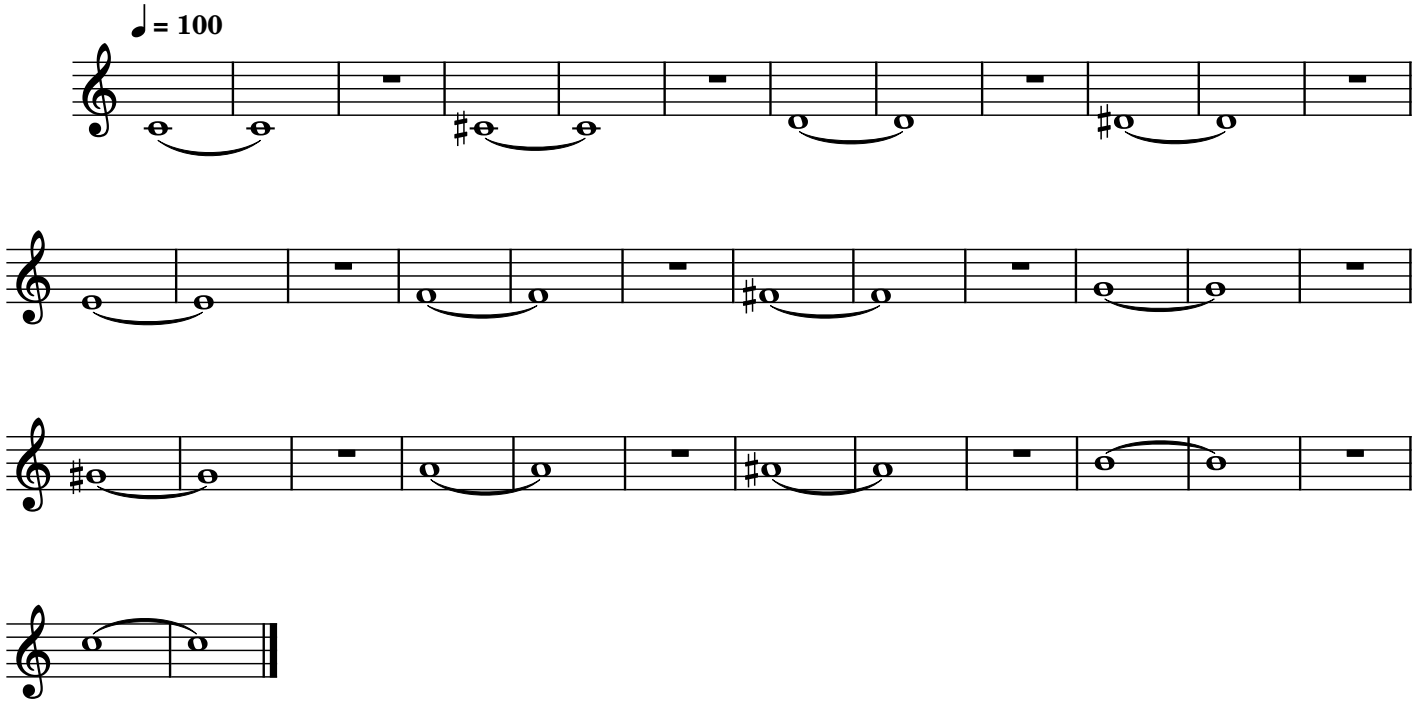
Perform both exercises on the open harmonic series using all valve combinations
(F: 0, 2, 1, 12, 23 and Bb: T23, T12,T1, T2, T0)



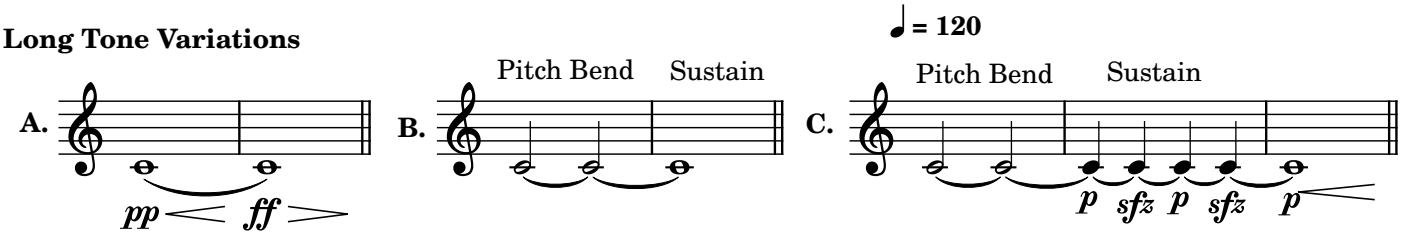


Middle Register

Long Tones 2.1

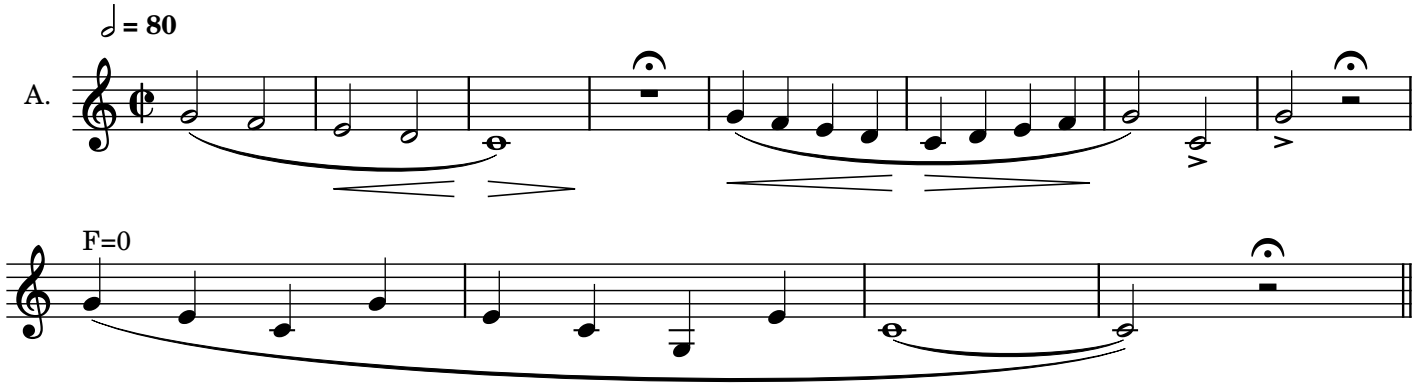


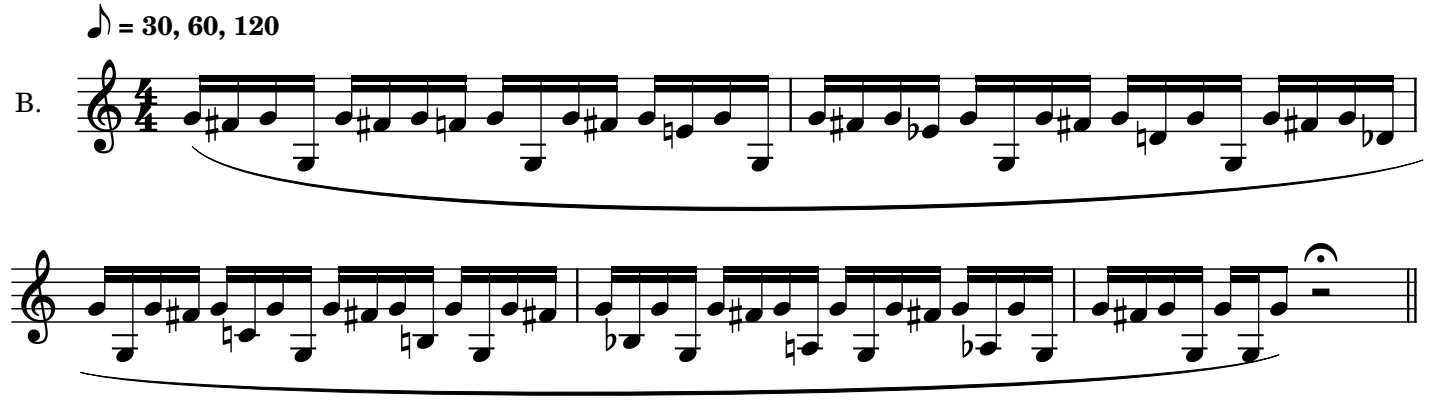
Long Tone Variations



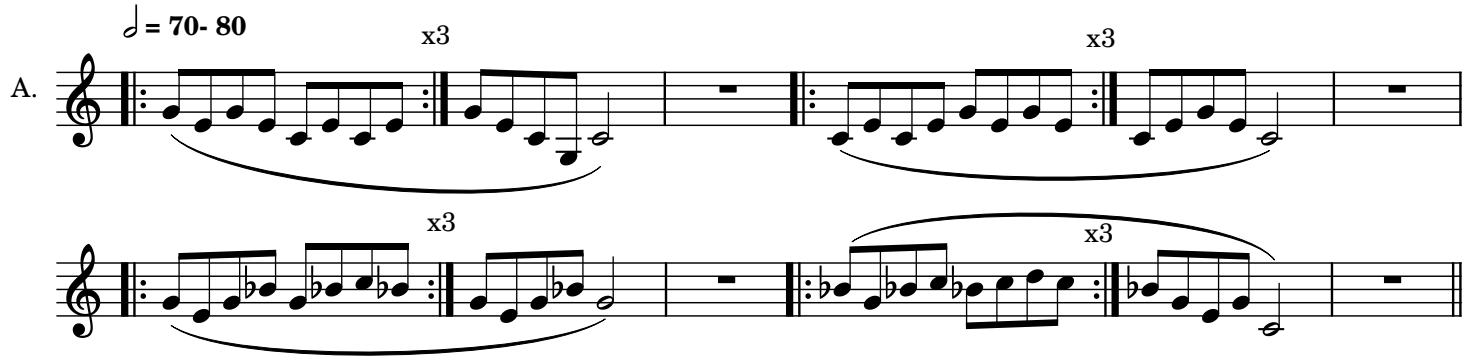
Patterns 2.2

This exercise is 6a and 6b from Fred W. Teuber. The original exercise is performed firstly by descending from C major through B major, Bb major, and A major utilizing the harmonic series for the last slurred passage in each key center. The exercise then continues on the Bb Horn starting on 2nd line Ab for the key of Db major. You then ascend through D major, Eb major, E major, and ending in F major.

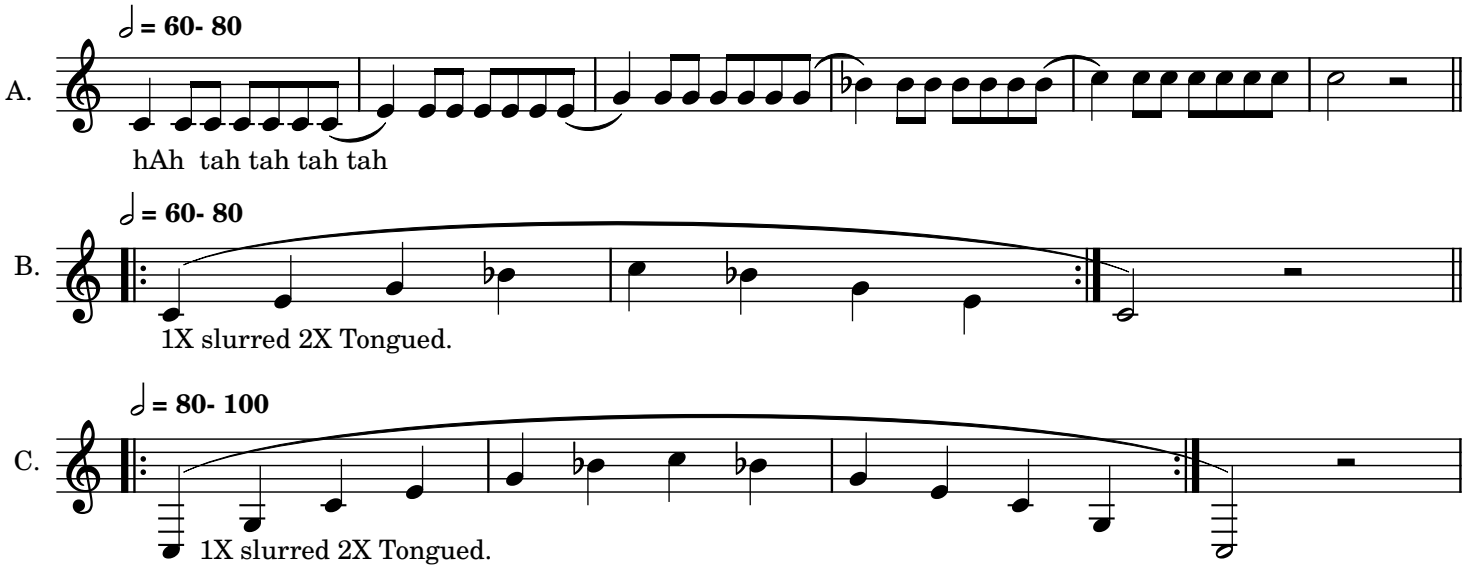


This is the exercise “Noodles” from Julie Landsman's Caruso Method for Horn. Perform this exercise without taking your mouthpiece off your face. When you need to take a breath, pause and breathe slowly through your nose so that you do not replace the mouthpiece. This exercise is excellent for managing breaks and shifts in the mid register. Play in all keys between middle C and 3rd space C.

Flexibility 2.3

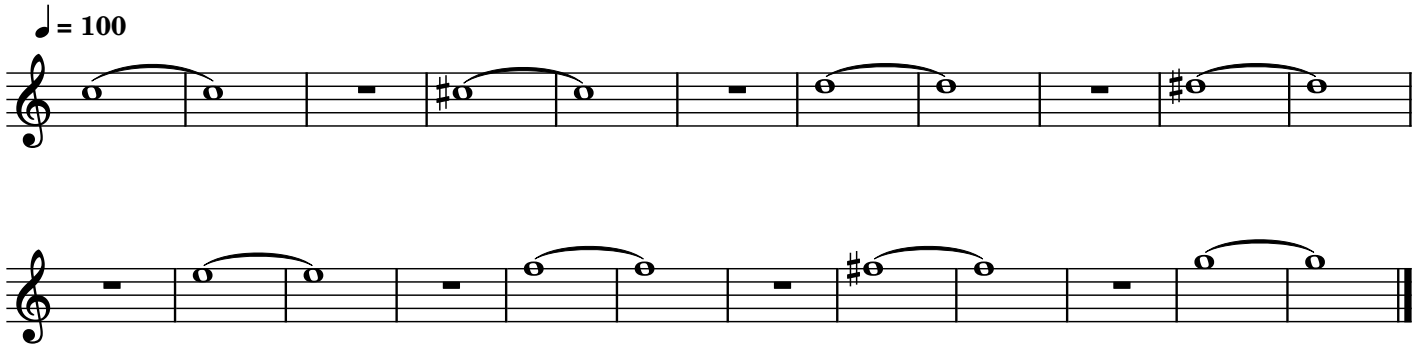
This is 7a and 7b from Teuber. Perform on the F horn from 0,1,2,12, and 23. Then continue on the Bb horn and ascend using the combinations T23, T12, T1, T2, and finally T0. If you can not repeat 3times in one breath, omit repetitions until you can perform the exercise fast enough.



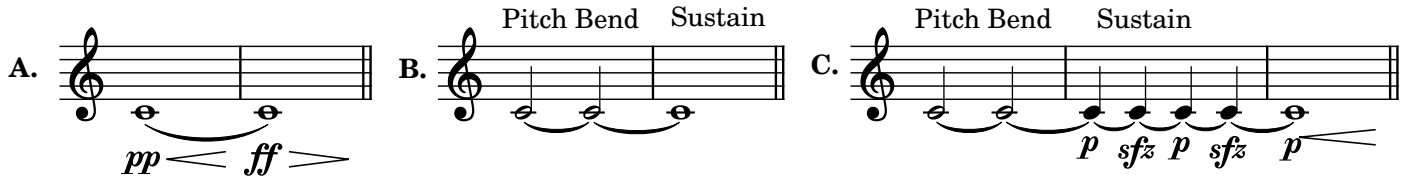
Articulation 2.4

Perform the following exercises on the open harmonic series with all valve combinations
(F: 0, 2, 1, 12, 23 and Bb: T23, T12,T1, T2, T0)

High Register

Long Tones 3.1

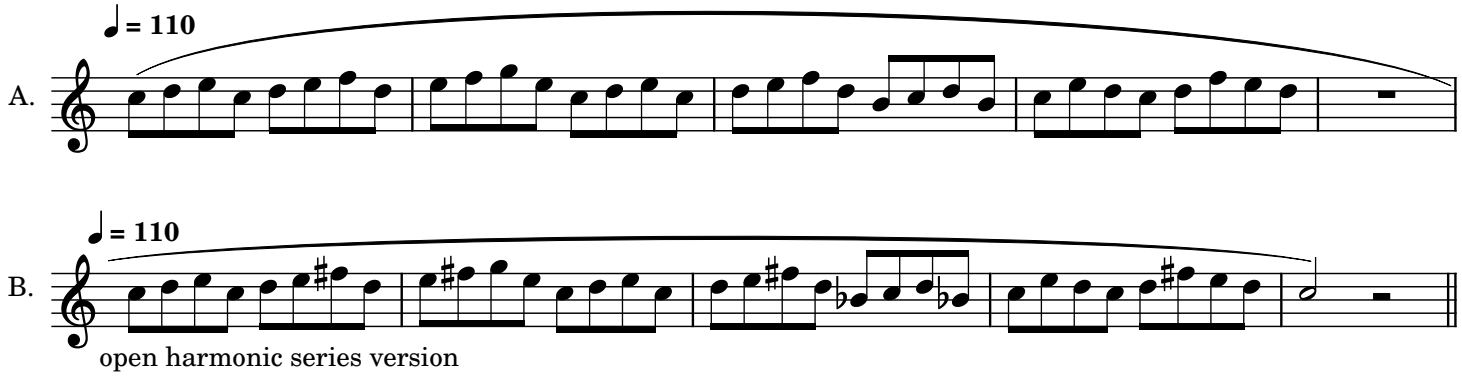


Long Tone Variations



Patterns 3.2

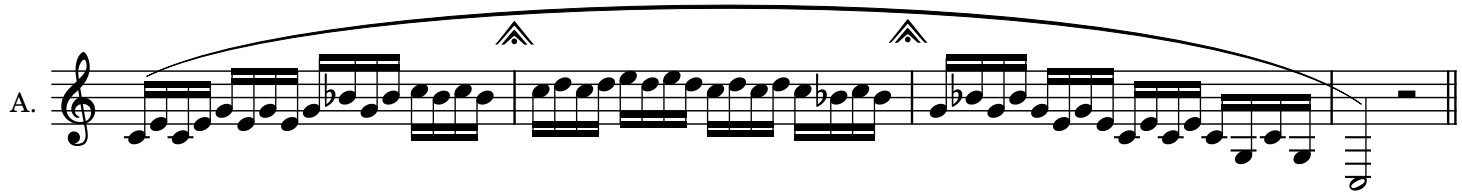
Another Clarke study. Perform in all keys between 3rd space C and G on top of the staff. Bonus points if you do the exercise on the open harmonic series with the sharp 11 partial and flat 7th partial for the 4th and 7th scale degrees.



open harmonic series version

Flexibility 3.3

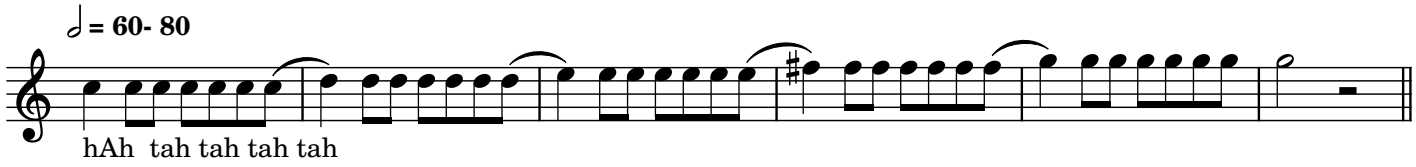
This exercise is no. 8a from Teuber. Omit the middle measure until you can perform the exercise in one breath. The original exercise starts on an F horn A, two ledger lines below treble clef, and ascends to first space F using the following valve series: 12, 1, 2, 0, T23, T12, T1, T2, and T0.

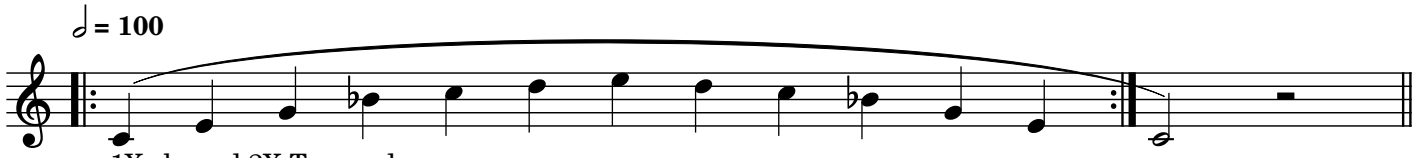


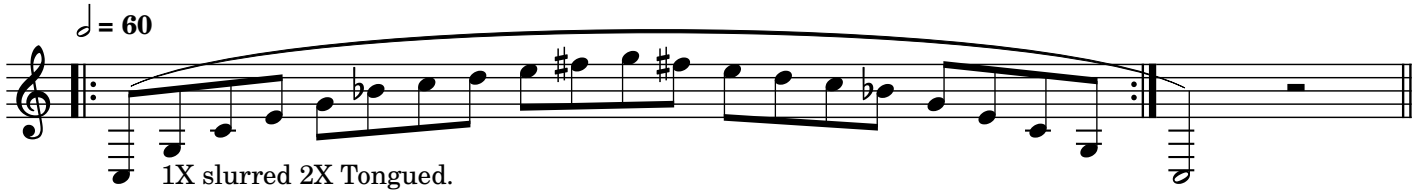
Articulation 3.4

Perform the following exercises on the open harmonic series with all valve combinations
(F: 0, 2, 1, 12, 23 and Bb: T23, T12,T1, T2, T0)

A.



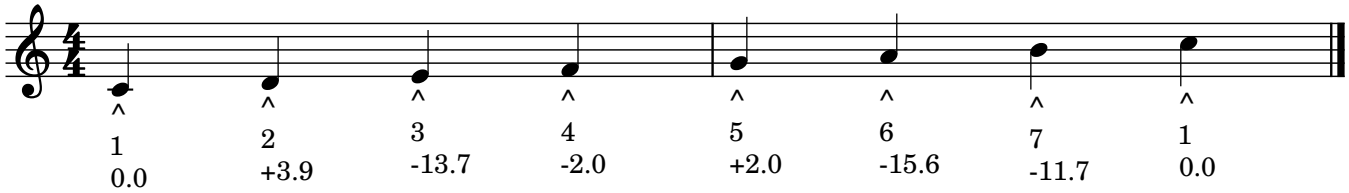
B.

C.



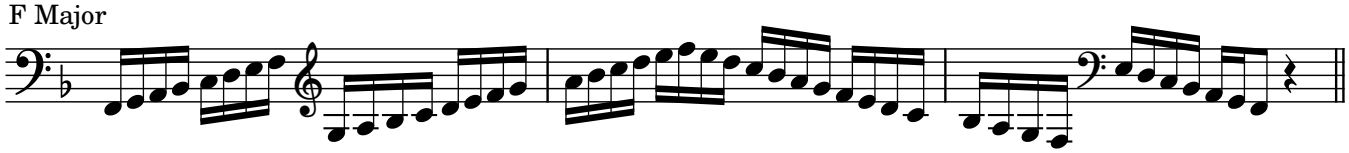
Major Scales

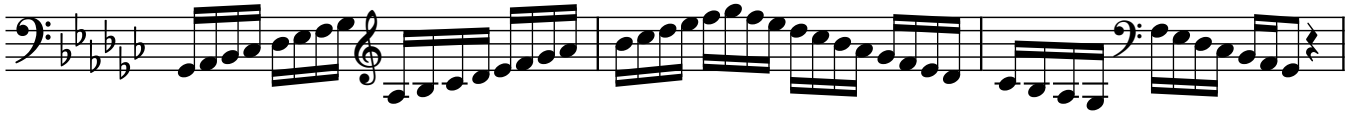
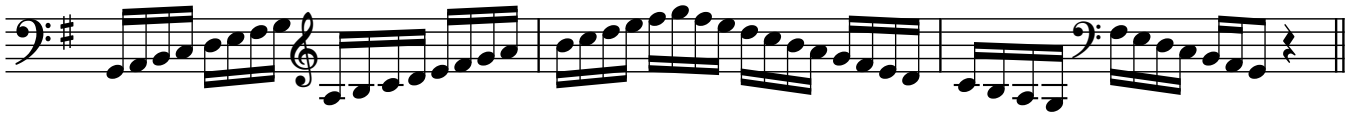
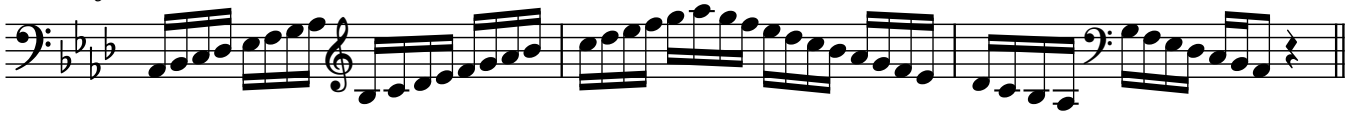
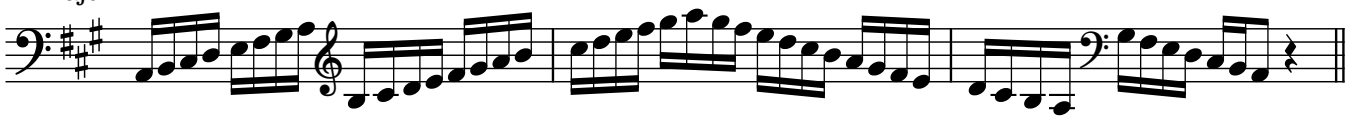
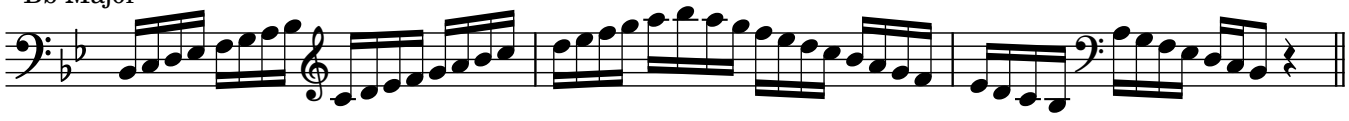
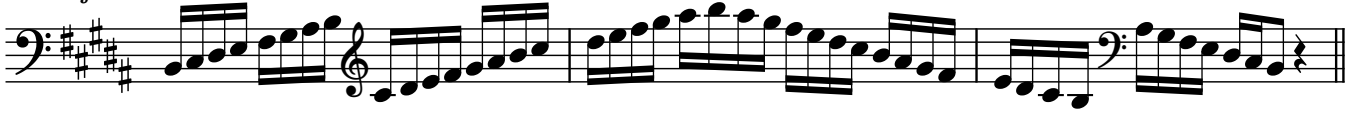
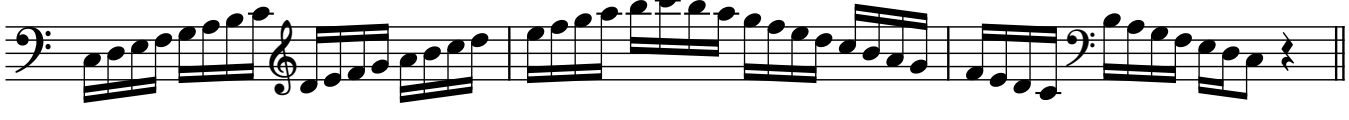
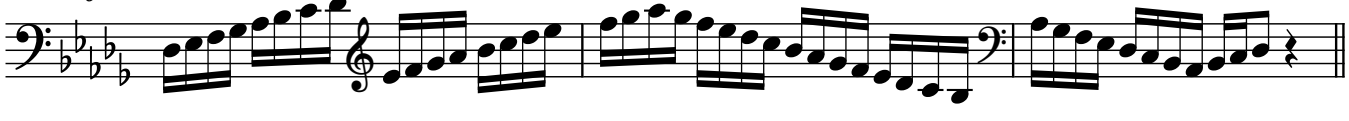
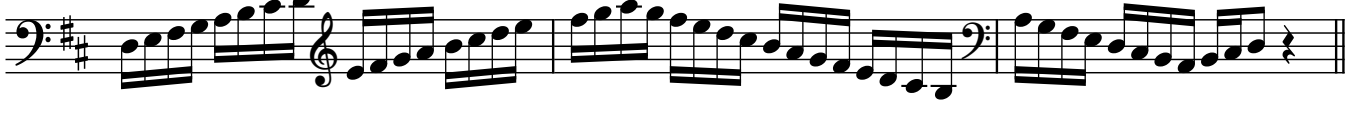
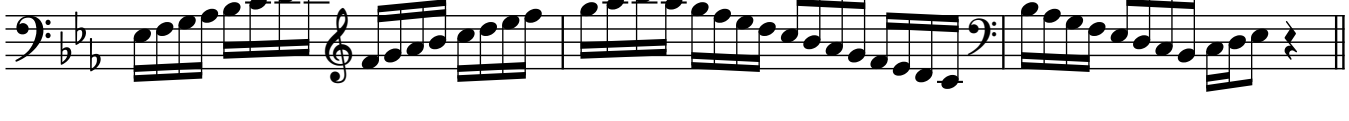
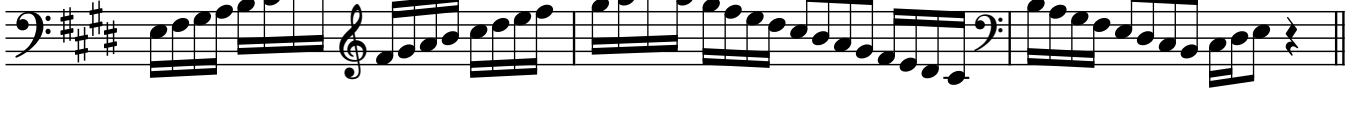
Practice scales with a metronome and a tuner. Pick a tempo you can play smoothly. It is also advantageous to practice your scales with a drone on the tonic, or root pitch(^1) of each scale to develop your intonation as it relates to each key center. The following is a brief explanation on how to temper your notes in a Major scale so that you play in just intonation rather than equal temperament.

Temperament of a Major Scale in “Just Intonation"

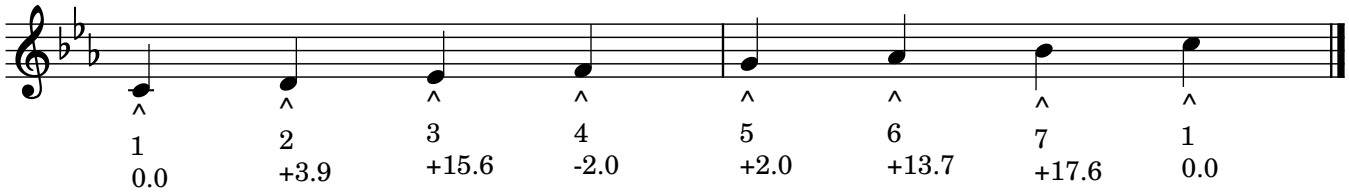


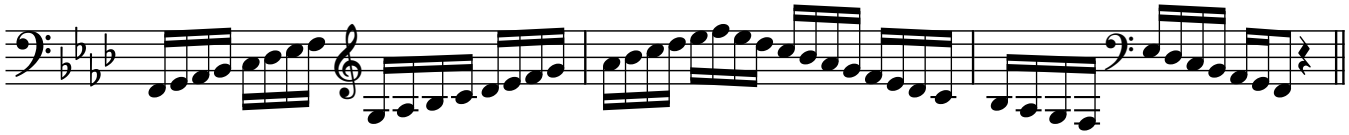
F Major



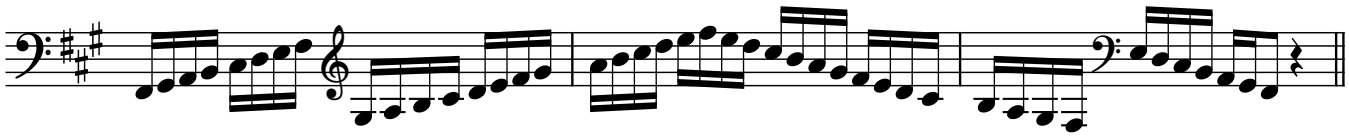
Gb Major

G Major

Ab Major

A Major

Bb Major

B Major

C Major

Db Major

D Major

Eb Major

E Major

Natural Minor Scales

The following is a brief explanation on how to temper your notes in a minor scale so that you play in just intonation rather than equal temperament.

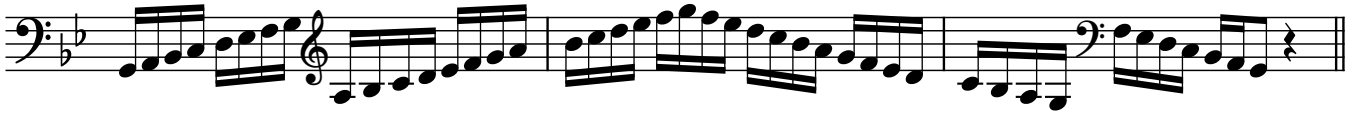
Temperament of a Minor Scale in “Just Intonation"

F minor

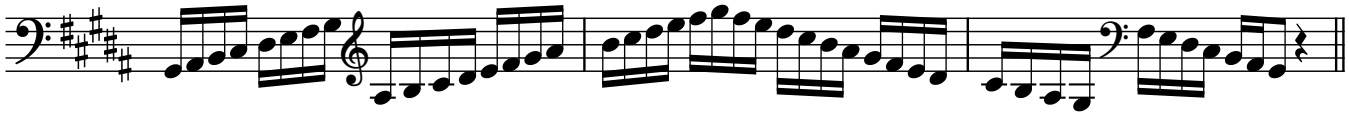
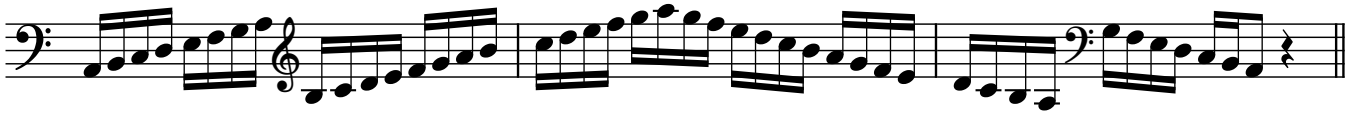
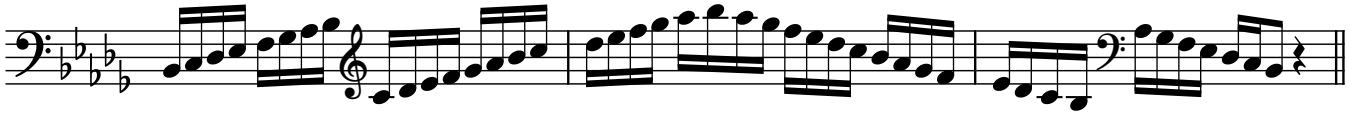
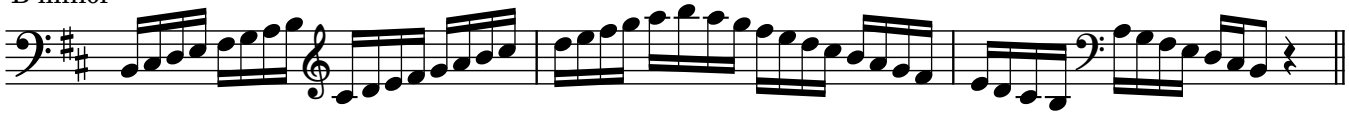
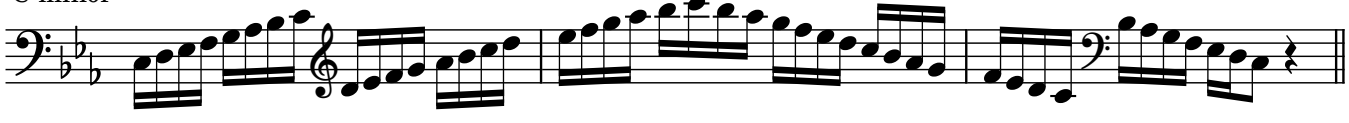


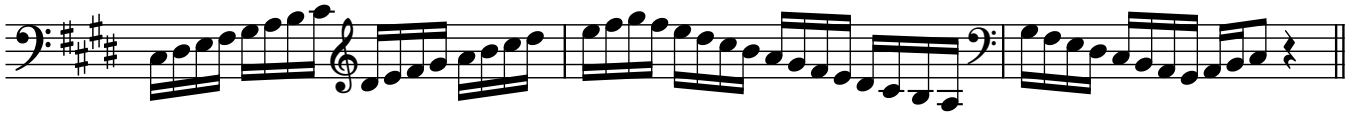
F# minor

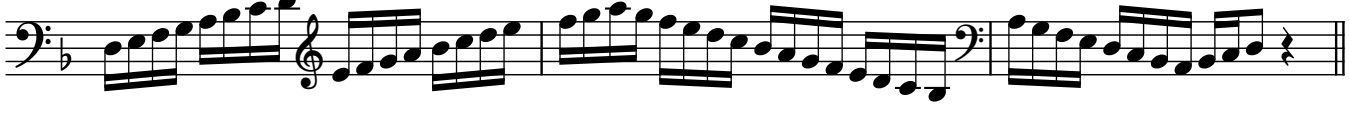
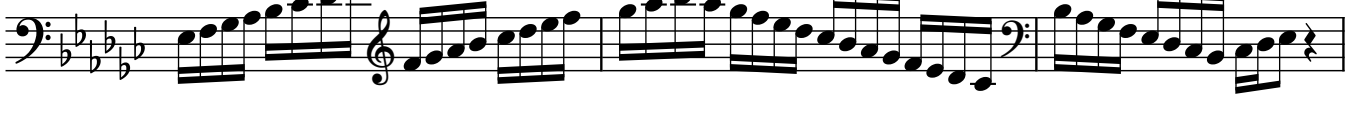
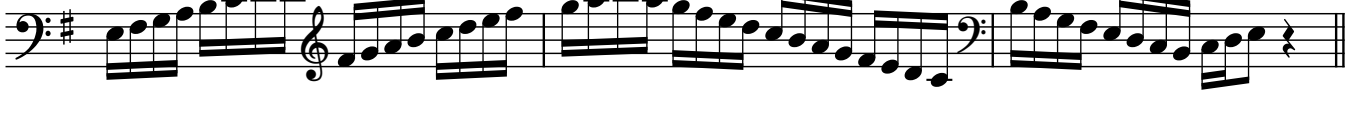


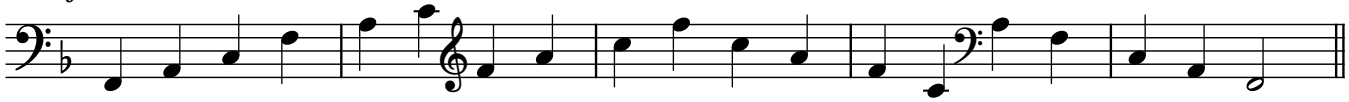
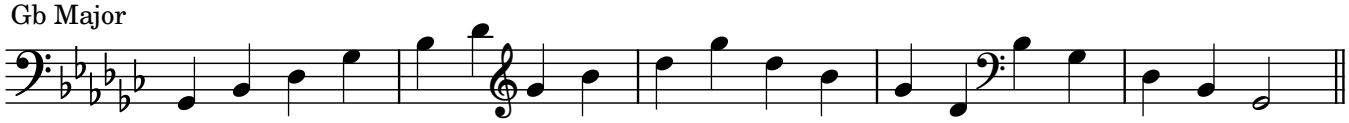
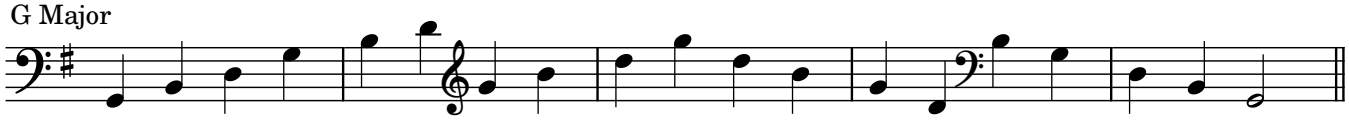
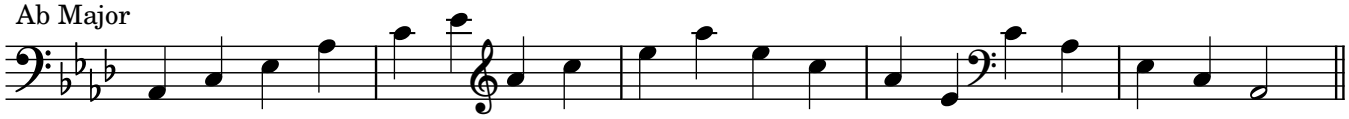
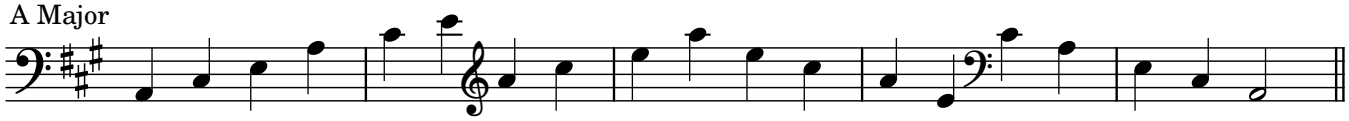
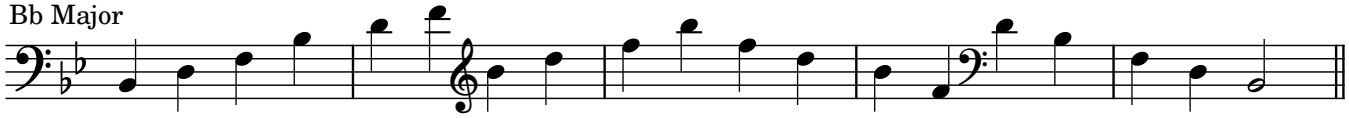
G minor

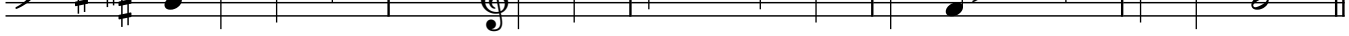


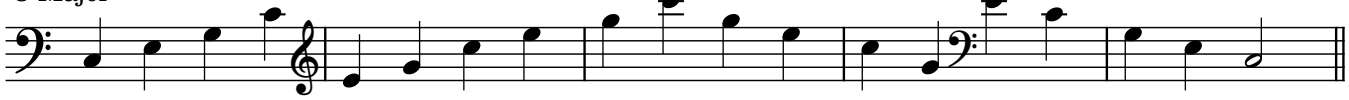
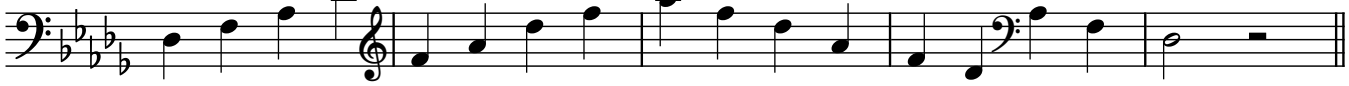
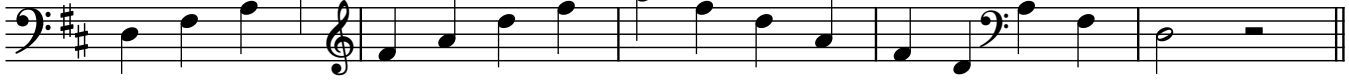
G# minor

A minor

Bb minor

B minor

C minor

C# minor

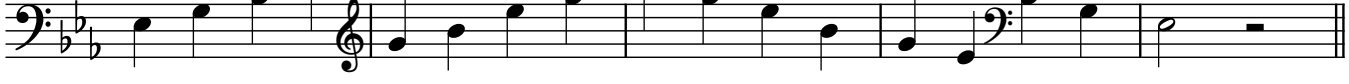


D minor

Eb minor

E minor

Major Arpeggios

F Major

Gb Major

G Major

Ab Major

A Major

Bb Major

B Major

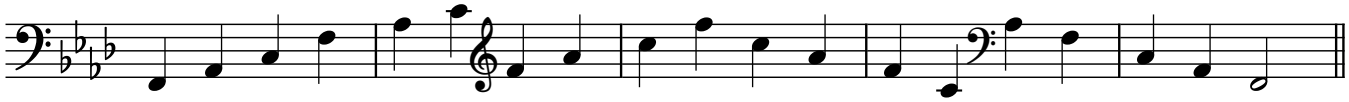
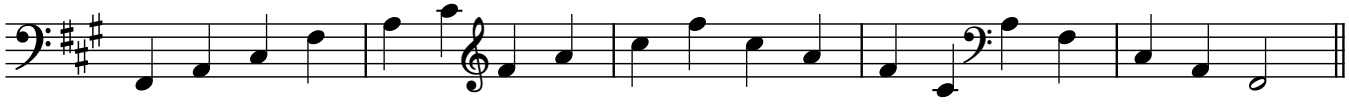
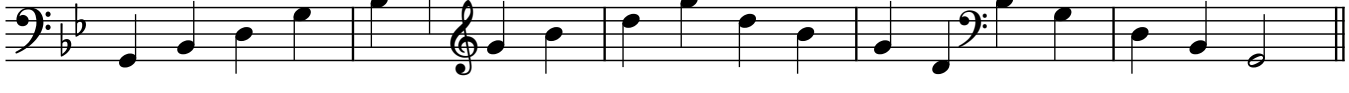
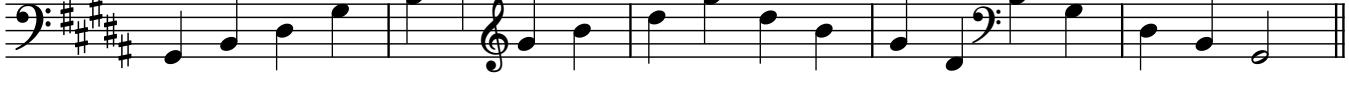


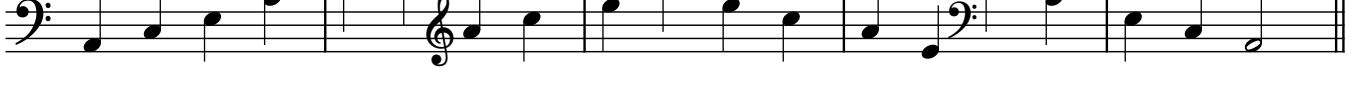
C Major

Db Major

D Major

Eb Major

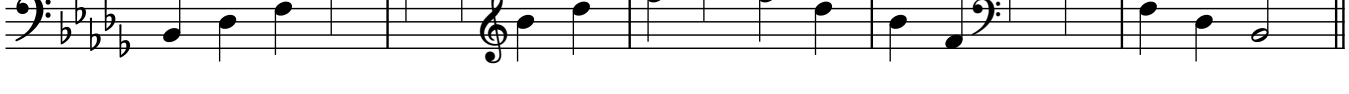


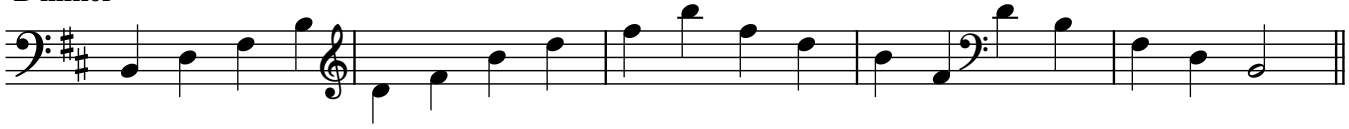
E Major

Minor Arpeggios

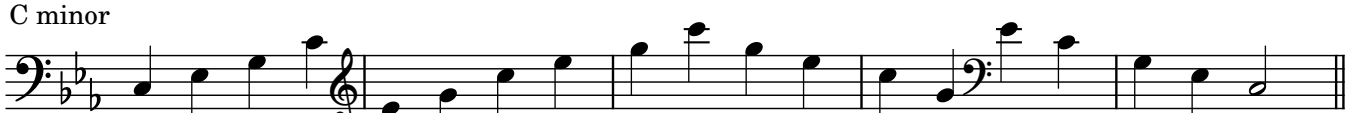
F minor

F# minor

G minor

G# minor

A minor

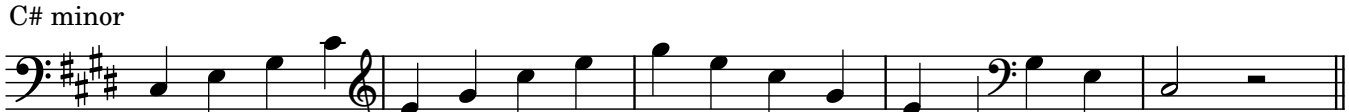
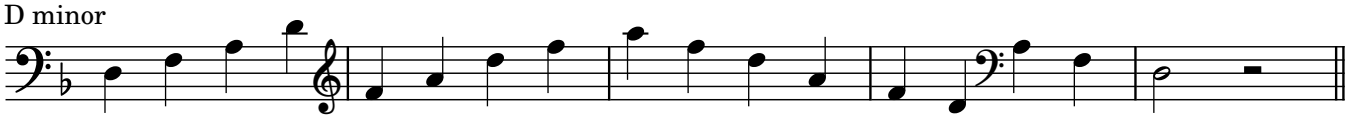


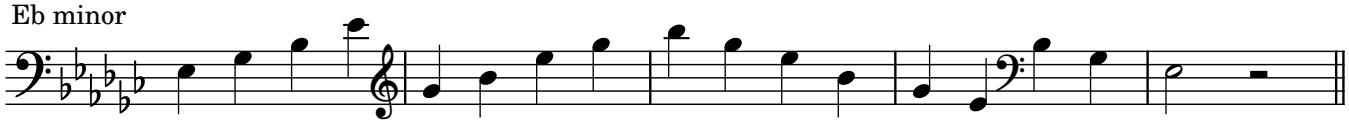
Bb minor

B minor

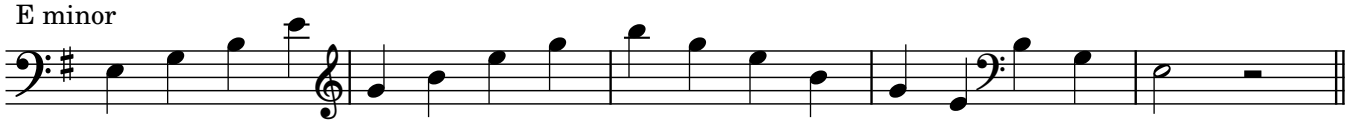


C minor



C# minor

D minor

Eb minor

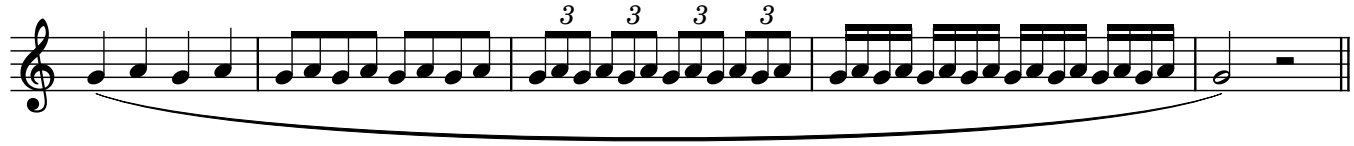


E minor

Lip Trill Exercises

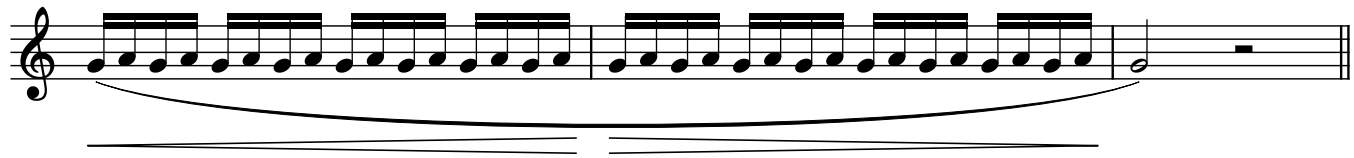
Each exercise starts on 2nd line G using 1&3 on the F horn. Ascend chromatically to top line F by following this pattern: 13,23,12,1,2,0,T23,T12,T1,T2,T0.

Metric Modulation

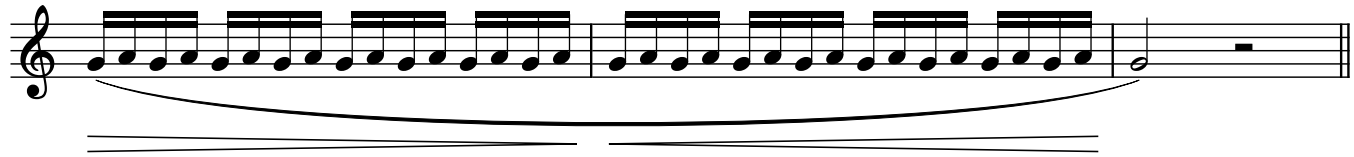
A.



Dynamic Change (soft-loud-soft)

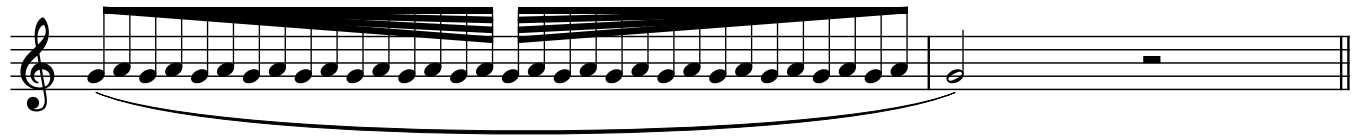
B.

Dynamic Change (loud-soft-loud)

C.



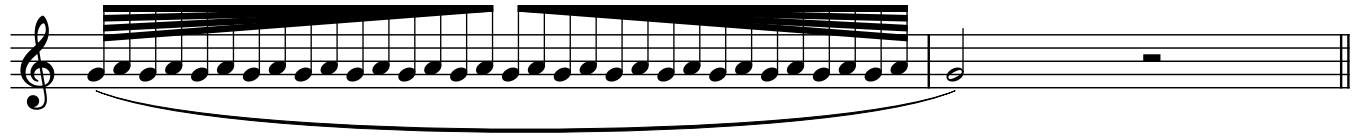
Speed change(this exercise is a gesture)

D.



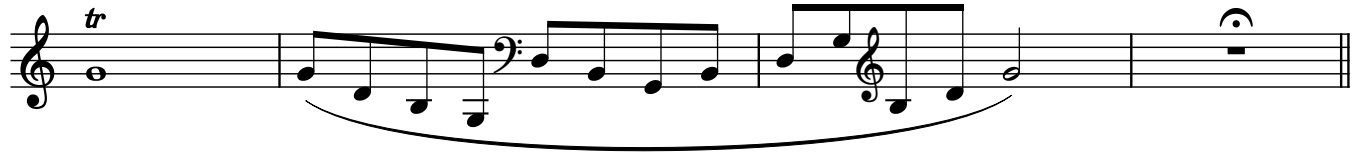
Speed change(this exercise is a gesture)

E.



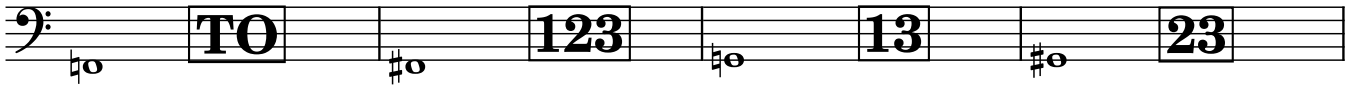
Trill to Arpeggio (in strict time)

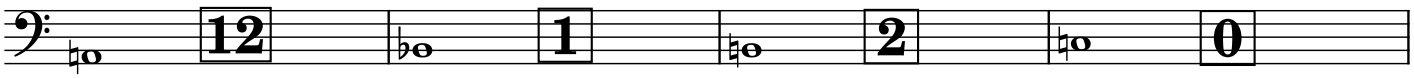
F.



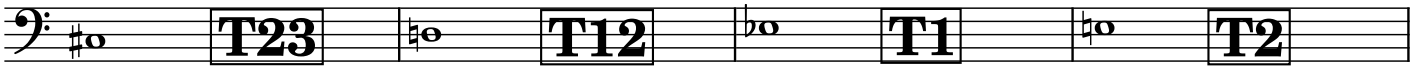
Note Fingering Guide
for double horns

Each note will have the following options: Flat, Sharp, and “Traditional” for the most amicable and common option. Sharp fingering options will appear above the staff, Flat options will appear below the staff, and “Traditional” options will be boxed on the staff. Bb Horn fingerings will have a “T” in front of the numerals and F horn fingerings will only have the numerals that are assigned to the note. If you are flat in the low register, open your hand, and blow the pitch up into center. Conversely, if you are sharp in the high register you may need to cover the bell with your hand and blow down to center the pitch in tune. There are very few perfectly “in tune” notes on the horn. Practice with a drone and tuner, and use your hand liberally to fine tune your pitch. Fingerings that accommodate lip trill will be indicated with an asterisk mark.(*)

Sharp:

Flat:

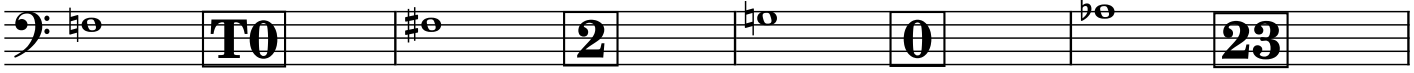
Sharp:

Flat:

Sharp: 123 13 23 12

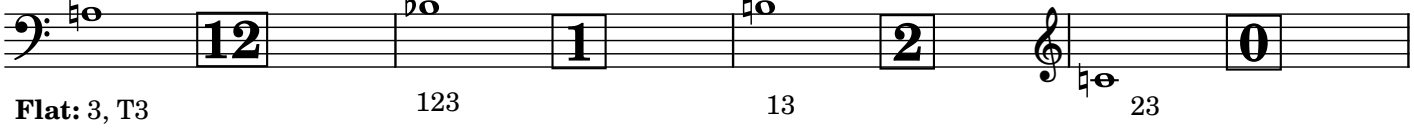


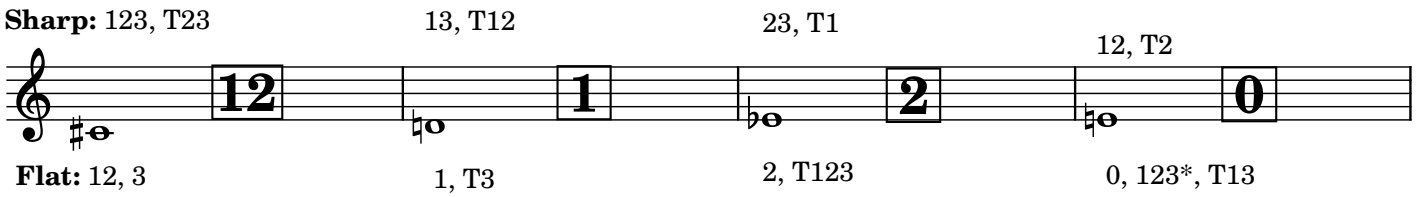
Flat: T3 3

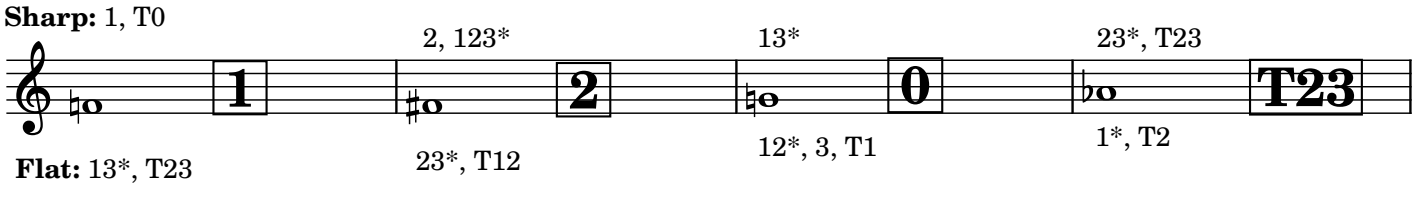
Sharp: 1 123, T123 13, T13 23, T23

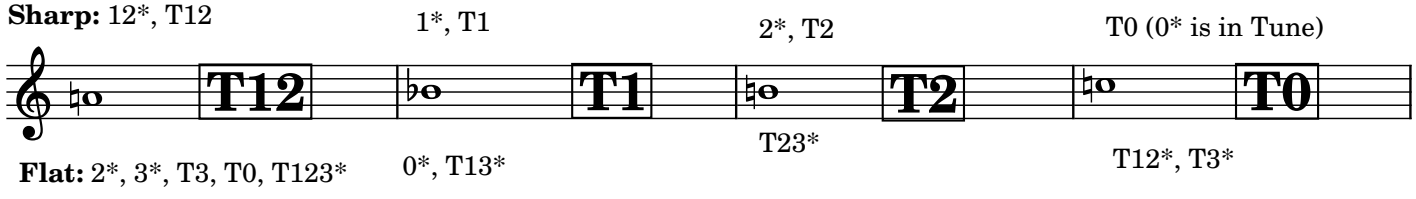


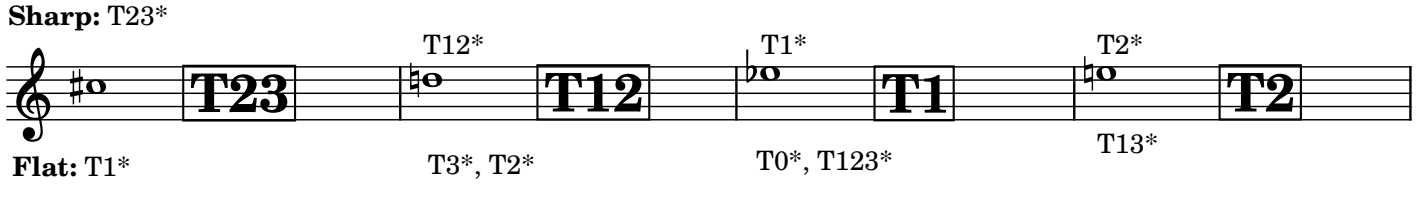
Flat:

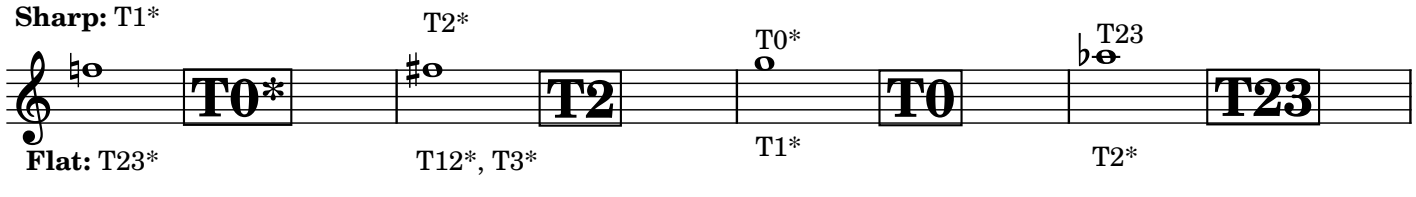
Sharp: 12, T12 1, T1 2, T2 T0, T13

Flat: 3, T3 123 13 23

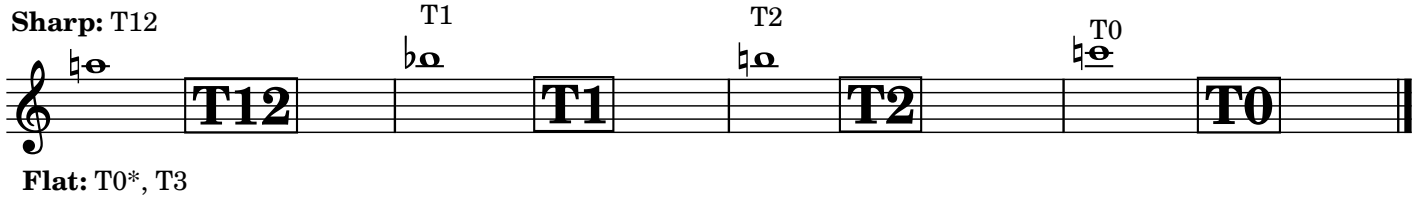

Sharp: 123, T23
13, T12
23, T1
12, T2
12
1
2
0
Flat: 12, 3
1, T3
2, T123
0, 123*, T13


Sharp: 1, T0
2, 123*
13*
23*, T23
1
2
0
T23
Flat: 13*, T23
23*, T12
12*, 3, T1
1*, T2


Sharp: 12*, T12
1*, T1
2*, T2
T0 (0* is in Tune)
T12
T1
T2
T0
Flat: 2*, 3*, T3, T0, T123*
0*, T13*
T23*
T12*, T3*


Sharp: T23*
T12*
T1*
T2*
T23
T12
T1
T2
Flat: T1*
T3*, T2*
T0*, T123*
T13*


Sharp: T1*
T2*
T0*
T23
T0*
T2
T0
T23
Flat: T23*
T12*, T3*
T1*
T2*


Sharp: T12
T1
T2
T0
T12
T1
T2
T0
Flat: T0*, T3