Pitch Tendencies and Adjustments

The following charts show pitch tendencies for notes that generally need adjustment on most instruments. Your intonation will begin to improve by becoming aware of the pitch tendencies of your instrument and implementing ways to alter those notes so they are closer to the pitch center. Your understanding of these concepts will be evident as you demonstrate better intonation skills.

**Flute**

**Sharp tendencies**

```
\( \text{\#C} \quad \text{\#D} \quad \text{\#E} \quad \text{\#F} \quad \text{\#G} \quad \text{\#A} \quad \text{\#B} \)
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**Flat tendencies**

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\( \text{E} \quad \text{D} \quad \text{C} \quad \text{B} \quad \text{A} \quad \text{G} \quad \text{F} \)
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**Sharp:**
The flute will tend to play sharp when dynamics get louder. Notes in the upper range also have a tendency towards sharpness. At times, flute pitch may go sharp if too much air moves across the blow hole.

**Pitch may be lowered through a variety of techniques including:**

- rolling the flute in slightly
- slight shift of the head to help direct air downward
- slight shift of the embouchure to help direct air downward
- head joint adjustments, pull out
- alternate fingerings
- adding keys

**Flat:**
The flute will tend to play flat when dynamics get softer. Notes in the lower range also have a tendency towards flatness. Unsupported air and slower air speed will also cause the pitch to go flat. At times, flute pitch may go flat if too much of the blow hole is covered.

**Pitch may be raised through a variety of techniques including:**

- rolling the flute out slightly
- slight shift of the head to help direct air upward
- better air support
- slight shift of the embouchure to help direct air upward
- head joint adjustments, push in
- alternate fingerings

**Oboe**

**Sharp tendencies**

```
\( \text{\#C} \quad \text{\#D} \quad \text{\#E} \quad \text{\#F} \quad \text{\#G} \quad \text{\#A} \quad \text{\#B} \)
```

**Flat tendencies**

```
\( \text{C} \quad \text{B} \quad \text{A} \quad \text{G} \quad \text{F} \quad \text{E} \quad \text{D} \)
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**Sharp:**
The oboe will tend to play sharp in the upper range, especially above high B\(\flat\). Sharpness is also caused by pinching the reed or biting. At times, and depending on the quality of the reed, taking too much reed in the mouth may cause sharpness.

**Pitch may be lowered through a variety of techniques including:**

- directing the airstream downward
- slight relaxation of the embouchure to avoid pinching or biting
Flat:
The oboe will tend to play flat in the lower range. Unsupported air and slower air speed will also cause the pitch to go flat. Flatness is also caused by an embouchure that is unsupported or too relaxed. At times, and depending on the quality of the reed, taking too little reed in the mouth may cause flatness.

Pitch may be raised through a variety of techniques including:

- directing the airstream upward
- better air support
- slight increase in embouchure firmness
- adjusting the amount of reed in the mouth
- alternate fingerings

Bassoon

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Sharp tendencies

Flat tendencies

Sharp:
The bassoon will tend to play sharp when dynamics get softer. The notes in the extreme lower range of the bassoon are usually very sharp. In the mid and upper ranges, G and G♯ will also be very sharp. Sharpness is also caused by pinching the reed or biting. The bassoon will tend to play sharp when dynamics get softer. The condition of the reed also contributes to pitch tendencies. A reed that is too hard will sometimes tend to play sharp. At times, and depending on the quality of the reed, taking too much reed in the mouth may cause sharpness.

Pitch may be lowered through a variety of techniques including:

- directing the airstream downward
- slight relaxation of the embouchure to avoid pinching
- adjusting the reed or selecting another
- adjusting the amount of reed in the mouth
- alternate fingerings
- change of bocal length

Flat:
The bassoon will tend to play flat when dynamics get louder. Flatness is sometimes prevalent at the upper end of the middle range. Flatness is also caused by unsupported air, slower air speed, and an embouchure that is unsupported or too relaxed. The condition of the reed also contributes to pitch tendencies. A reed that is too soft will sometimes tend to play flat. At times, and depending on the quality of the reed, taking too little reed in the mouth may cause flatness.

Pitch may be raised through a variety of techniques including:

- directing the airstream upward
- better air support
- slight increase in embouchure firmness
- adjusting the reed or selecting another
- adjusting the amount of reed in the mouth
- alternate fingerings
- change of bocal length
Clarinet (B♭, Alto, Bass, Contra Alto, and Contra Bass)

Sharp tendencies

Flat tendencies

Sharp:
The throat tones on the clarinet tend to be sharp. Although not idiosyncratic, players should be aware that if they pinch in the upper range, this will err to the sharp side. Low clarinets will tend to be sharp in the upper range.

Pitch may be lowered through a variety of techniques including:

- directing the airstream downward
- slight relaxation of the embouchure to avoid pinching
- adjusting the amount of reed and mouthpiece in the mouth
- selecting a softer reed
- barrel adjustment
- alternate fingerings

Flat:
Low clarinets will tend to be flat in the lower range. Except when a student pinches, some notes in the upper range can go flat. Flatness is caused by unsupported air, slower air speed and an embouchure that is unsupported or too relaxed.

Pitch may be raised through a variety of techniques including:

- directing the airstream upward
- better air support
- slight increase in embouchure firmness
- adjusting the amount of reed and mouthpiece in the mouth
- selecting a harder reed
- barrel (neck) adjustment
- alternate fingerings

Saxophone (Alto, Tenor, and Baritone)

Sharp tendencies

Flat tendencies

Sharp:
Notes in the upper range of the saxophone tend to be sharp. Third space C♯ and fourth line D are generally sharp. Sharpness is also caused by pinching the reed or biting. The condition of the reed also contributes to pitch tendencies.

A reed that is too hard will sometimes tend to play sharp. At times, and depending on the quality of the reed, taking too much reed in the mouth may cause sharpness.

Pitch may be lowered through a variety of techniques including:

- directing the airstream downward
- slight relaxation of the embouchure to avoid pinching
- adjusting the amount of reed and mouthpiece in the mouth
- selecting a softer reed
- mouthpiece placement adjustment on the neck
- alternate fingerings
Flat:
Notes in the lower range of the saxophone tend to be flat. Flatness is sometimes caused by unsupported air, lower air speed and an embouchure that is unsupported or too relaxed. The condition of the reed also contributes to pitch tendencies. A reed that is too soft will sometimes tend to play flat. At times, and depending on the quality of the reed, taking too little reed in the mouth may cause flatness.

Flat may be raised through a variety of techniques including:

- directing the airstream upward
- better air support
- slight increase in embouchure firmness
- adjusting the amount of reed and mouthpiece in the mouth
- selecting a harder reed
- mouthpiece placement adjustment on the neck
- alternate fingerings

Trumpet and Baritone T.C.

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Sharp tendencies

Flat tendencies

Sharp:
Some notes on brass instruments call for the performer to make subtle adjustments in breath support, air stream, and embouchure firmness. The notes listed above that are generally sharp need greater attention. In most cases, using trumpet valves in combination will raise the pitch center. As valves are used, the tubing length shortens. Therefore, in general, the more valves used in the combination, the sharper the pitch will tend to be.

Pitch may be lowered through a variety of techniques including:

- directing the airstream downward
- change in air speed
- slight relaxation of the embouchure
- adjust first and/or third valve slide
- alternate fingerings

Flat:
While flat tendencies for brass instruments are not as prevalent as sharp, some notes may border on flat. Generally this calls for the player to make natural adjustments in performance.

Pitch may be raised through a variety of techniques including:

- directing the airstream upward
- change in air speed and better air support
- slight increase in embouchure firmness
- alternate fingerings
Horn
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Sharp tendencies

Flat tendencies

All brass players are encouraged to read the trumpet intonation sections on sharp and flat tendencies as the general concepts listed there apply to all valve brass instruments. Those playing double horn need to focus on intonation of both the F and B♭ slides. When all slides are completely inserted, many horns have been tooled to play a bit sharp. See trumpet intonation section on sharp and flat tendencies.

Pitch may be lowered through a variety of techniques including:
- directing the airstream downward
- change in air speed
- slight relaxation of the embouchure
- adjust tuning slide
- adjust valve slides (proportionate to length of the slide)
- alternate fingerings
- moving the hand slightly out of the bell

Pitch may be raised through a variety of techniques including:
- directing the airstream upward
- change in air speed and better air support
- slight increase in embouchure firmness
- adjust tuning slide
- adjust valve slides (proportionate to length of the slide)
- alternate fingerings
- moving the hand slightly into the bell

Trombone
MEMORIZE THIS INFORMATION

Sharp tendencies

Flat tendencies

Pitch centering on the trombone is fully reliant on the keen ear of the performer, as it works on a slide system rather than a system of valves. Each pitch is entirely alterable. Basic principles concerning breath support and embouchure listed in the trumpet section apply to trombone intonation. Additionally, there are certain notes on the trombone that naturally tend to be in need of alteration.

Pitch may be lowered through a variety of techniques including:
- directing the airstream downward
- change in air speed
- slight relaxation of the embouchure
- adjust tuning slide
- adjust slide position downward
- alternate slide position

Pitch may be raised through a variety of techniques including:
- directing the airstream upward
- change in air speed and better air support
- slight increase in embouchure firmness
- adjust tuning slide
- adjust slide position upward
- alternate slide position
All brass players are encouraged to read the trumpet intonation sections on sharp and flat tendencies as the general concepts listed there apply to all valve brass instruments. The use of a fourth valve assists in correcting intonation in the lower range.

**Euphonium and Baritone B.C.**

**Sharp tendencies**

![Sharp Tendencies](image)

**Flat tendencies**

![Flat Tendencies](image)

**Pitch may be lowered through a variety of techniques including:**
- directing the airstream downward
- change in air speed
- slight relaxation of the embouchure
- adjust tuning slide
- adjust valve slides (proportionate to length of the slide)
- alternate fingerings
- use of fourth valve

**Pitch may be raised through a variety of techniques including:**
- directing the airstream upward
- change in air speed and better air support
- slight increase in embouchure firmness
- adjust tuning slide
- adjust valve slides (proportionate to length of the slide)
- alternate fingerings
- use of fourth valve

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**Tuba**

**Sharp tendencies**

![Sharp Tendencies](image)

**Flat tendencies**

![Flat Tendencies](image)

All brass players are encouraged to read the trumpet intonation section on sharp and flat tendencies as the general concepts listed there apply to all valve brass instruments. The use of a fourth valve assists in correcting intonation in the lower range.

**Pitch may be lowered through a variety of techniques including:**
- directing the airstream downward
- change in air speed
- slight relaxation of the embouchure
- adjust tuning slide
- adjust valve slides (proportionate to length of the slide)
- alternate fingerings
- use of fourth valve

**Pitch may be raised through a variety of techniques including:**
- directing the airstream upward
- change in air speed and better air support
- slight increase in embouchure firmness
- adjust tuning slide
- adjust valve slides (proportionate to length of the slide)
- alternate fingerings
- use of fourth valve