Tune The Instrument

When tuning to one note only approach the tuning note from below

Intonation Discrepancies

Means of Improving Intonation:

Also consider the following generalizations:
1-2 valve combination is moderately sharp.
1-3 valve combination is very sharp.
1-2-3 valve combination is extremely sharp.
2-3 valve combination is moderately flat.

Embouchure - Center the tone. The vibration frequency must agree with the partial to be played otherwise the player will bubble.
- Practice buzzing melodies on the mouthpiece only.
- The accurate brass player must develop a muscular memory.

Endurance - Tune when the lips are properly warmed up.
- As one plays longer pitch will go sharp.
- Playing when one is over tired will cause pitch to go flat.

Mouthpiece - Make sure it is matched for the instrument.

Syllables - Sharp notes may be lowered with TOE or TAH.
Flat notes may be raised with TEE.

Dynamics- Crescendos may blow sharp. To correct: Maintain a firm embouchure throughout crescendo.
- Diminuendos may blow flat. To correct: Maintain sufficient breath support throughout diminuendo

Trigger - If one is available it will enable the player to raise faulty pitches while playing.

Alternate Fingerings - Know the alternate fingerings which work on your instrument best.
- If available, implement the use of the 4th valve whenever possible.

Listen - Listen to good music to develop your ear.
- Check your buzzing of the chromatic scale with the tuner.
- Also frequently play long tones and scales frequently checking them with the tuner.
TUBA

Possible Adjustments for Selected Pitch Tendencies

TUBA
(Note: Tune the 4th valve to where the low Bb is a little flat and the low B natural is still a little sharp.)

Flat - An embouchure that is not firm makes this note tend toward flatness.

Sharp - To lower pitch finger with 2nd and 4th valve and still lip down.

Sharp - To lower the pitch, lip it down with 1st and 3rd valve combination - If 4th valve slide is properly pulled lip the pitch up since this pitch will be a little flat.

Sharp - To lower the pitch finger 3rd valve.

Flat - To raise the pitch, finger use 1st and 3rd valve.

Flat - To raise the pitch, finger with 2nd and 3rd valves.

Flat - To raise the pitch, finger with 1st and 2nd valves.

Sharp - To lower the pitch, finger with 1st and 3rd valves.
TUBA (continued)

Possible Adjustments for Selected Pitch Tendencies

\( \text{\textbf{Sharp} - To lower the pitch, lip down, possibly finger with 2nd and 3rd valves as an alternate fingering} \)

\( \text{\textbf{Sharp} - To lower the pitch, finger with 1st and 2nd valves.} \)

\( \text{\textbf{Sharp} - To lower the pitch, lip down and have 3rd valve slide pulled to tune. Possibly finger the note with the 1st valve.} \)

\( \text{\textbf{Sharp} - To lower the pitch, finger with 3rd valve only.} \)
**Pitch Tendencies & Adjustments**

**Trombone**

<table>
<thead>
<tr>
<th>Pitch Tendency</th>
<th>Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Use trigger and lower 1st position. (May still be very sharp if trigger is not properly tuned.)</td>
</tr>
<tr>
<td>S</td>
<td>Use trigger and lower 1st position.</td>
</tr>
<tr>
<td>S</td>
<td>Lower 1st position</td>
</tr>
<tr>
<td>F</td>
<td>Use 4th position</td>
</tr>
</tbody>
</table>

Lower 1st position  
Raise 3rd position  
Raise 2nd position  
Lower 1st position

**Pitch Tendencies & Adjustments**

**Tuba**

<table>
<thead>
<tr>
<th>Pitch Tendency</th>
<th>Adjustment</th>
</tr>
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<tbody>
<tr>
<td>VVS</td>
<td>Use 2nd &amp; 4th valve or pull 1st valve slide</td>
</tr>
<tr>
<td>VS</td>
<td>Use 4th valve or pull 1st valve slide</td>
</tr>
<tr>
<td>S</td>
<td>Use 3rd valve or pull 1st slide</td>
</tr>
<tr>
<td>VVS</td>
<td>Use 2nd &amp; 4th valve Drop jaw</td>
</tr>
<tr>
<td>VS</td>
<td>Use 4th valve</td>
</tr>
<tr>
<td>S</td>
<td>Use 3rd valve</td>
</tr>
</tbody>
</table>

Use 3rd valve or pull 1st slide  
Use 1st & 3rd or 4th valve  
Use 1st and 2nd Pull 1st slide  
Use 3rd valve Play open
Procedures for Tuning the Instrument
1. Warm up thoroughly before tuning.
2. Tune at a mezzo-forte dynamic level and do not use vibrato.
3. Tune to a reliable frequency (electronic tuner, etc.) using the recommended tuning note below.
4. Do not humor the tuning note; play it straight. Adjust the main tuning if the pitch is sharp or flat.

**BASIC TUNING NOTE**

The tuning pitch is indicated with a half note; quarter note pitches are used to help “groove” the tuning note by approaching it from below.

Tuning Mechanism: Main Tuning Slide. Pull out the main slide to lower the overall pitch of the instrument; push it in to raise the pitch.

To tune the fourth valve on tubas so equipped, play the third harmonic note F on the open horn, then engage the fourth valve and match the pitch. If the pitch played with the fourth valve is sharp or flat, pull out or push in the fourth valve slide.

**Note:** The fourth valve when engaged lengthens the overall tubing of the tuba a perfect fourth, thus extending the low range downward as well as providing additional alternate fingerings for better intonation.

**Tuning the Valves**

Each of the valves on your instrument has a separate tuning slide which must be adjusted in relationship to the main tubing after it has been tuned. Neglecting to tune the valves will adversely affect the overall intonation of your instrument. Follow these procedures:

1. Tune the first valve exactly one whole step below the opening tuning note as follows:
   - Do not humor the pitch played with the valve. If it is flat, push in the slide. If it is sharp, pull out the slide.
   - These procedures should be followed when tuning the other valves (see below).

2. Next, tune the second valve exactly one half step below the open tuning note as follows:

3. Last, tune the third valve exactly one and a half steps below the open tuning note as follows:

   *On instruments not equipped with a fourth valve it may be necessary to tune the third valve slightly flat to help lower notes played with valves 1-3 and 1-2-3.*

Techniques for Adjusting Pitches While Playing
1. Alternate Fingerings
2. Adjusting the Main Tuning Slide (if convenient to do so while playing)
3. Embouchure Adjustment—Lipping (increasing or decreasing lip pressure)
4. Combinations of the Above

**INHERENT INTONATION FLAWS**

a) Use alternate fingerings as marked if your instrument is equipped with a fourth valve, otherwise lip down or temporarily pull out the main tuning slide.

b) If the fifth harmonic notes are flat, try alternate fingerings or lip up.

* Arrows pointing up indicate that the notes tend to be sharp; arrows pointing down indicate that the notes tend to be flat.
B♭ TUBA INTONATION CHART

Name ___________________ Date ___________________

Instrument Make and Model ___________________

Mouthpiece Used ___________________

Carefully follow the procedures outlined in the Tuning Guide for your instrument before beginning to chart your intonation with a friend. Your teacher should provide an Intonation Charting Guidesheet with instructions on how to use an electronic tuner. Mark intonation discrepancies for lower octave scales below the staff.

**Tuning Notes**

![Tuning Notes Diagram]

**Chromatic Scale**

![Chromatic Scale Diagram]

**Use 4th Valve**

**Major Scales**

![Major Scales Diagram]

**Harmonic Minor Scales**

![Harmonic Minor Scales Diagram]

**Pitch Tendencies of Dynamics**

![Pitch Tendencies of Dynamics Diagram]