

Tuning in an orchestra

What is actually happening when the oboe plays the A, and what to do about it.

1 The order of events

The oboe gives the A. Most orchestras tune to A at 440 Hz; many European ones sit at 442 or 443, and the oboe, not your tuner, decides. The order varies by orchestra; commonly wind and brass take the A first and the strings take a fresh one. Take it when it is given, briefly and quietly, and keep silence around other people's tuning.

2 Before the A

Wind and brass: warm the instrument for several minutes first. A cold instrument is flat and will rise over the first quarter of an hour, so tuning it cold means tuning it wrong. Strings: tune your fifths (basses, fourths) from the A, then check the open strings against each other in pairs.

3 The tuner on the stand

Use it for the A and then stop looking at it. From then on the ear does the work, because a chord in tune is not the same as every player agreeing with a tuner. Tune to the bass line and to your principal, not to the player beside you. For unisons the ear outperforms any needle: it hears beats a screen cannot show.

4 The chord rule

In a major chord the root is fixed by the bass, the fifth sits very slightly high, and the third sits noticeably low: about a seventh of a semitone lower than a tuner would show. If your note is the third, lean it down until the beating stops (beating is the slow wah-wah pulse two notes make when they are almost, but not quite, the same pitch). In a minor chord the third leans the other way, slightly up. Know which note of the chord you have; write it in the part where it matters.

5 Dynamics drag the pitch

Most instruments drift sharp as they get louder and flat as they get softer; clarinets famously do the opposite, and every instrument drifts furthest at the top of its range. Learn which way yours goes. Loud and drifting: open the sound, keep the air steady and listen down to the bass. Soft and sagging: more support, not more pressure.

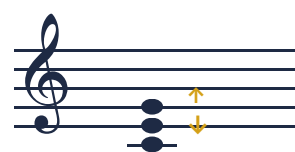
6 The hall changes

Over the evening the room warms, wind and brass rise, and strings drift. Re-check quietly at the interval and after long rests. Between movements, a small adjustment is normal; an audible one is not.

7 Your section

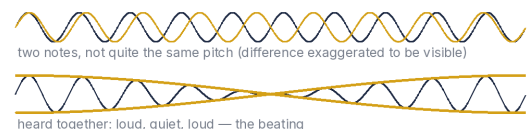
Woodwind: tune to where your principal actually plays, not to the needle. Brass: pull the slide rather than liping everything. Strings: the section is in tune when the open strings agree; check with the desk in front, not across the orchestra.

THE CHORD RULE, DRAWN — C MAJOR



fifth: a whisker high
third: lean down
root: fixed by the bass

WHAT BEATING IS



Sound is vibration: two notes almost the same pitch alternately reinforce and cancel, and that rise and fall in loudness is the beat. One beat a second means the pitches are one hertz apart; when the beats stop, the unison is pure. Drill: two minutes against a drone, leaning until they stop.

