

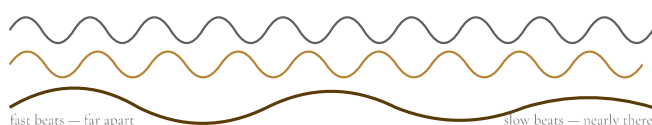
Tuning & intonation

Tuning is the minute before you play. Intonation is every minute after it. A group that tunes beautifully and then stops listening will still play out of tune — so the useful skill is not setting the A, it is hearing the chord you are inside and moving your note towards it.

TUNING AN ENSEMBLE, IN ORDER

- 1 **One source, and only one.** The oboe's A in an orchestra; the piano if there is one; a tuba or principal clarinet in a band. A tuner is a checking tool, not the source.
- 2 **Winds before strings.** Winds warm up sharp, so they need a minute of playing first; strings can be adjusted in seconds at the peg.
- 3 **Down from the top.** A first, then each player finds their other strings by pure fifths — or their other notes by long tones.
- 4 **Then tune to each other.** Two players hold an octave, then a fifth. Adjust until the sound stops wobbling.
- 5 **Hold a full chord.** The real test. Bass note first, then the fifth, then the third on top.
- 6 **Check again after ten minutes.** The room warms, the instruments move. One quiet A between movements is normal, not an admission of failure.

BEATS — THE SOUND OF BEING OUT



Two notes a little apart make the sound pulse. The further apart, the faster the pulse. Move your note either way and listen: if the pulsing slows you are going the right way, and when it disappears you are in tune. Never guess the direction — test it.

WHICH NOTE BENDS, AND HOW FAR

Octaves	Dead exact. Any wobble at all is audible.
Fifths	Pure and wide open. Tune these before anything else.
Major thirds	A shade low in a sustained chord — the ear wants it narrow.
Minor thirds	A shade high. The opposite instinct.
Leading notes	Lean upward when they are pulling to the tonic.
In a unison	Nobody wins by force. Both players move half the distance.

WHY IT DRIFTS

	Goes sharp	Goes flat
WINDS	Warm instrument, warm room, playing loud, blowing hard when tired	Cold start, playing very softly, low breath support
STRINGS	Squeezing the left hand, playing high up the string, hot lights	New strings settling, cold room, heavy bow pressure
EVERYONE	Excitement. Groups run sharp and fast under pressure	Long rests. Come back in listening, not confident

FIXING IT IN THE ROOM

Tune down to the bass. The lowest sounding part holds its note; the upper parts move to it. Harmony is built from the bottom.

Stop and hold. Freeze on the chord that went wrong and sustain it — you cannot fix intonation at speed.

Name the interval. Knowing you are the third of the chord tells you which way to move.

HOW CLOSE IS CLOSE ENOUGH

Concert pitch is A = 440 Hz, though many orchestras tune higher, to 442. A semitone divides into 100 cents: five out passes unnoticed, ten is heard on a held chord, twenty sounds wrong. Aim for a sound with no pulse, not a number on a screen.

PRACTISING IT ALONE

Play long tones against a drone on the tonic and hold each degree of the scale until the beating stops. Then sing the note before you play it. Tuners train your eyes; drones train your ears.

COMPOSERS, NOTE

Exposed slow unisons, high thirds and quiet held chords are the hardest things to play in tune. Ask for them because you want them, not by accident — and give young players octaves and fifths where you can.