

# Intonation: semitones

## Microtones

Dividing semitones (halfsteps) into smaller intervals is a simple but illuminating intonation exercise which can affect all of your playing. Having played quarter-tones, eighth-tones, sixteenth-tones and so on, the feel and sound of a semitone suddenly seems vast in comparison. It is obviously easiest to do on the cello or bass because of the bigger distances between notes, but is very helpful for violinists, especially those with wide fingertips who may feel that semitones are too close for comfort.

**Play each stage completely without vibrato.**

- 1 In third position on the A string, play E - D - E. Play firmly, with separate bows. Tune both notes to the open strings.
- 2 Play E - D $\sharp$  - E, playing a 'tempered' D $\sharp$  exactly half-way between the D and E.
- 3 Play E - then the note a quarter-tone lower (exactly halfway between E and D $\sharp$ ) - then E again.
- 4 Now only using one finger, rocking slightly up or down to find the pitches, play E - then the note an eighth-tone lower - then the E again.
- 5 Continue halving through the 16th, 32nd, 64th and 128th of a tone. Always play E, then the fraction of a tone below, and then the E again. Keep checking the E with the open E to make sure they are the same.

Do the same on each string with each pair of fingers, in low, middle and high positions.

This exercise also works as a good vibrato exercise because it sensitises the ear and the finger to the slightest variation in pitch. After doing it a couple of times it is easy to play with the narrowest, purest vibrato which sounds like BBBB BBBB, CCCCCCCC, etc. - in other words, sounding like one pitch which throbs rather than a wide sliding of the pitch between the note itself and the same note flattened.

## Wide and narrow semitones

In a chromatic scale or group, semitones sometimes need to be spaced equally, as on the piano. More often they need to be played expressively, the sharps 'leading up' and the flats 'leading down', so that some semitones are closer together and others wider apart. The basic principle is simple:

**If the letter names are the same the semitone is played wide (ie F-F $\sharp$ , A-Ab).**

**If the letter names are different the semitone is played close (ie E-F, A-G $\sharp$ ).**

In the following examples, a bracket indicates a wide semitone, a V indicates a narrow semitone.

Caprice 17 Paganini

The image shows a musical staff for Caprice 17 by Paganini. It features a chromatic scale starting on E4. The notes are: E4 (finger 4), F4 (finger 3), F $\sharp$ 4 (finger 2), G4 (finger 1), G $\sharp$ 4 (finger 2), A4 (finger 1), A $\flat$ 4 (finger 0), B $\flat$ 4 (finger 4), B4 (finger 3), C5 (finger 2), C $\sharp$ 5 (finger 1), D5 (finger 2), D $\sharp$ 5 (finger 1), E5 (finger 1). A bracket is placed under the interval between F $\sharp$ 4 and G4, indicating a wide semitone. The piece concludes with a double bar line and a fermata over the final E5.

Violin Concerto in D Tchaikowski

The image shows a musical staff for the Violin Concerto in D by Tchaikowski. It features a chromatic scale starting on D4. The notes are: D4 (finger 1), E4 (finger 1), F4 (finger 1), F $\sharp$ 4 (finger 1), G4 (finger 1), G $\sharp$ 4 (finger 1), A4 (finger 1), A $\flat$ 4 (finger 1), B $\flat$ 4 (finger 1), B4 (finger 1), C5 (finger 1), C $\sharp$ 5 (finger 1), D5 (finger 1), D $\sharp$ 5 (finger 1), E5 (finger 1). A 'V' mark is placed under the interval between F $\sharp$ 4 and G4, indicating a narrow semitone. The piece concludes with a double bar line and a fermata over the final E5.

## Semitone shifts with one finger

Play the first bar across the strings without shifting. In the second bar use a semitone shift to play the same notes on only one string. Play with such clean shifts, and identical intonation, that somebody listening without looking would not realise that you were using a different fingering in each bar.

- Tempo: slow, medium and fast.
- Repeat each pair of bars several times.
- Move the whole hand to shift - do not just move the finger.
- Lift and drop the fingers 'late' and fast, especially when playing at slow and medium speeds.
- Play slurred as written, and also separate bows.

The image displays six pairs of musical staves, each representing a different fingering technique for semitone shifts. Each pair consists of a top staff with a treble clef and a bottom staff with a bass clef. The top staves are marked with fingerings (1-1, 2-2, 3-3, 4-4) and slurs. The bottom staves are marked with fingerings (1 1, 1 2, 1 3, 1 4) and the word 'simile'. The music is written in a key with one sharp (F#) and a common time signature. The first pair uses a 1-1 fingering with a slur. The second pair uses a 1 2 fingering with a slur. The third pair uses a 2-2 fingering with a slur. The fourth pair uses a 1 3 fingering with a slur. The fifth pair uses a 3-3 fingering with a slur. The sixth pair uses a 4-4 fingering with a slur. Each pair is repeated four times.

**Other positions** Play the same notes on the G-D strings, starting in 2nd position, and on the D-A strings starting in 5th position.

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Next month's BASICS returns to tone production, with two special exercises that instantly improve tone production on any bowed instrument.