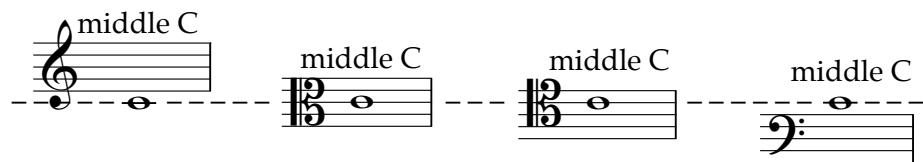


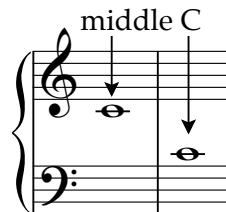
*Section 1.3***ALL ABOUT OCTAVES**

Octave An **octave** is the distance from a note up or down to the next note with the **same name**. For example, from the pitch A up to the next A is one octave. Octaves span **eight letter names**: A-B-C-D-E-F-G-A = 1-2-3-4-5-6-7-8.

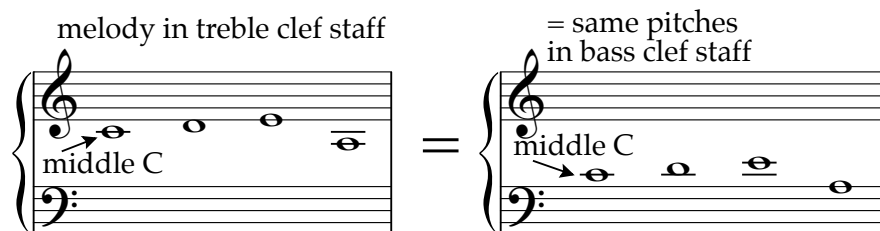
Middle C **Middle C** is the C just to the left of center on the piano keyboard; it is near the “middle” of the piano. In treble clef, middle C is one ledger line below the staff. In bass clef, middle C is one ledger line above the staff. On C clefs, including alto clef and tenor clef, middle C is at the center of the clef sign. All of the notes below represent exactly the same piano key (middle C).

**Middle C on the grand staff**

In a **grand staff**, middle C is notated differently depending on whether it is in the treble or bass clef. Middle C is literally the “middle” ledger line, one line below the treble clef and one line above the bass clef.

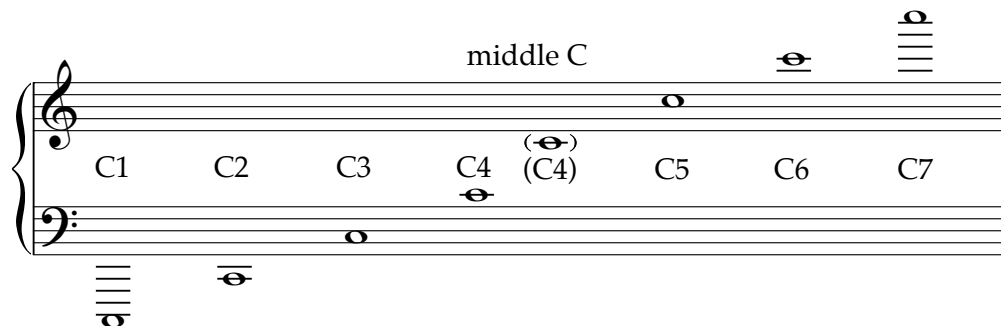
**Ledger lines between the staves**

Ledger lines may occur between the staves to make it clear whether the notes are in the treble clef (or right hand) part or bass clef (left hand) part.



American Standard octave designations

In **American Standard (or Scientific) Pitch Notation**, The octaves are numbered, with middle C being C4. Every C begins a new octave number, so the B just below C4 is B3, and the D just above C4 is D4. Accidentals don't change the octave; B#4 = C5, and Cb5=B4.

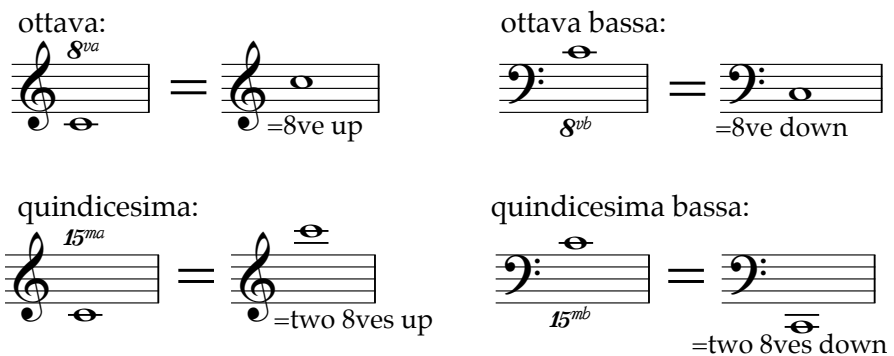


Helmholtz octave designations

Helmholtz pitch notation is used widely in Europe and older science publications. Middle C is c' (read "one-line C"). Octaves are C,, ("subcontra C"); C, ("contra C"); C ("great C"); c ("small C"); c' ("one-line C"=Middle C); c'' ("two-line C"); c''' ("three-line C"); and c'''' ("four-line C").

**Ottava
Quindicesima**

The **ottava** symbol (8va) raises a note by one octave, while the **ottava bassa** (8vb) lowers a note by one octave. Ottava always appears above the staff, and ottava bassa appears below the staff. Similarly, **quindicesima** (15ma) raises a note two octaves; **quindicesima bassa** lowers a note two octaves.



Octave clef

The **octave clef** lowers the music an octave; it is often used for tenor voice.

