

Chapter 1

Fundamentals

1.1 Pitch

Definition 1 (Pitch) *Pitch is the property of the sound which allows a relative ordering of perceived sounds on a frequency-related scale.*

On a keyboard, pitch goes up to the right of the keyboard, while it goes down on the left.

Pitches are expressed through **notes**. There are 7 note names, which are repeated in **octave registers**, identified by the bottom number.

$$\cdots A_3 B_3 \underbrace{C_4 D_4 E_4 F_4 G_4 A_4 B_4}_{\text{Octave register 4}} C_5 D_5 \cdots$$

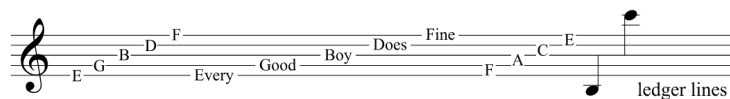


Figure 1.1: Treble clef

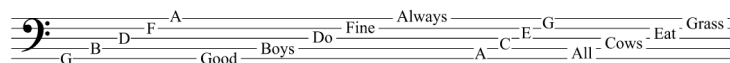


Figure 1.2: Bass clef

Definition 2 (Octave) *The distance / interval between two notes with the same name.*

Definition 3 (Middle C) *The C_4 pitch, usually located in the middle of a keyboard (on the instrument) and always annotated in the middle of the grand staff, shared by the two staves.*



Figure 1.3: The Grand Staff

Definition 4 (Accidental) *A symbol placed before a note to raise / lower its pitch by a given amount.*

An accidental is effective only for a measure. They affect the entire piece if they are placed before the clef in a **key signature**.

♭	Flat	−1 half step
♯	Sharp	+1 half step
♭♭	Double flat	−2 half steps / −1 whole step
×	Double sharp	+2 half steps / +1 whole step
♮	Natural	Cancels preceding accidentals

Definition 5 (Half step) *On the keyboard, the distance / interval between one key (either black or white) and the next (either black or white).*

Definition 6 (Whole step) *The interval made up of two half steps.*

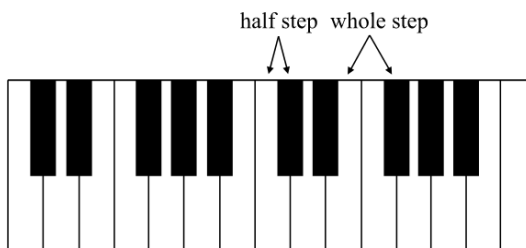


Figure 1.4: Half steps and whole steps

Definition 7 (Enharmonic) *Which has the same sound, but different name.*

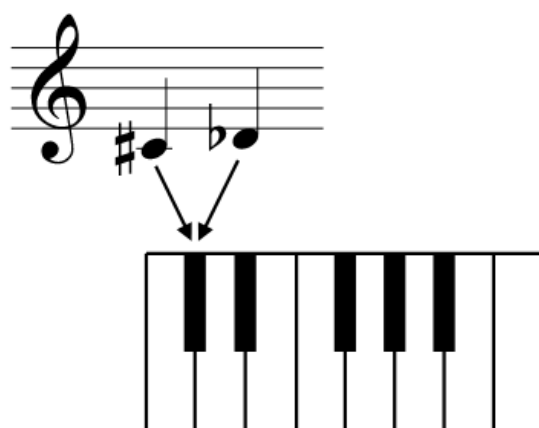


Figure 1.5: Enharmonic notes

Chapter 2

Scales