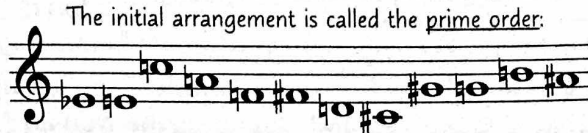


Serialism

Serialism is a twentieth century method of composition — one of the main composers who developed and used this system was **Arnold Schoenberg** (1874-1951). He invented the **12-tone system** in the 1920s.

The 12-Tone System Arranges Notes in a Certain Order

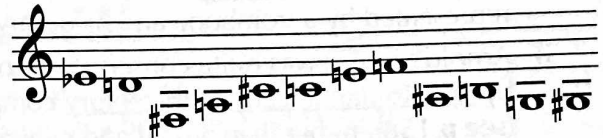
- 1) To use the 12-tone system, start by arranging the **12 chromatic notes** of an octave into a **set order** (any order you like), written out **horizontally** — this is called a **tone row**.



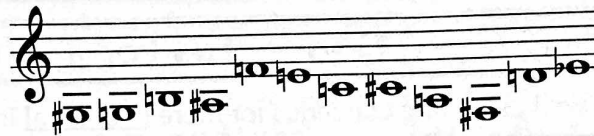
- 2) Now **rearrange** the prime order. There are a few **different ways** of doing this — the first is to play the notes in **reverse order** (or **retrograde**).



- 3) Take the prime order again and turn the **intervals** between the notes **upside down** — this is known as an **inversion**.
E.g. if the prime order goes **up a semitone**, in the inversion you go **down a semitone**.



- 4) For the last type of arrangement, take your **inversion** and play the notes in **reverse order** to give a **retrograde inversion**.

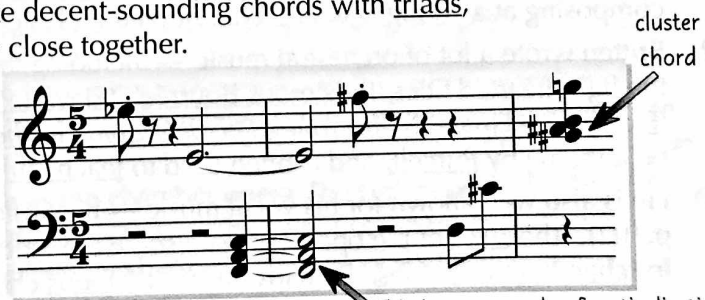


- 5) These four different **tone rows** can be **transposed** — each one can start on **any** of the 12 different notes. This gives you **48** different tone rows to use in your composition (see below).
6) As it uses **all** the notes of a **chromatic scale**, this music is not written in any key — it's **atonal**.

Use the Tone Rows as the Building Blocks of the Piece

- Pick any **tone row** — the notes can be played in the **bass line** or **melody** and in **any octave**.
- Once a row has been **started**, you have to use **all** the notes in it (i.e. you **can't** just use half a row). However, rows can be **passed between parts** and can **overlap**.
- Notes can be **combined** to make **motifs** — memorable bits of melody that **reappear** through the piece.
- Groups** of notes can be piled up to make **chords**. Notes that were next to each other in the original rows would be played **all at once** by different instruments. This is called **verticalisation** — notes that were written out **horizontally** in the **rows** are written out **vertically** in the **score**.
- The prime order could be designed to create decent-sounding chords with **triads**, or to create **cluster chords** with notes really close together.
- Serialist music is quite **complicated** to write, so most pieces are only for **small groups** of instruments.

'Moses und Aron' by Schoenberg
and Alban Berg's Violin Concerto
are good examples of serialist pieces.



This is an example of verticalisation.

Not to be confused with cerealism — eating your breakfast in order...

Although this page is all about ordering the notes, serialism can order other elements too — such as metres, dynamics or rhythms. Total serialism, which came a bit later, is when every aspect of a piece is ordered.