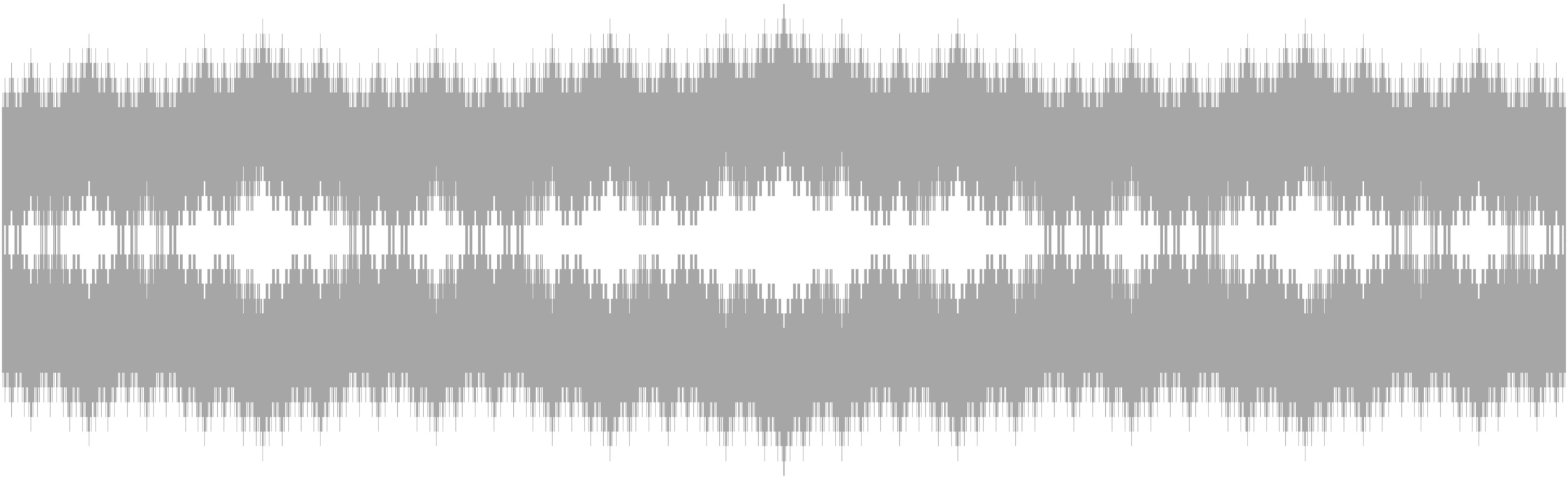


Fractal

for any number of pitched sound sources



This score is a fractal piece for pitched sounds. To play the score, you need to be able to transpose a group of pitches and play it with your sound source(s). Your sound source(s) could be anything with a controllable pitch – your voice, an instrument, software, a sequencer etc.

Instructions

Choose any pitch to be **pitch 1**.

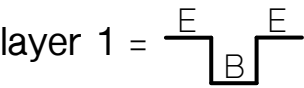
Example

pitch 1 = E5

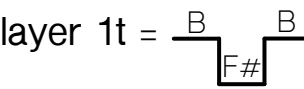
Choose any pitch within an octave of **pitch 1**, ascending or descending. This is **pitch 2**. The interval from **pitch 1** to **pitch 2** is the **transposition interval**.

pitch 2 = B4
transposition interval = descending perfect 4th

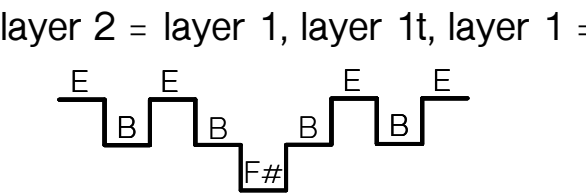
Play **pitch 1**, then **pitch 2**, then **pitch 1** again. This is **layer 1**.



Play **layer 1** again, but transpose it by the **transposition interval**, so it starts on **pitch 2**. This transposed version is **layer 1t** (the **t** stands for transposed).

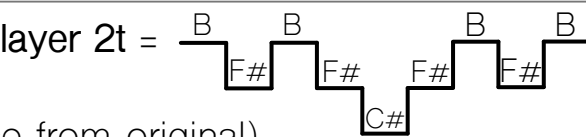


Play **layer 1** again, at its original pitch. Everything played so far (**layer 1**, followed by **layer 1t**, followed by **layer 1**), forms **layer 2**.



Every layer follows this ABA structure, where B is a transposition of A.

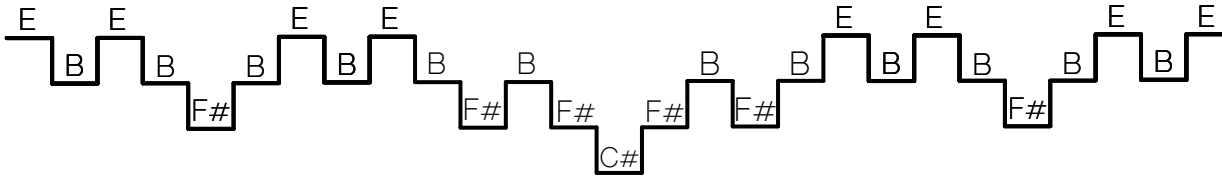
Play **layer 2** again, but transpose it by the **transposition interval**, so it starts on **pitch 2**.



This transposed version is **layer 2t**, made of **layer 1t**, **layer 1tt**, **layer 1t** (tt = transposed twice from original).

Play **layer 2** again, at its original pitch. This whole sequence of **layer 2**, **layer 2t**, **layer 2**, is **layer 3**.

layer 3 = **layer 2**, **layer 2t**, **layer 2** =



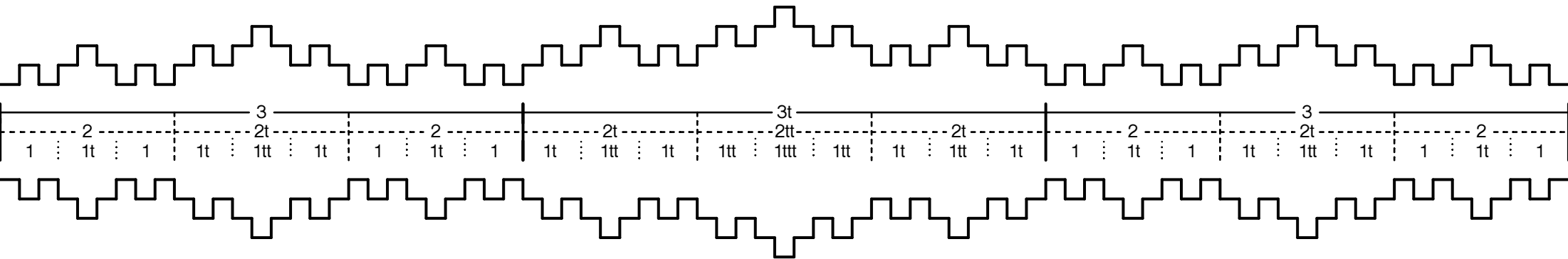
Continue repeating the last two steps for as long as desired, using speed, rhythm, loudness, and different methods of sound production for expression. If you reach the point where the highest pitch in the **next layer** would exceed your sound source's pitch range, then at the end of the **current layer** either:

- Change the direction of the **transposition interval** (ascending becomes descending and descending becomes ascending), and continue the fractal. Optionally, change the size of the **transposition interval** as well.
- Return to **pitch 1**, change the size and/or direction of the **transposition interval**, and begin the fractal again from **layer 1**.
- Stop playing.
- If you're playing this piece with a group of people: stop playing and wait for most other players to reach their range limit before doing one of the above.

Optionally, set a pitch range that's smaller than your sound source's total possible pitch range.

If desired, experiment with layering multiple fractals, experimenting with different speeds, rhythms, starting times, loudnesses, methods of sound production, and different choices for **pitch 1** and **pitch 2**. You might experiment with widening or narrowing the interval between any two consecutive pitches everywhere those two consecutive pitches appear in the fractal. Optional remix: create a musical idea using your sound source(s) that can be transposed. Instead of playing each pitch, play your material on repeat, replacing each note with the corresponding transposition of your material.

Below is a visual representation of **layer 4** of the fractal showing both directions, with a timeline to show the **layers 3, 2 and 1** within. This could be useful when realising the piece, and you might find it helpful to write in some pitches. By writing the first note of each diagram, you could use 3 copies of the diagram to represent **layer 5**, 9 for **layer 6**, 27 for **layer 7**, 81 for **layer 8** and so on (multiply by 3 for each higher layer).



(These two pages have more copies of the visual representation to be written on.)

