MANUAL FOR COMPOSERS: *circa ten to the ninety* (2025)

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Two Performers, Digital Chessboard, Max (MSP), Monitor, Speakers.

Introduction:

circa ten to the ninety operates within the program Max/MSP. The designed system reads the game on an electronic chessboard (or UCI) and arranges the layers of sound provided by the composer to create the audial performance in real-time.

How The Sound Is Structured:

All the pieces on the board are always producing a representative sound. The sound emitted is determined using two criteria:

- ➔ The chess piece type (King, Queen, Rook, Bishop, Knight, Pawn).
- ➔ The positions of the pieces on the board.

The chess piece type determines which of the 6 provided sound layers the system is picking from. The position of a piece determines which sample of the selected layer is going to be played on loop. Each layer is automatically divided into 64 samples of equal length. Each sample represents a square of the board. They are mapped in a spiral, as such:

□ – Start of audio file
■ – End of audio file

	a	b	c	d	e	f	g	h
8	⁄	←	←	←	←	←	←	\
7	↓	⁄	←	←	←	←	\	↑
6	↓	↓	⁄	←	←	\	↑	↑
5	↓	↓	↓	■	\	↑	↑	↑
4	↓	↓	\	→	⁄	↑	↑	↑
3	↓	\	→	→	→	⁄	↑	↑
2	\	→	→	→	→	→	⁄	↑
1	□	→	→	→	→	→	→	⁄

For example, a pawn on square d4 will play sample 61/64 of the “Pawn” layer (being at position 61 of the spiral). If the “Pawn” layer is, say, 20m00s, then the sample that will be looped will be between 18m45s and 19m04s, with a loop duration of about 19s. This process is repeated for all active pieces on the board.

Moves:

When a move is made, say Pawn d2 to d4, the sound emitted changes with its position change. When the piece is placed, this pawn's **sound spikes in volume momentarily**, separating itself from all the other sounds, and then decays back into the masses of sound layers.

When a capture occurs, the capturing piece's sound spikes in volume as it would for any other move. Additionally, all other sounds have an equal and opposite reaction, creating **a dip in volume** away from the singular spiked sound.

When check occurs, the king's sound spikes in volume. **When checkmate occurs**, spikes alternate between the sounds of the last moved piece and the mated king.

Tension Build:

Throughout the game, the outputted sound's frequency gets progressively shifted upwards, ramping up slowly from a factor of 1 to 1.3 over the course of a full 20mn game (10mn on each player's clock). This creates a sense of a tension build, maintaining the intensity of the game.

Turn Distinction:

The white and black pieces are panned to the side of the board that they are on. This means that (in the initial board state) 16 white pieces are hard-panned and opposed to 16 black pieces. The sounds that are representing the side whose turn it is **not** are mixed into reverb, thus putting an emphasis on the side that is to play a move.

What The Composer Provides:

The composer needs to provide **6 stereo files** of duration 10–30 min. Note that longer duration reduces repetitiveness. Each of these files will be used to represent a type of chess piece (King, Queen, Rook, Bishop, Knight, Pawn), so they should be labeled accordingly, with Last Name, First Name, and Piece Type.

Additionally, the composer should provide a statement to accompany the piece with conceptual context.

Nota Bene:

Keep in mind the layering—the 6 layers should be distinct and able to sit in their own frequency/rhythm space and not overpower. There are 32 pieces on the board at the start of the game, each producing a sound from one of the layers. Note the 16 pawns. It is best to make sure that the "Pawn" layer is sparse enough to be layered 16 times.