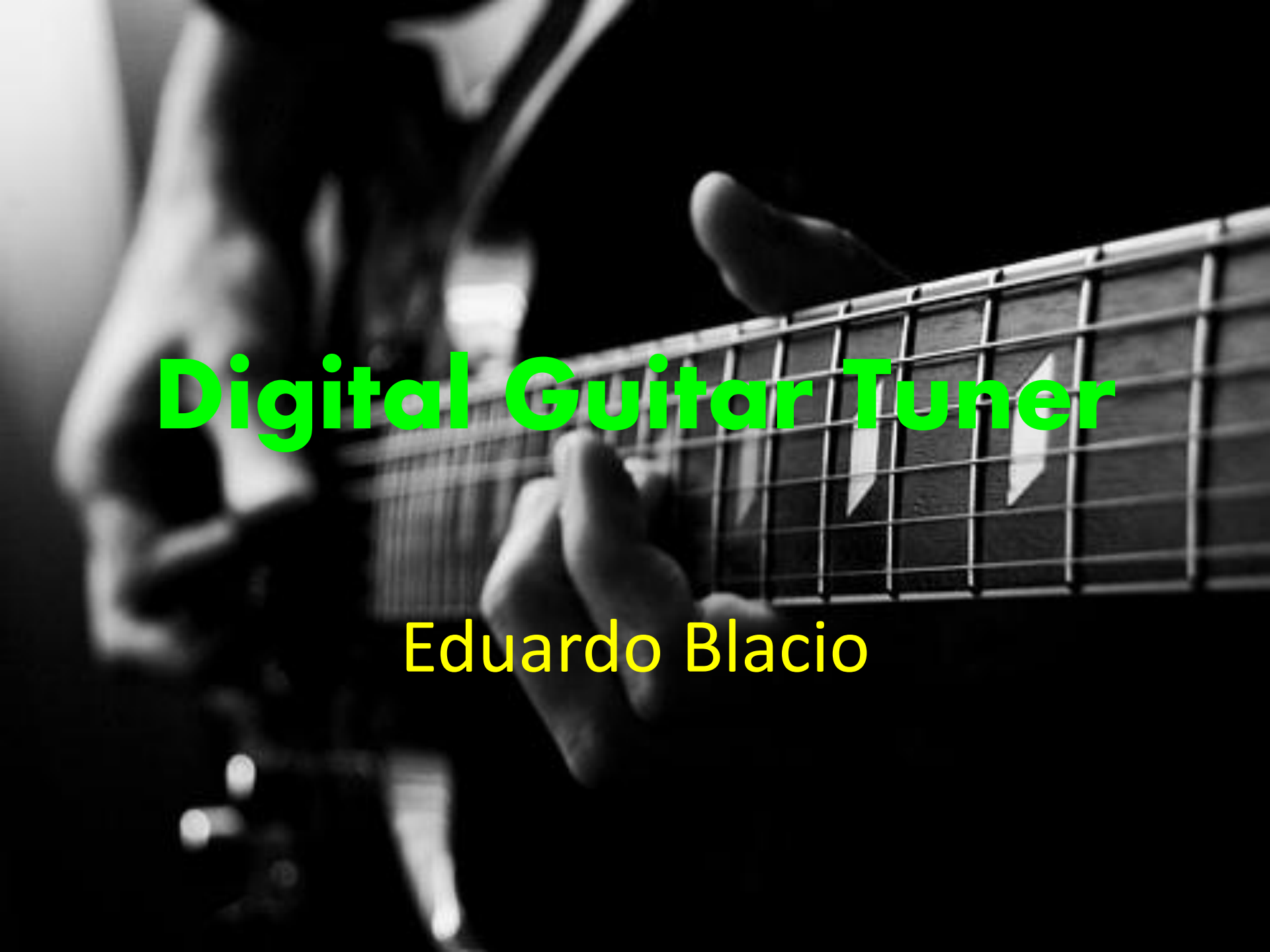
Digital Guitar Tuner
Eduardo Blacio

Base Frequencies



STANDARD FREQUENCIES FOR GUITAR STRINGS

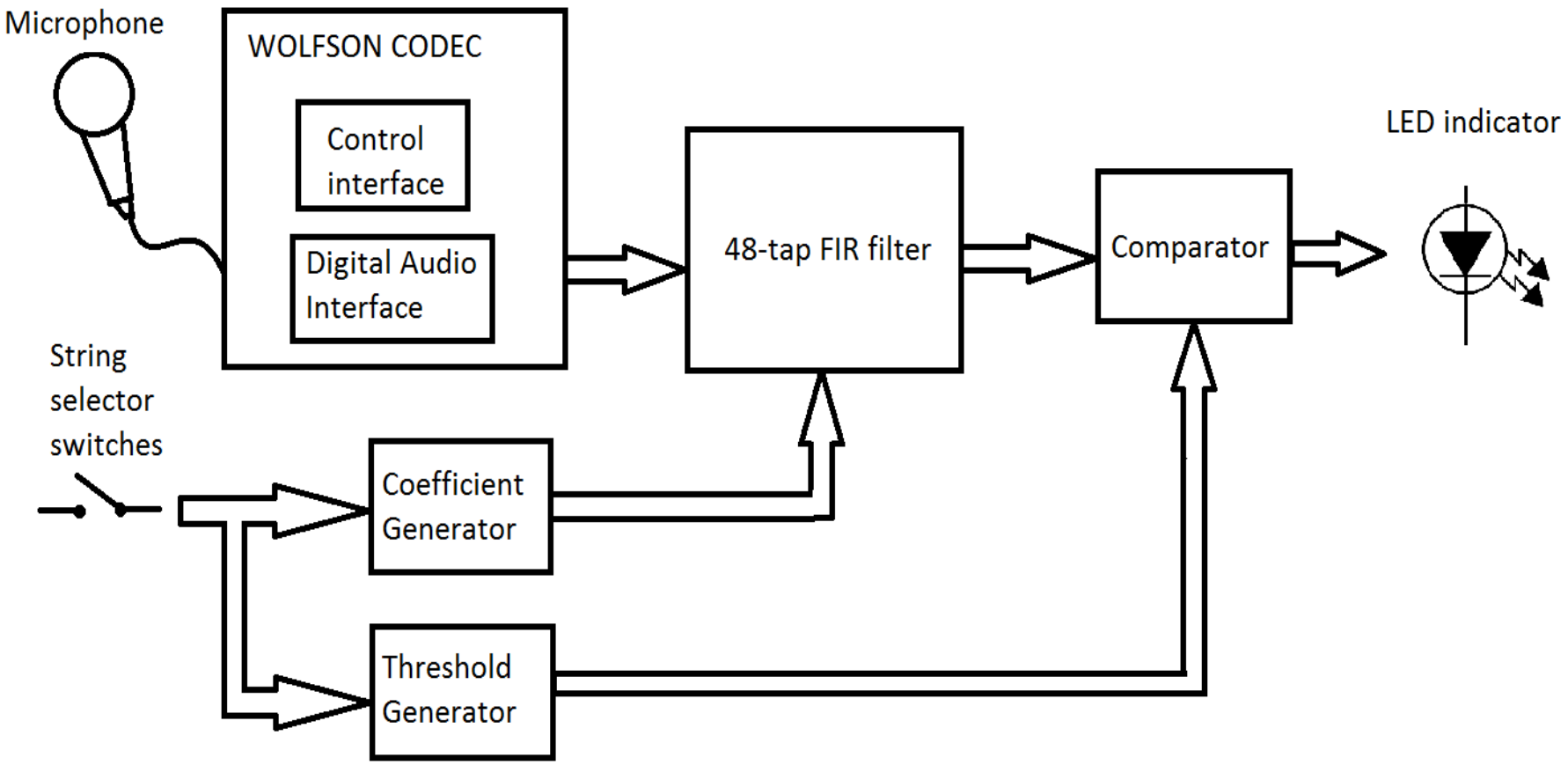
Open Guitar Strings	**Key Number**	**Standard Frequency (Hz)**
E	E2	82.4
A	A2	110.0
D	D3	146.8
G	G3	196.0
B	B3	246.9
E	E4	329.6
	A4	440.0



Procedure

- Obtain the data from the sound CODEC of the DE2-70 board.
- Filter the data to ensure right frequency.
- Use the MSB of the signal to detect a zero-crossing rising edge to count periods.
- Count number of samples per period.
- Compare said number of samples with thresholds stored in a ROM.
- Show results.

General Block Diagram




Thank You!!