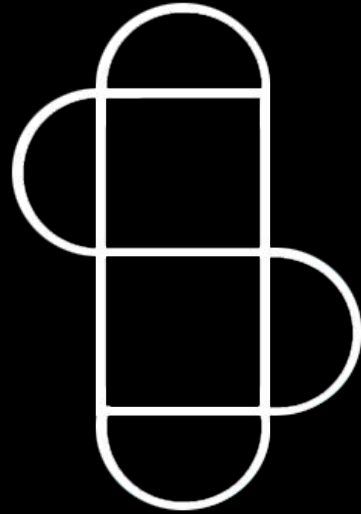


ANSAL



# GLOBAL SCHEME AND CONNECTIONS

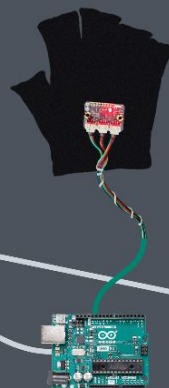
MIDI INPUT DEVICES



JUCE, SC & PROCESSING



HAND INCLINATION INPUT



GUITAR AUDIO INPUT



# VOCODER

**Audio Input** : Audio enters via the microphone and is normalized using the *SimpleCompressor* class.

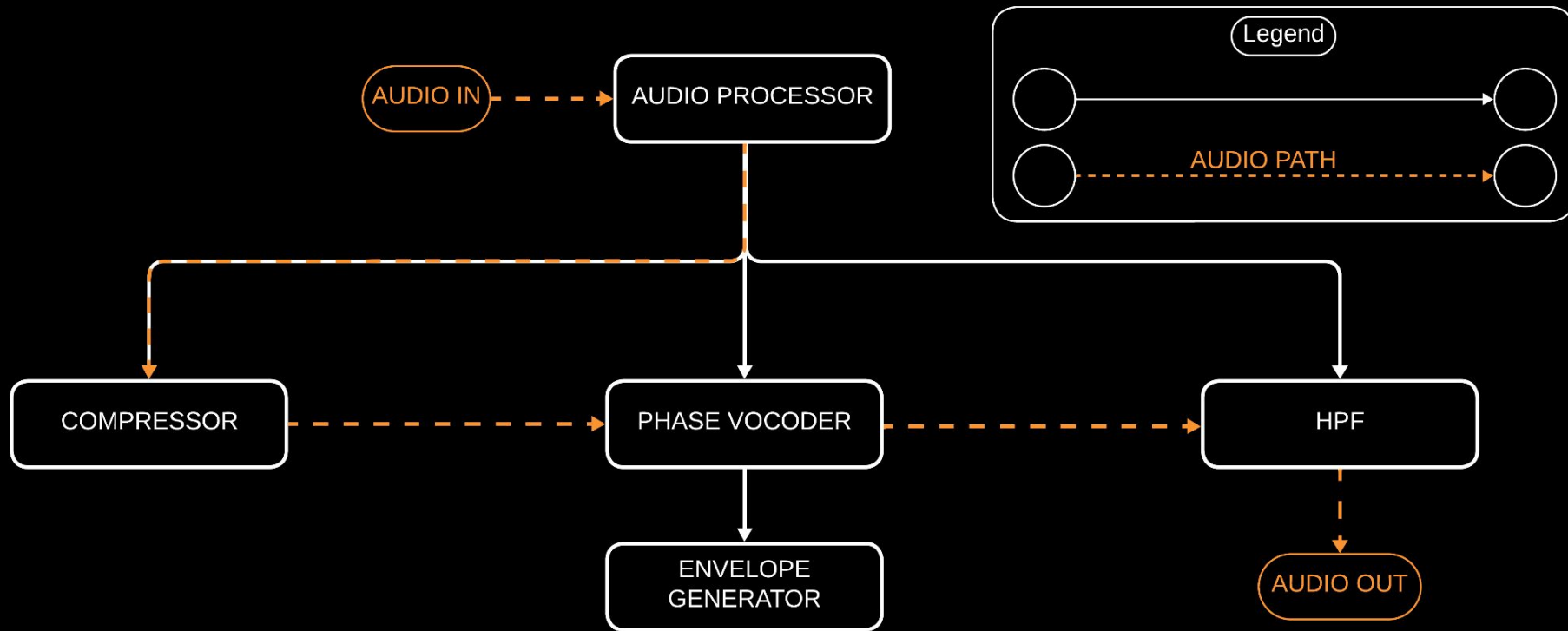
**Audio and MIDI Processing** : The *processBlock* reads the audio buffer and MIDI input, assigning MIDI notes to one of the K voices for processing at the specific note frequency.

**Voice Processing** : Each vocoder voice (*PhaseVoc* class) processes the audio buffer using the following "leaky autocorrelation" formula :

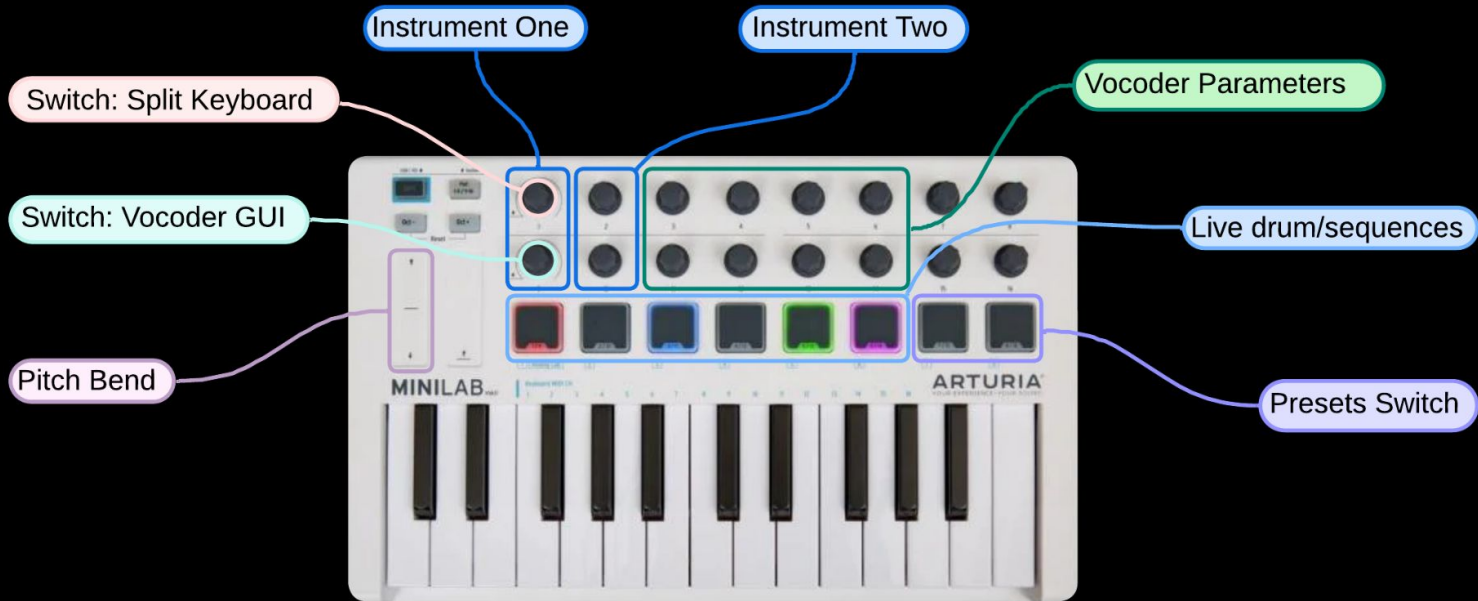
$$R_{l,n} = (1 - k)R_{l,n-1} + kx_nx_{n-l}$$



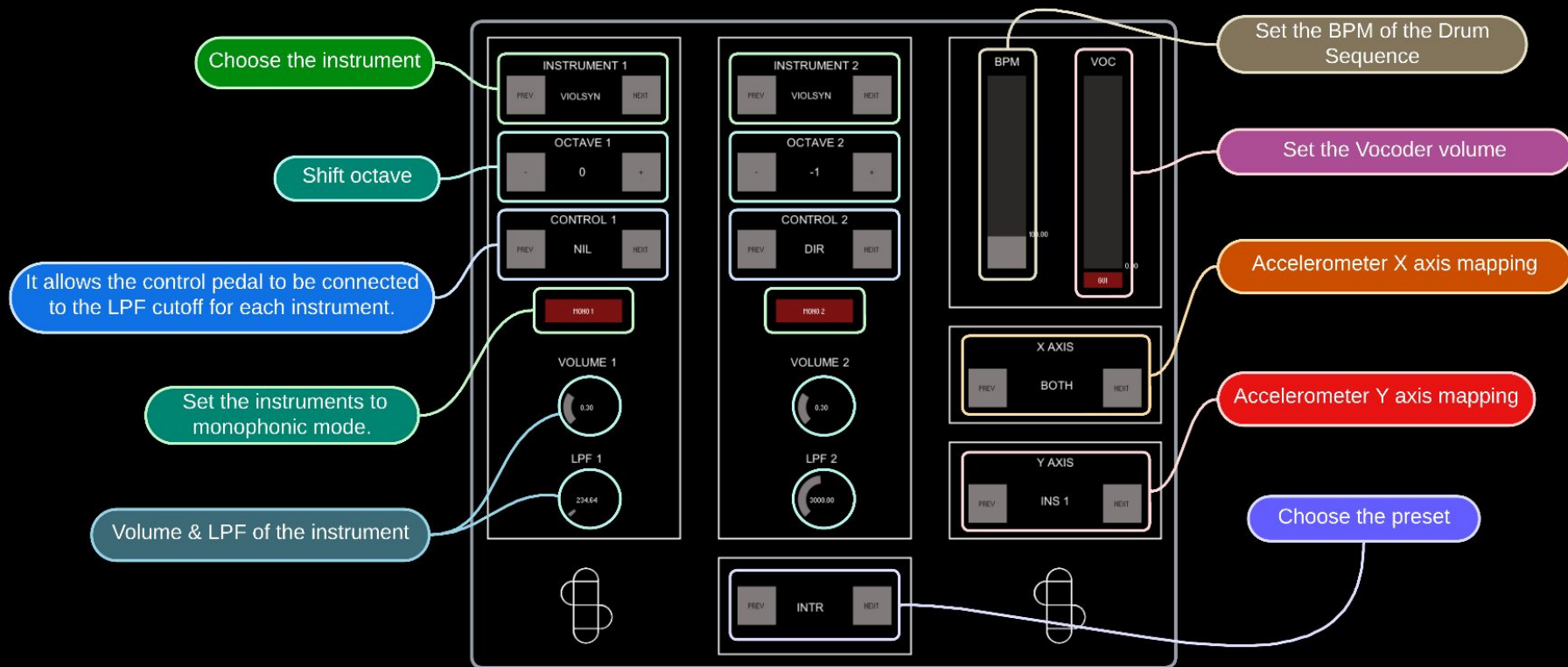
# VOCODER CHAIN



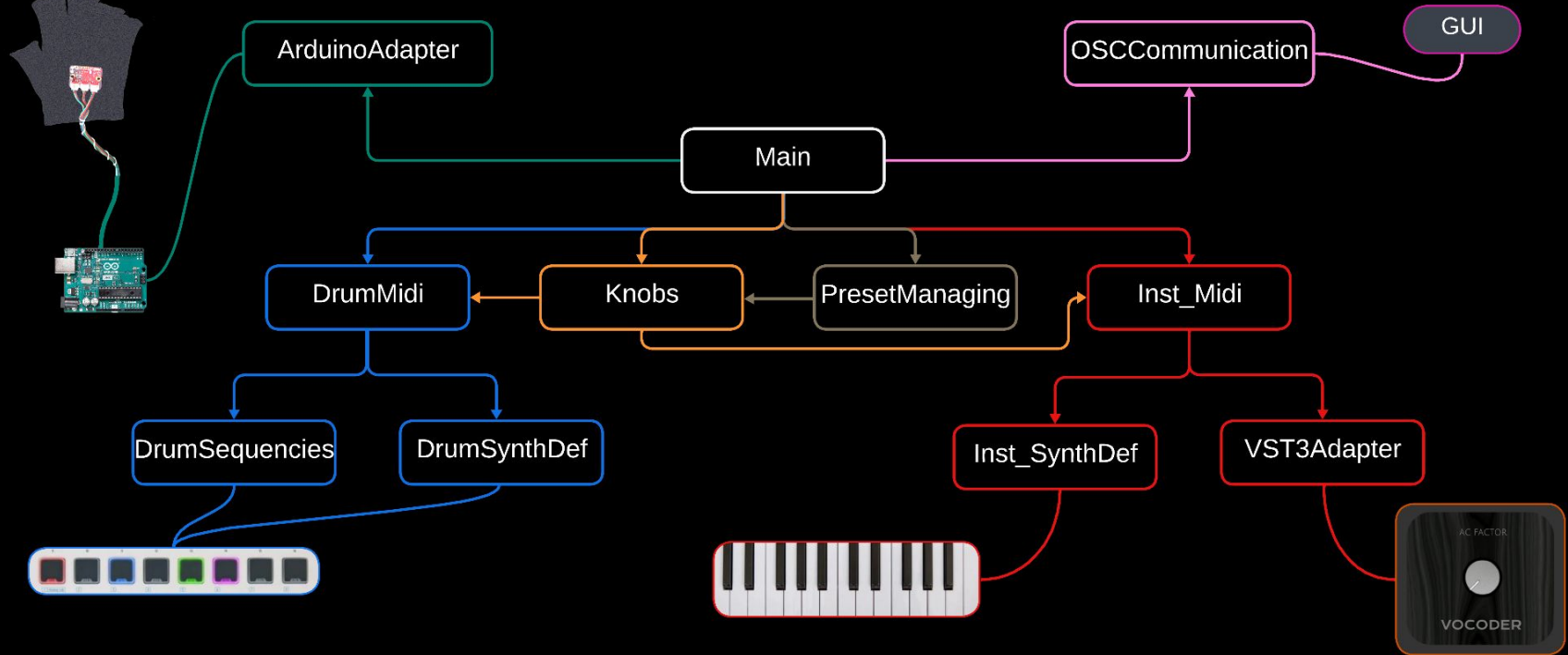
# KEYBOARD MAPPING



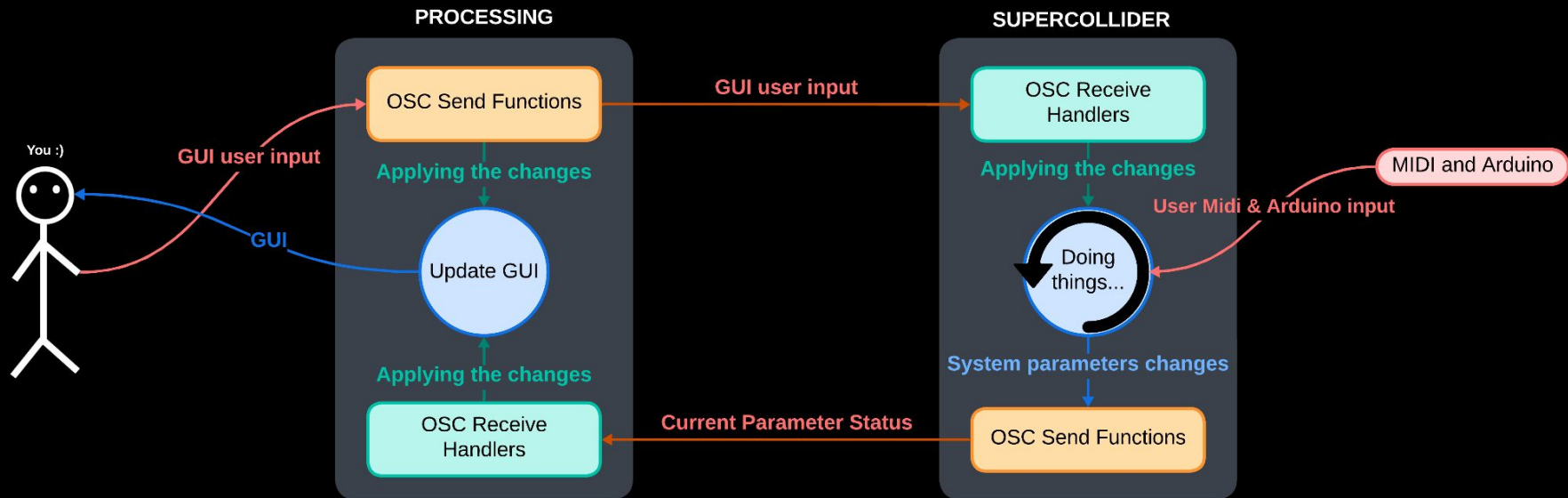
# SYNTH GUI



# SYNTH MODULES SCHEME

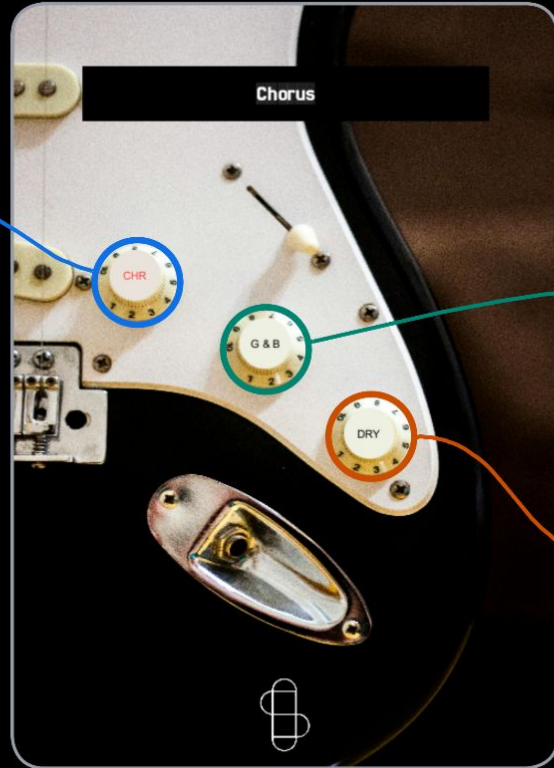


# COMMUNICATION





# GUITAR



Chorus

Guitar and Bass

Dry