

## Synthesis Recipe

# TR-808 Maracas

The Roland TR-808 maracas sound can be emulated by filtering an impulse of white noise, first with a highpass filter and then a lowpass filter, as shown in figure 1.

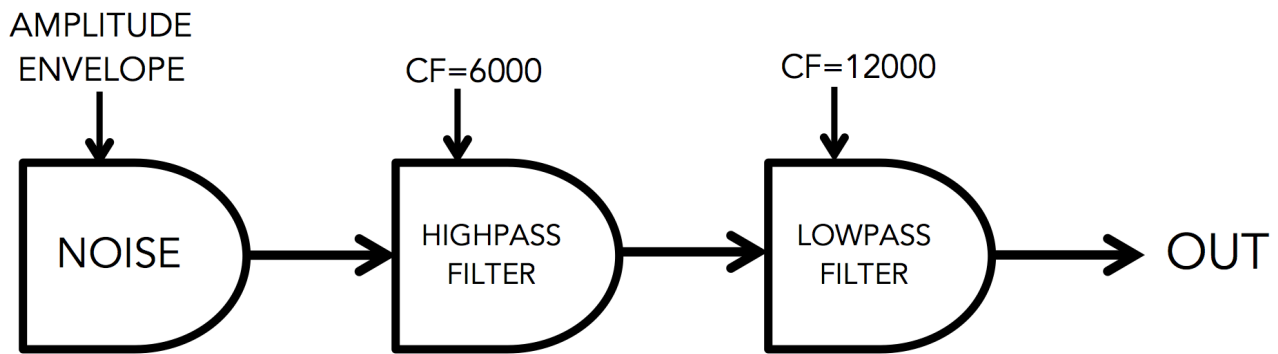


Figure 1: Flow diagram of TR808 maracas sound.

Use the **noise** opcode to create some white noise, use **buthp** as the highpass filter and use **butlp** as the lowpass filter. The cutoff frequencies are indicated in figure 1.

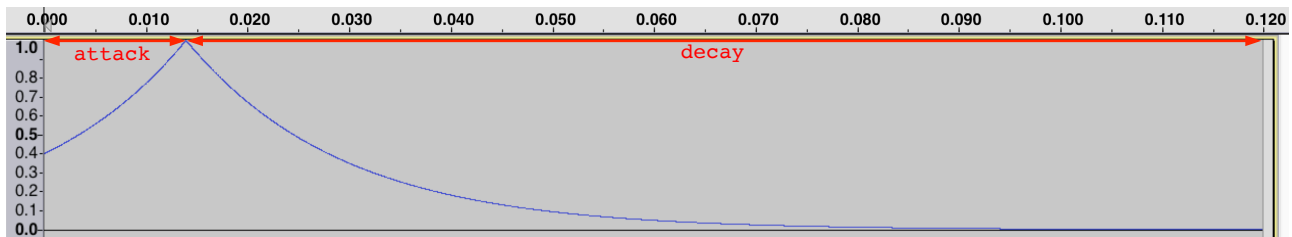


Figure 2: Amplitude envelope

The amplitude envelope for the white noise generator is shown in figure 2.

The starting value of the envelope is 0.4.

It reaches a value of 1 after 0.014 seconds.

The decay duration is the remainder of the note duration.

The ending value is 0.001.

## Further Experimentation

Play around with:

- the envelope attack time
- the filter cutoff frequencies
- the note duration.